



January 23, 2014

Tom Lubozynski
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

RE: Cape Canaveral Energy Center
Air Permit No. 0090006-008-AC
Regulatory Required Submittal

Dear Mr. Lubozynski:

Florida Power & Light Company (FPL) is submitting the Initial Compliance Test Reports per the requirements of 40 CFR Part 60. Testing on No.2 ultra-low sulfur distillate (ULSD) was completed on all three units (3A, 3B, 3C) on December 12, 2013.

If you have any comments or questions regarding the attached, please feel free to contact me at 561-691-2808 or Kristin Peekstok at 561-691-7132.

Sincerely,
Florida Power & Light Company

A handwritten signature in blue ink, appearing to read 'Matthew J. Raffenberg', is written over a light blue horizontal line.

Matthew J. Raffenberg
Director, FPL Licensing and Permitting

Cc (by email): Dennis Donahue, FPL
Michael Tammaro, FPL
Steve Coombe, FPL
Todd Brown, FPL
Mark Lemasney, FPL
Michael Young, FDEP
Jeff Koerner, FDEP
Aaron Watkins, FDEP
Dave McNeal, EPA

INITIAL COMPLIANCE

**CARBON MONOXIDE, NITROGEN DIOXIDE,
VOLATILE ORGANIC COMPOUNDS, OXYGEN,
CARBON DIOXIDE, AMMONIA AND VISIBLE
EMISSION MEASUREMENTS**

Emission Units 009 (31A), 010 (32B) and 011
(33C) - Combusting Oil

**FLORIDA POWER AND LIGHT COMPANY
CAPE CANAVERAL ENERGY CENTER**
Brevard County, Florida

Air Permit: 0090006-010-AV

Test Dates: December 5-12, 2013
Report Date: January 15, 2014



KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

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INITIAL COMPLIANCE

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*Koogler and Associates, Inc.
4014 NW 13th Street
Gainesville, Florida 32609
352-377-58222*

758-13-03



INITIAL COMPLIANCE

**CARBON MONOXIDE, NITROGEN DIOXIDE, VOLATILE ORGANIC
COMPOUNDS, OXYGEN, CARBON DIOXIDE, AMMONIA AND VISIBLE
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Responsible Official Certification:

I certify that, based upon information and belief formed after reasonable inquiry,
the statements and information in the attached documents are true, accurate
and complete.

MARK LEMASNEY / CAPE CANAVERAL PLANT GM	<i>M. Lemasney</i>
Name/Title	Signature

1/16/14
Date

758-13-03

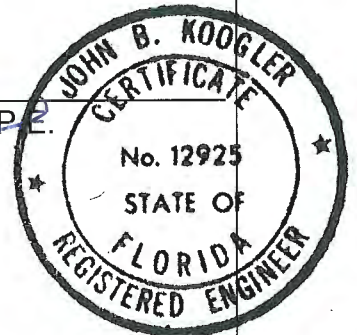


To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.



John B. Koogler, Ph.D., P.E.

State of Florida
License No. 12925



Date

1/15/2014



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- B. Unit 32B Annual Compliance Emission Measurements 12-09-2013
- C. Unit 31A Annual Compliance Emission Measurements 12-12-2013
- D. NO_x Converter Efficiency Test
- E. Calibration Gas Certification
- F. Visible Emission Certification
- G. Ultra-low Sulfur Diesel Analysis
- H. Project Participants



1.0 INTRODUCTION

Florida Power and Light Company owns and operates the Cape Canaveral Energy Center located in Brevard County, Florida. The Center includes three 265 megawatt Siemens, 8000H gas turbine-electrical generator sets; EU-009 (Unit 31A), EU-010 (Unit 32B) and EU-011 (Unit 33C). Each unit is comprised of an evaporative inlet cooling system and one supplementary-fired heat recovery steam generator (HRSG) with SCR systems.

During the period December 5-12, 2013, Koogler and Associates, Inc. of Gainesville, Florida was contracted by Siemens Energy Inc. to conduct emission measurements for carbon monoxide (CO), nitrogen oxide (NO_x), volatile organic compounds (VOC), ammonia slip (NH₃) and visible emissions on these emission units while combusting ultra-low sulfur diesel fuel. The testing was for initial compliance demonstration as required under Permit 0090006-010-AV, Specific condition A.10. The units were initially tested under a separate Siemens contract while burning natural gas earlier in 2013. In addition to field testing, fuel analysis was conducted for sulfur content as required by permit.

The emission limits, as provided in the permit are: CO (10 ppmvd, 61 lb/hr), NO_x (8.0 ppmvd, 80 lb/hr), VOC (6.0 ppmvd, 18.9 lb/hr) and NH₃ (5 ppmvd); all at 15% O₂. The limits must be met continually with compliance assurance provided by continuous CO and NO_x monitoring systems in addition to initial compliance testing.

The results provided herein indicate all three units were in compliance with permit limits.

2.0 PROCESS DESCRIPTION

The permit provides the following Emission Unit description.

Combined Cycle Unit 3 is comprised of emissions units (EU) 009, 010, and 011. Each EU consists of: a combustion turbine generator (CTG) with automated control, inlet air filtration system and evaporative cooling, a gas-fired heat recovery steam generator (HRSG) with duct burner (DB), a HRSG stack, and associated support equipment. The project also includes one steam turbine generator (STG) that serves the combined cycle unit.

Fuels: Each CTG fires natural gas as the primary fuel and ultralow sulfur distillate (ULSD) fuel oil as a restricted alternate fuel.

Generating Capacity: Each of the three CTG units has a nominal generating capacity of 265 MW. The STG unit has a nominal generating capacity of 500 MW. The total nominal generating capacity of the “3-on-1” combined cycle unit is approximately 1,250 MW.

Controls: The efficient combustion of natural gas and restricted firing of ULSD fuel oil minimizes the emissions of CO, PM/PM₁₀, SAM, SO₂ and VOC. Dry Low-NO_x (DLN) combustion technology for gas firing and water injection for oil firing reduce NO_x emissions. An SCR system further reduces NO_x emissions.

Stack Parameters: Each HRSG has a stack 149 feet tall with a diameter of 22 feet.

Continuous Monitors: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_x emissions as well as flue gas oxygen or carbon dioxide content.

3.0 SAMPLE PORT LOCATIONS

As noted above, each stack is round, measuring 22 feet in diameter. The test ports are located 126 feet above grade with the 4-inch ports at least 44 feet downstream (2.0 stack diameters) and 12 feet upstream (0.55 stack diameters) from any flow disturbance. Samples were withdrawn from at least two test ports through a heated Teflon sampling line to the sampling trailer located at the base of the stacks.

4.0 FIELD AND ANALYTICAL PROCEDURES

Pollutant concentration measurements were made using EPA Methods 10 (CO-NDIR analyzer), 7E (NO_x-chemiluminescent analyzer), 25A (VOC-Flame Ionization Detector analyzer), 320 (NH₃- Fourier Transform Infrared Spectrometer), 3A (CO₂ and O₂ - paramagnetic cell) and 9 (Visible Emissions Observation) as adopted by FDEP in Rule 62-297 F.A.C.

Schematic diagrams of the sampling trains used for the emission measurements are shown in Figures 1 and 2. An exhaust gas from each of the three emission units was withdrawn through a heated sampling probe and heated sample filter, and was conveyed to the instruments trailer through a heated Teflon sample line.

The gases then entered a heated manifold and were split with subsamples going to each of the four gas sampling instruments. The gas conditioning for the NO_x, CO, and O₂ samples included removal of moisture. The concentrations of these gases were measured on a dry gas basis. The gas sample analyzed for THC was passed directly from an in-stack filter and heated sample line to the hydrocarbon analyzer and analyzed on a wet basis (no moisture removal). The hydrocarbon concentration is reported as propane on a dry gas basis. All sampling systems were designed and operated in accordance with the requirements of EPA methodology. Certified gases (certifications are provided in the Appendices of this report) were used to calibrate all gas analyzers. Calibration data for each analyzer are provided in the Appendices. All data were collected on Telog data logger systems. Data were transferred from the data loggers to an Excel data sheet for storage and reporting.

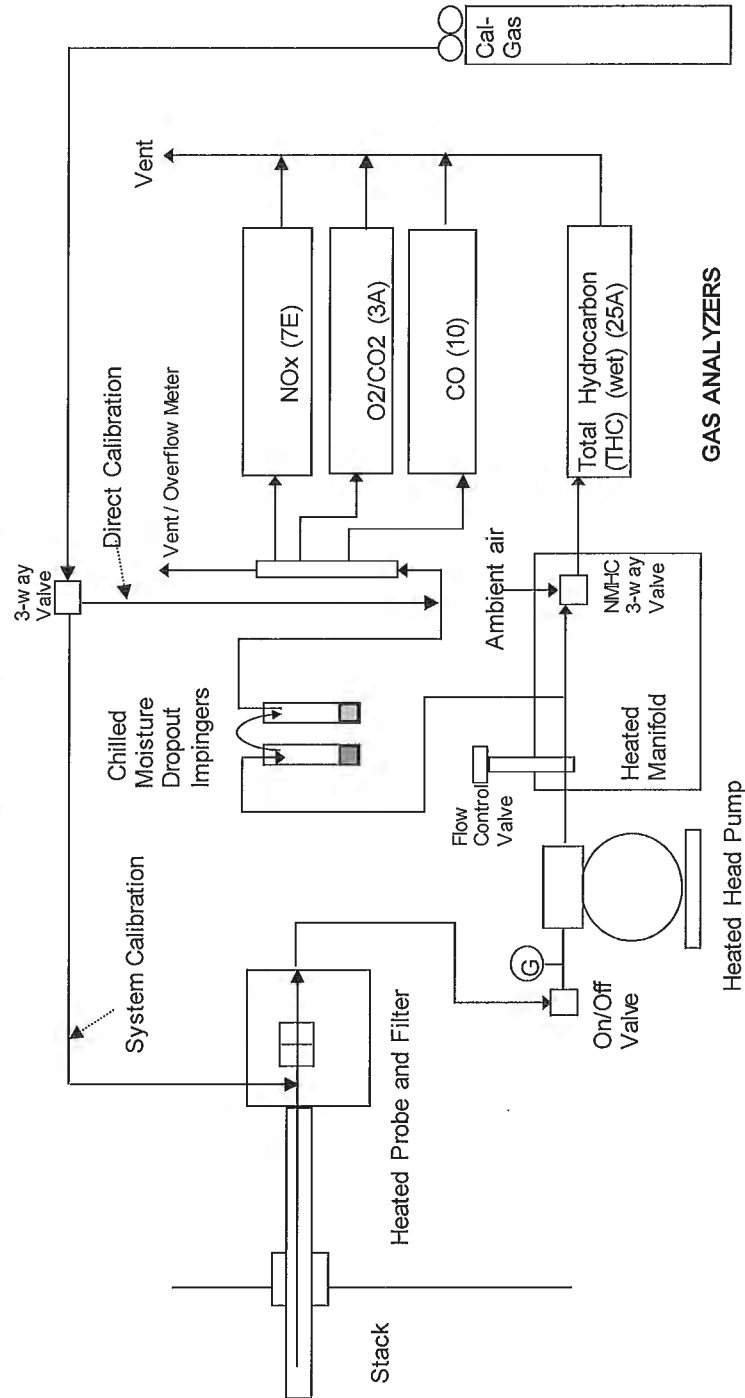


FIGURE 1 Mobile CEMS Sample Train



A second heated stainless steel sampling probe with heated Teflon line was used to extract exhaust gas from each emission unit and to deliver the gas to a separate trailer system specific for FTIR sampling for NH₃. All sampling lines were heated and checked for leaks as required by Method 320. Ethylene (100 ppm in N₂) was used for the calibration transfer standard (CTS) gas. During each emission unit testing, quality assurance spiking was conducted using a certified cylinder gas of NH₃ (25ppm in N₂) to assess whether adequate recovery (70 to 130% of expected NH₃) was achieved. Gas certifications for both ethylene and NH₃ are provided in the Appendices of this report.

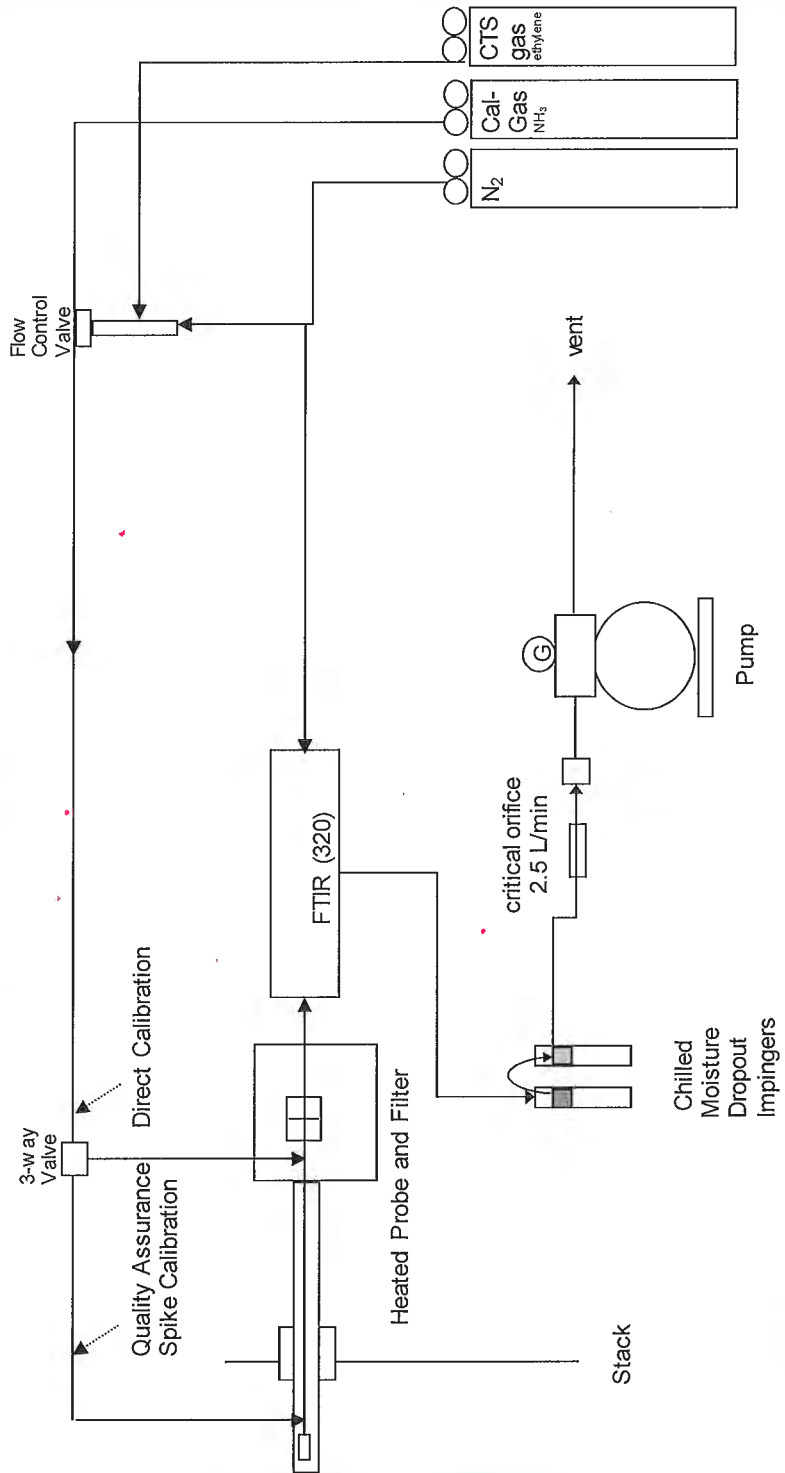
The FTIR system is a MKS model 2030 unit using MG2000 software. The analyzer has a fixed pathlength of 5.1 meters in a 0.5 liter gold-plated gas cell with KBr windows and a MCT detector chilled with liquid nitrogen to reduce signal noise. Sampling was conducted with the cell temperature set at 191 °C which is a standard setting in the MKS. All reference spectra were created by MKS and stored in the MKS software library for analysis. Confirmation of the NH₃ reference spectra was made on-site during the testing by Koogler. The FTIR collected 30-second average (one interferogram analysis per second) spectrum at a fixed wavenumber resolution of 0.5 wavenumbers. The analysis was conducted during testing using the FTIR for a number of other compounds such as, H₂O, CO₂, NO and NO₂ as an additional comparative check of the FTIR library analysis. While quality assurance was only conducted and reported for NH₃ as required by Method 320, the additional analyses provided confidence.

MKS states the detection limit to be 0.02 ppb at 1 min averaging for reference spectra of NH₃. Based on field spectra analysis, sensitivity of less than 0.1 ppm was achieved. Figure 2 provides a diagram of the FTIR sampling system.

Visible emissions observations were conducted on each emission unit for a 180-minute period. No visible emissions were observed from any of the units. Field data sheets and calculation summaries for these observations are included in the Appendices of this report.

Exhaust gas flow rate was determined by fuel flow and EPA Method 19 calculation methodology.

Koogler And Associates, Inc.



KOOGLER & ASSOCIATES

FIGURE 2 Mobile FTIR - CEMS Sample Train

5.0 SUMMARY OF RESULTS

The following Tables 1, 2 and 3 provide results of the emission monitoring described herein. The results indicate that all units tested were in compliance with the permit limits and conditions for initial compliance testing while burning ultra-low sulfur diesel fuel oil.

In addition to the emissions monitoring results, laboratory analytical results of the fuel oil sulfur content indicate 11 ppm w/w or 0.0011 % sulfur. The permit limit for sulfur content is 0.0015 % sulfur. Analytical results are appended.

TABLE 1

Summary of Emission for CO, NOx, VOC and NH3 Florida Power & Light Company Cape Canaveral Energy Center EU-011 Unit 33C - One Nominal 265 MW CTG with Supplementary-fired HRSG December 5, 2013										
Run No.	O2 (%)	CO (ppm dry) (1)		NOx (ppm dry) (2)		moisture (5)	THC (ppm dry) (3)		NH3 (ppm dry) (4)	
		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2
1	13.63	0.87	0.70	9.18	7.45	8.10	0.02	0.02	0.76	0.62
2	13.64	0.91	0.74	9.32	7.57	8.34	0.02	0.01	0.65	0.53
3	13.64	0.95	0.77	9.30	7.56	7.97	0.01	0.00	0.74	0.60
Average	13.64	0.91	0.74	9.27	7.53	8.14	0.01	0.01	0.72	0.58

- (1) Carbon Monoxide measurements were conducted in accordance with EPA test method 10. Permit limit 10 ppmvd, 61 lb/hr
- (2) Nitrogen Oxide measurements were conducted in accordance with EPA test method 7E. Permit limit, 8.0 ppmvd, 80.0 lb/hr
- (3) VOC measurements were conducted in accordance with EPA test method 25A. Permit limit 6.0 ppmvd, 18.9 lb/hr.
- (4) Ammonia Slip measurements were conducted in accordance with EPA test method 320. Permit limit 5 ppmvd.
- (5) Moisture provided by FTIR M320 data to adjust VOC Concentration from wet to dry ppm

Run No.	flow rate dscf/hr (Method 19)	CO (lb/hr)	NOx (lb/hr)	THC (lb/hr)
1	14:45-15:45 66,825,008	3.42	36.23	0.08
2	16:00-17:00 67,032,979	3.59	36.90	0.06
3	17:15-18:15 67,218,507	3.76	36.95	0.02
Average	67,025,498	3.59	36.69	0.06



TABLE 2

Summary of Emission for CO, NOx, VOC and NH3 Florida Power & Light Company Cape Canaveral Energy Center EU-010 Unit 32B - One Nominal 265 MW CTG with Supplementary-fired HRSG December 9, 2013											
Run No.	O2 (%)	CO (ppm dry) (1)		NOx (ppm dry) (2)		moisture (5)	VOC (ppm dry) (3)		NH3 (ppm dry) (4)		
		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2	
1	13.59	1.35	1.09	7.65	6.17	8.55	0.13	0.10	0.46	0.37	
2	13.60	1.39	1.12	8.08	6.53	8.43	0.14	0.11	0.40	0.32	
3	13.62	1.32	1.07	7.85	6.36	8.34	0.13	0.10	0.37	0.30	
Average	13.60	1.35	1.10	7.86	6.35	8.44	0.13	0.11	0.41	0.33	

- (1) Carbon Monoxide measurements were conducted in accordance with EPA test method 10. Permit limit 10 ppmvd, 61 lb/hr
- (2) Nitrogen Oxide measurements were conducted in accordance with EPA test method 7E. Permit limit, 8.0 ppmvd, 80.0 lb/hr
- (3) VOC measurements were conducted in accordance with EPA test method 25A. Permit limit 6.0 ppmvd, 18.9 lb/hr.
- (4) Ammonia Slip measurements were conducted in accordance with EPA test method 320. Permit limit 5 ppmvd.
- (5) Moisture provided by FTIR M320 data to adjust VOC Concentration from wet to dry ppm

Run No.	flow rate dscf/hr (Method 19)	CO (lb/hr)		NOx (lb/hr)		THC (lb/hr)	
		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2
1	12:30-13:30	67,635,608	5.37	30.35	5.51		
2	13:45-14:45	67,599,297	5.52	32.10	0.56		
3	15:00-16:00	67,587,446	5.26	31.26	0.51		
Average		67,607,451	5.39	31.24	0.53		



TABLE 3

Summary of Emission for CO, NOx, VOC and NH3
 Florida Power & Light Company
 Cape Canaveral Energy Center
 EU-009 Unit 31A - One Nominal 265 MW CTG with Supplementary-fired HRSG
 December 12, 2013

Run No.	O2 (%)	CO (ppm dry) (1)		NOx (ppm dry) (2)		THC (ppm dry) (3)		NH3 (ppm dry) (4)	
		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2
1	13.96	3.16	2.69	7.70	6.55	0.10	0.09	0.34	0.28
2	13.96	2.95	2.51	7.97	6.77	0.11	0.09	0.28	0.24
3	13.96	2.75	2.34	7.91	6.73	0.11	0.09	0.27	0.23
Average	13.96	2.95	2.51	7.86	6.68	0.11	0.09	0.29	0.25

- (1) Carbon Monoxide measurements were conducted in accordance with EPA test method 10
- (2) Nitrogen Oxide measurements were conducted in accordance with EPA test method 7E
- (3) VOC measurements were conducted in accordance with EPA test method 25A
- (4) Ammonia Slip measurements were conducted in accordance with EPA test method 320
- (5) Moisture provided by FTIR M920 data to adjust VOC Concentration from wet to dry ppm

Run No.	flow rate dscf/hr (Method 19)	CO (lb/hr)		NOx (lb/hr)		THC (lb/hr)	
		Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2	Uncorrected	Corrected for 15% O2
1	67,881,476	13.27	11.57	32.31	28.45	0.44	0.45
2	67,898,525	12.37	11.57	33.45	28.45	0.46	0.45
3	67,935,624	11.57	11.57	33.25	28.45	0.45	0.45
Average	67,905,209	12.40	11.57	33.00	28.45	0.45	0.45

A. Unit 33C Annual Compliance Emission Measurements 12-05-13.

- A-1. Gases Calculations
- A-2. Gases Field Data Sheets
- A-3. Ammonia Slip (NH3) Calculations
- A-4. Ammonia Slip (NH3) Field Data Sheet
- A-5. Visible Emission Calculations
- A-6. Visible Emission Field Data Sheet
- A-7. Plant Operating Data

B. Unit 32B Annual Compliance Emission Measurements 12-09-13.

- B-1. Gases Calculations
- B-2. Gases Field Data Sheets
- B-3. Ammonia Slip (NH3) Calculations
- B-4. Ammonia Slip (NH3) Field Data Sheet
- B-5. Visible Emission Calculations
- B-6. Visible Emission Field Data Sheet
- B-7. Plant Operating Data

C. Unit 31A Annual Compliance Emission Measurements 12-12-13.

- C-1. Gases Calculations
- C-2. Gases Field Data Sheets
- C-3. Ammonia Slip (NH3) Calculations
- C-4. Ammonia Slip (NH3) Field Data Sheet
- C-5. Visible Emission Calculations
- C-6. Visible Emission Field Data Sheet
- C-7. Plant Operating Data

D. NOx Converter Efficiency Test

- D-1. Calculations
- D-2. Field Data Sheet

E. Calibration Gas Certification

F. Visible Emission Certification

G. Ultra-low Sulfur Diesel Analysis

H. Project Participants

A

P

P

E

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EXAMPLE CALCULATIONS (CALIBRATIONS)

Analyzer Calibration Error

Method 7E, Section 12.2, Analyzer Calibration Error.

$$ACE = \left| \frac{C_{Dir,i} - C_V}{CS} \right| \times 100 \text{ where } i = \text{zero, mid, or span} \quad \text{Eq. 7E-1}$$

Example: Unit 31A, 12/12/2013, carbon monoxide, Run No. 1

$$ACE = \left| \frac{C_{Dir,mid} - C_V}{CS} \right| \times 100 = \left| \frac{11.00 \text{ ppm} - 10.50 \text{ ppm}}{51.30 \text{ ppm}} \right| \times 100 = 0.975\%$$

FTIR Matrix Spiking

Method 320, Section 8.6.2, Matrix Spiking.

$$CS_m = (DF \times \text{Spike} + \text{unspike}(1 - DF))$$

Example: Unit 31A, 12/12/2013, NH_3

$$CS_m = 0.226 \times 25 \text{ ppm} + 0.4 \text{ ppm} \times (1 - 0.226) = 5.93 \text{ ppm}$$

$$Diff = |CS_m / CS_a| \text{ (must be } \pm 0.7 \text{ to } 1.3)$$

Example: Unit 31A, 12/12/2013, NH_3

$$Diff = |5.17 \text{ ppm} / 5.93 \text{ ppm}| = 0.87 \text{ (87\% recovery)}$$

EXAMPLE CALCULATIONS (BIAS, DRIFT, AND CORRECTED RAW AVERAGE)

System Bias

Method 7E, Section 12.3, System Bias.

$$SB_i = \left(\frac{C_{sys,cal} - C_{Dir,i}}{CS} \right) \times 100 \quad \text{where } i = \text{zero, mid, or span} \quad \text{Eq. 7E-2}$$

Example: Unit 31A, 12/12/2013, carbon monoxide, Run No. 1, mid gas

$$SB_{cal} = \frac{11.172 \text{ ppm} - 11.00 \text{ ppm}}{51.30 \text{ ppm}} \times 100 = 0.335\%$$

Example: Unit 31A, 12/12/2013, THC, Run No. 1

$$ACE_{THC} = \frac{\left| 10.35 - \left(\frac{100.975 - 0.063}{100.7 - 0} \times 10.1 + \left(100.975 - \left(\frac{100.975 - 0.063}{100.7 - 0} \right) \right) \right) \right|}{10.1} \times 100 = 1.645\%$$

EXAMPLE CALCULATIONS (RUNS)

Method 19 Stack Exhaust Flow (Q_s)

$$Q_s = \text{Fuel Usage} \left(\frac{\text{lb}}{\text{hr}} \right) * (1/\text{Density}) * (\text{HHV}) * (\text{Ffactor}) * (20.9/20.9 - \text{O}_2 \text{ Corr}\%)$$

Example: Unit 31A, 12/12/13, Run No. 1

$$Q_s = \frac{\frac{\text{scf}}{\text{hr}} = \left(\frac{107.2 \times \text{fuel lb}}{\text{hr}} \right) \left(\frac{\text{gal}}{7.05 \text{ lb}} \right) \left(\frac{137,000 \text{ btu}}{\text{gal}} \right) \left(\frac{\text{mmbtu}}{1,000,000 \text{ btu}} \right) \left(\frac{9,190 \text{ dscf}}{\text{mmbtu}} \right) \frac{(20.9)\% \text{ O}_2}{(20.9 - 15.0)}}{\text{MMBtu}}$$

$$= 67,881,476 \text{ SCFH}$$

Moisture Correction

Method 7E, 12.10 Moisture Correction @ 7.08 percent moisture

$$C_D = \frac{C_W}{1 - B_{WS}} \quad \text{Eq. 7E-10}$$

Example: Unit 31A, 12/12/13, Run No. 1, THC

$$C_D = \frac{0.104 \text{ ppmvw}}{1 - 0.0708} = 0.112 \text{ ppmvd}$$

Emission Rate (lb/hr)

Calculation for pound per hour emission rate. Calculate, as follows: (calc. for NO_x gas Run 1, if applicable)

$$E_{\text{lb/hr}} = \frac{C_{\text{Gas}}}{10^6} \times \frac{Q_s \times MW}{G}$$

Example: Unit 31A, 12/12/2013, carbon monoxide, Run No. 1

$$E_{\text{lb/hr}} = \frac{3.16 \text{ ppm}}{10^6 \text{ ppm}} \times \frac{67,881,476 \text{ SCFH} \times 28 \text{ lb/lb-mol}}{385.23 \text{ SCF/lb-mol}} = \frac{13.27 \text{ lb}}{\text{hr}}$$

NO_x Converter Efficiency - See appendix; Section D-1

M = Mid calibration gas, designator.

MW = Molecular weight (lb/lb-mol)

SB = System bias, percent of calibration span.

SB_i = Pre-run system bias, percent of calibration span.

SB_f = Post-run system bias, percent of calibration span.

Spike = Spike gas concentration.

Unspike = measured or expected concentration of analyte in stack gas.

A-1

**Unit 33C Annual Compliance Emission
Measurements 12-05-13.**

Gases Calculations

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KOGLER & ASSOCIATES, INC.

ENVIRONMENTAL SERVICES

Unit 33C, Pollutant:		CO	NO _x	THC	CO ₂	O ₂	
Method:		10.00	7E	25A	3A	3A	
Info	Instrument Span	125.00	50.00	100.00	25.00	25.00	
	Zero Gas Cylinder ID	DBY267	DBY267	DBY267	DBY267	DBY267	
	Low Gas Cylinder ID	CC-184994	NA	CC-184994	NA	NA	
	Mid Gas Cylinder ID	EB0021641	EB0015940	EB0021641	EB-0050207	EB-0050207	
	Span Gas Cylinder ID	CC166547	EB0000520	CC166547	CC-107906	CC-107906	
	Zero Gas Concentration (C _{v,zero})	0.00	0.00	0.00	0.00	0.00	
	Low Gas Concentration (C _{v,low})	10.50	NA	10.10	NA	NA	
	Mid Gas Concentration (C _{v,mid})	51.30	24.70	52.00	9.74	9.82	
	Span Gas Concentration (CS)	102.60	48.70	100.70	19.60	20.00	
	Calibration Gas Concentration (C _{v,cal})	10.50	24.70	10.10	9.74	9.82	
Pre-Sampling Calibrations	Direct Loop (System Loop for HCs)	Zero Gas Start	07:16 (0.000)	07:16 (0.000)	07:43 (0.000)	07:16 (0.025)	07:16 (0.000)
		Zero Gas Stop	07:17 (0.000)	07:17 (0.000)	07:44 (0.000)	07:17 (0.025)	07:17 (0.000)
		Zero Gas Response (C _{dir,zero})	0.00	0.00	0.00	0.03	0.00
		Zero Gas Accuracy ¹ (ACE _{zero})	0.000% < 2%	0.000% < 2%	NA	0.128% < 2%	0.000% < 2%
		Low Gas Start	07:12 (10.969)	NA	07:38 (10.175)	NA	NA
		Low Gas Stop	07:13 (11.000)	NA	07:39 (10.125)	NA	NA
		Low Gas Response (C _{dir,low})	10.98	NA	10.15	NA	NA
		Low Gas Accuracy ^{1,3} (ACE _{low})	0.472% < 2%	NA	0.147% < 5%	NA	NA
	Mid Gas Start	07:09 (51.281)	06:55 (25.175)	07:35 (51.925)	07:01 (9.912)	07:01 (9.956)	
	Mid Gas Stop	07:10 (51.500)	06:56 (25.225)	07:36 (51.850)	07:02 (9.906)	07:02 (9.956)	
	Mid Gas Response (C _{dir,mid})	51.39	25.20	51.89	9.91	9.96	
	Mid Gas Accuracy ^{1,3} (ACE _{mid})	0.088% < 2%	1.027% < 2%	0.564% < 5%	0.864% < 2%	0.681% < 2%	
	Span Gas Start	07:05 (102.719)	06:51 (48.800)	07:32 (101.125)	06:58 (19.606)	06:58 (19.988)	
	Span Gas Stop	07:06 (102.250)	06:52 (48.775)	07:33 (100.975)	06:59 (19.625)	06:59 (19.994)	
	Span Gas Response (C _{dir,span})	102.48	48.79	101.05	19.62	19.99	
	Span Gas Accuracy ¹ (ACE _{span})	0.113% < 2%	0.180% < 2%	NA	0.080% < 2%	0.047% < 2%	
System Loop	Zero Gas Start	07:43 (0.000)	07:43 (0.000)	07:43 (0.000)	07:43 (0.006)	07:43 (0.000)	
	Zero Gas Stop	07:44 (0.000)	07:44 (0.000)	07:44 (0.000)	07:44 (0.006)	07:44 (0.000)	
	Zero Gas Response (C _{sys,zero})	0.00	0.00	0.00	0.01	0.00	
	Zero Gas Accuracy ² (SB _{zero})	0.000% < 5%	0.000% < 5%	NA	0.096% < 5%	0.000% < 5%	
	Calibration Gas Start	07:39 (10.781)	07:25 (25.000)	07:39 (10.125)	07:29 (9.812)	07:29 (9.906)	
	Calibration Gas Stop	07:40 (10.750)	07:26 (25.050)	07:40 (10.125)	07:30 (9.794)	07:30 (9.900)	
	Calibration Gas Response (C _{sys,cal})	10.77	25.03	10.13	9.80	9.90	
	Calibration Gas Accuracy ² (SB _{cal})	0.213% < 5%	0.359% < 5%	NA	0.542% < 5%	0.266% < 5%	
References and Formulas		1. Section 12.2, Equation 7E-1 (2% of span plus analyzer calibration error) 2. Section 12.3, Equation 7E-2 (5% of span) 3. Method 25A, Section 8.4 (5% of predicted values from 2-point calibration curve zero-span)					

Unit 33C, Pollutant:		CO	NOx	THC	CO2	O2		
Method:		10.00	7E	25A	3A	3A		
Stack Gas Analysis 1	Compliance 1	Start	14:45 (0.875)	14:45 (9.000)	14:45 (0.000)	14:45 (5.169)	14:45 (13.731)	
		Stop	15:45 (1.063)	15:45 (9.325)	15:45 (1.125)	15:45 (5.156)	15:45 (13.731)	
		Stack Gas Response (C_{avg})	0.88	9.26	0.02	5.15	13.73	
		Corrected Stack Gas Response ^{1,2} (C_{gss})	0.87	9.18	0.02	5.11	13.63	
	System Loop	Zero Gas Start	15:47 (0.000)	15:47 (0.150)	15:47 (0.000)	15:47 (0.025)	15:47 (0.000)	
		Zero Gas Stop	15:48 (0.000)	15:48 (0.125)	15:48 (0.000)	15:48 (0.025)	15:48 (0.000)	
		Zero Gas Response ($C_{sys, zero}$)	0.00	0.14	0.00	0.03	0.00	
		Average Zero Gas Response ($C_{sys, avg}$)	0.00	0.07	0.00	0.02	0.00	
		Zero Gas Accuracy ³ (SB_{zero})	0.000% < 5%	0.282% < 5%	NA	0.000% < 5%	0.000% < 5%	
		Zero Gas Drift ^{4,5} (D_{zero})	0.000% < 3%	0.282% < 3%	0.000% < 3%	0.096% < 3%	0.000% < 3%	
		Calibration Gas Start	15:56 (10.594)	15:50 (24.550)	15:56 (10.175)	15:53 (9.794)	15:53 (9.875)	
		Calibration Gas Stop	15:57 (10.625)	15:51 (24.600)	15:57 (10.150)	15:54 (9.812)	15:54 (9.888)	
		Calibration Gas Response ($C_{sys, cal}$)	10.61	24.58	10.16	9.80	9.88	
		Average Calibration Gas Response ($C_{sys, avg}$)	10.69	24.80	10.14	9.80	9.89	
		Calibration Gas Accuracy ³ (SB_{cal})	0.365% < 5%	1.283% < 5%	NA	0.542% < 5%	0.375% < 5%	
		Calibration Gas Drift ^{4,5} (D_{cal})	0.152% < 3%	0.924% < 3%	0.037% < 3%	0.000% < 3%	0.109% < 3%	
		References and Formulas		1. Method 7E, Section 12.6, Equation 7E-5b. 2. Method 25A, Section 12.1, Equation 25A-1. (as propane) 3. Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) 4. Method 25A, Section 13.1.2, (<3% of span) 5. Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run)				

Unit 33C, Pollutant:		CO	NO _x	THC	CO ₂	O ₂	
Method:		10.00	7E	25A	3A	3A	
Stack Gas Analysis 2	Compliance 2	Start	16:00 (0.938)	16:00 (9.275)	16:00 (0.025)	16:00 (5.131)	16:00 (13.694)
		Stop	16:59 (0.938)	16:59 (9.375)	16:59 (0.850)	16:59 (5.150)	16:59 (13.731)
		Stack Gas Response (C_{avg})	0.92	9.35	0.01	5.15	13.73
		Corrected Stack Gas Response ^{1,2} (C_{gas})	0.91	9.32	0.01	5.11	13.64
	System Loop	Zero Gas Start	17:02 (0.000)	17:02 (0.150)	17:02 (0.000)	17:02 (0.031)	17:02 (0.000)
		Zero Gas Stop	17:03 (0.000)	17:03 (0.100)	17:03 (0.000)	17:03 (0.019)	17:03 (0.000)
		Zero Gas Response ($C_{sys, zero}$)	0.00	0.12	0.00	0.03	0.00
		Average Zero Gas Response ($C_{sys, avg}$)	0.00	0.13	0.00	0.03	0.00
		Zero Gas Accuracy ³ (SB _{zero})	0.000% < 5%	0.257% < 5%	NA	0.000% < 5%	0.000% < 5%
		Zero Gas Drift ^{4,5} (D_{zero})	0.000% < 3%	0.026% < 3%	0.000% < 3%	0.000% < 3%	0.000% < 3%
		Calibration Gas Start	17:11 (10.625)	17:05 (24.525)	17:11 (10.100)	17:08 (9.794)	17:08 (9.888)
		Calibration Gas Stop	17:12 (10.656)	17:06 (24.600)	17:12 (10.050)	17:09 (9.812)	17:09 (9.894)
		Calibration Gas Response ($C_{sys, cal}$)	10.64	24.56	10.08	9.80	9.89
		Average Calibration Gas Response ($C_{sys, avg}$)	10.63	24.57	10.12	9.80	9.89
Calibration Gas Accuracy ³ (SB _{cal})	0.335% < 5%	1.309% < 5%	NA	0.542% < 5%	0.328% < 5%		
Calibration Gas Drift ^{4,5} (D_{cal})	0.030% < 3%	0.026% < 3%	0.087% < 3%	0.000% < 3%	0.047% < 3%		
References and Formulas		<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 					

Unit 33C, Pollutant:		CO	NOx	THC	CO2	O2	
Method:		10.00	7E	25A	3A	3A	
Stack Gas Analysis 3	Compliance 3	Start	17:15 (1.000)	17:15 (9.250)	17:15 (0.025)	17:15 (5.144)	17:15 (13.681)
		Stop	18:14 (1.375)	18:14 (9.350)	18:14 (0.300)	18:14 (5.144)	18:14 (13.744)
		Stack Gas Response (C_{avg})	0.95	9.33	0.01	5.15	13.73
		Corrected Stack Gas Response ^{1,2} (C_{gas})	0.95	9.30	0.01	5.11	13.64
	System Loop	Zero Gas Start	18:17 (0.000)	18:17 (0.100)	18:17 (0.000)	18:17 (0.013)	18:17 (0.000)
		Zero Gas Stop	18:18 (0.000)	18:18 (0.100)	18:18 (0.000)	18:18 (0.006)	18:18 (0.000)
		Zero Gas Response ($C_{sys, zero}$)	0.00	0.10	0.00	0.01	0.00
		Average Zero Gas Response ($C_{sys, avg}$)	0.00	0.11	0.00	0.02	0.00
		Zero Gas Accuracy ³ (SB_{zero})	0.000% < 5%	0.205% < 5%	0.000% < 5%	0.080% < 5%	0.000% < 5%
		Zero Gas Drift ^{4,5} (D_{zero})	0.000% < 3%	0.051% < 3%	0.000% < 3%	0.080% < 3%	0.000% < 3%
		Calibration Gas Start	18:26 (10.656)	18:20 (24.575)	18:26 (10.225)	18:23 (9.806)	18:23 (9.888)
		Calibration Gas Stop	18:27 (10.625)	18:21 (24.600)	18:27 (10.275)	18:24 (9.825)	18:24 (9.888)
		Calibration Gas Response ($C_{sys, cal}$)	10.64	24.59	10.25	9.82	9.89
		Average Calibration Gas Response ($C_{sys, avg}$)	10.64	24.58	10.16	9.81	9.89
		Calibration Gas Accuracy ³ (SB_{cal})	0.335% < 5%	1.258% < 5%	NA	0.478% < 5%	0.344% < 5%
		Calibration Gas Drift ^{4,5} (D_{cal})	0.000% < 3%	0.051% < 3%	0.174% < 3%	0.064% < 3%	0.016% < 3%
References and Formulas		<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 					

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A
12/5/13 6:47 AM	0.00	0.05	0.05	0.01	0.01
12/5/13 6:48 AM	0.00	0.03	0.00	0.01	0.01
12/5/13 6:49 AM	0.03	8.33	0.03	0.01	0.01
12/5/13 6:50 AM	0.00	49.38	0.00	0.00	0.01
12/5/13 6:51 AM	0.00	48.80	0.00	0.01	0.00
12/5/13 6:52 AM	0.00	48.78	0.00	0.01	0.00
12/5/13 6:53 AM	0.00	42.48	0.05	0.01	0.01
12/5/13 6:54 AM	0.00	25.20	0.00	0.01	0.00
12/5/13 6:55 AM	0.03	25.18	0.00	0.00	0.00
12/5/13 6:56 AM	0.00	25.23	0.00	0.01	0.00
12/5/13 6:57 AM	0.00	13.60	0.15	10.74	10.43
12/5/13 6:58 AM	0.00	0.08	0.15	19.61	19.99
12/5/13 6:59 AM	0.00	0.03	0.18	19.63	19.99
12/5/13 7:00 AM	0.00	0.03	0.05	14.66	15.24
12/5/13 7:01 AM	0.00	0.03	0.03	9.91	9.96
12/5/13 7:02 AM	0.00	0.00	0.03	9.91	9.96
12/5/13 7:03 AM	35.44	0.08	92.08	4.86	5.23
12/5/13 7:04 AM	95.72	0.00	101.88	0.03	0.00
12/5/13 7:05 AM	102.72	0.00	101.75	0.03	0.00
12/5/13 7:06 AM	102.25	0.00	93.37	0.02	0.00
12/5/13 7:07 AM	79.19	0.00	50.03	0.02	0.01
12/5/13 7:08 AM	51.88	0.00	49.38	0.02	0.00
12/5/13 7:09 AM	51.28	0.00	49.68	0.02	0.00
12/5/13 7:10 AM	51.50	0.00	44.60	0.02	0.00
12/5/13 7:11 AM	27.47	0.00	12.80	0.03	2.13
12/5/13 7:12 AM	10.97	0.00	9.83	0.03	0.00
12/5/13 7:13 AM	11.00	0.00	9.87	0.03	0.00
12/5/13 7:14 AM	10.97	0.00	9.97	0.03	0.00
12/5/13 7:15 AM	6.00	0.00	0.00	0.02	0.00
12/5/13 7:16 AM	0.00	0.00	0.00	0.03	0.00
12/5/13 7:17 AM	0.00	0.00	0.00	0.03	0.00
12/5/13 7:18 AM	4.03	0.33	3.33	0.31	4.71
12/5/13 7:19 AM	10.44	16.20	0.23	2.36	8.39
12/5/13 7:20 AM	0.28	0.23	0.03	0.01	0.03
12/5/13 7:21 AM	0.00	0.03	0.00	0.00	0.00
12/5/13 7:22 AM	0.00	0.03	0.00	0.00	0.00
12/5/13 7:23 AM	0.06	3.35	0.03	0.29	0.83
12/5/13 7:24 AM	0.00	24.10	0.00	0.00	0.00
12/5/13 7:25 AM	0.00	25.00	0.00	0.00	0.00
12/5/13 7:26 AM	0.00	25.05	0.00	0.00	0.00
12/5/13 7:27 AM	0.00	21.85	0.00	3.54	3.45
12/5/13 7:28 AM	0.00	0.25	0.00	9.78	9.89
12/5/13 7:29 AM	0.00	0.05	0.00	9.81	9.91
12/5/13 7:30 AM	1.22	0.03	36.80	9.79	9.90
12/5/13 7:31 AM	73.16	0.03	100.60	0.71	0.94
12/5/13 7:32 AM	93.47	0.03	101.13	0.03	0.00
12/5/13 7:33 AM	93.59	0.00	100.98	0.01	0.00
12/5/13 7:34 AM	91.28	0.00	76.30	0.01	0.00
12/5/13 7:35 AM	54.72	0.00	51.93	0.01	0.00
12/5/13 7:36 AM	50.22	0.00	51.85	0.01	0.00
12/5/13 7:37 AM	43.72	0.00	23.00	0.01	0.00
12/5/13 7:38 AM	12.00	0.00	10.18	0.01	0.00
12/5/13 7:39 AM	10.78	0.00	10.13	0.01	0.00
12/5/13 7:40 AM	10.75	0.00	10.13	0.01	0.00
12/5/13 7:41 AM	9.84	0.00	4.25	0.01	0.00
12/5/13 7:42 AM	0.75	0.00	0.00	0.01	0.00
12/5/13 7:43 AM	0.00	0.00	0.00	0.01	0.00
12/5/13 7:44 AM	0.00	0.00	0.00	0.01	0.00
12/5/13 7:45 AM	0.28	7.30	0.38	1.26	3.11
12/5/13 2:45 PM	0.88	9.00	0.00	5.17	13.73
12/5/13 2:46 PM	0.84	9.05	0.00	5.17	13.73
12/5/13 2:47 PM	0.88	9.10	0.00	5.17	13.73
12/5/13 2:48 PM	0.88	9.22	0.00	5.17	13.73
12/5/13 2:49 PM	0.84	9.12	0.00	5.16	13.74
12/5/13 2:50 PM	0.88	9.10	0.00	5.16	13.73
12/5/13 2:51 PM	0.84	9.22	0.00	5.16	13.73
12/5/13 2:52 PM	0.88	9.17	0.00	5.16	13.73
12/5/13 2:53 PM	0.88	9.20	0.00	5.16	13.73

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A
12/5/13 2:54 PM	0.97	9.17	0.00	5.16	13.73
12/5/13 2:55 PM	0.88	9.15	0.00	5.16	13.73
12/5/13 2:56 PM	0.84	9.15	0.00	5.16	13.73
12/5/13 2:57 PM	0.84	9.25	0.00	5.16	13.73
12/5/13 2:58 PM	0.84	9.33	0.00	5.16	13.73
12/5/13 2:59 PM	0.88	9.15	0.00	5.16	13.73
12/5/13 3:00 PM	0.91	9.25	0.00	5.16	13.73
12/5/13 3:01 PM	0.91	9.22	0.00	5.15	13.74
12/5/13 3:02 PM	0.88	9.30	0.00	5.16	13.73
12/5/13 3:03 PM	0.88	9.33	0.00	5.16	13.73
12/5/13 3:04 PM	0.91	9.22	0.00	5.16	13.73
12/5/13 3:05 PM	0.88	9.28	0.00	5.15	13.74
12/5/13 3:06 PM	0.91	9.20	0.00	5.15	13.74
12/5/13 3:07 PM	0.91	9.30	0.00	5.15	13.74
12/5/13 3:08 PM	0.84	9.37	0.00	5.15	13.74
12/5/13 3:09 PM	0.88	9.35	0.00	5.16	13.73
12/5/13 3:10 PM	0.91	9.22	0.00	5.16	13.73
12/5/13 3:11 PM	0.88	9.22	0.00	5.16	13.73
12/5/13 3:12 PM	0.88	9.25	0.00	5.16	13.73
12/5/13 3:13 PM	0.91	9.22	0.00	5.16	13.73
12/5/13 3:14 PM	0.84	9.35	0.00	5.15	13.73
12/5/13 3:15 PM	0.88	9.53	0.00	5.15	13.74
12/5/13 3:16 PM	0.94	9.47	0.00	5.15	13.73
12/5/13 3:17 PM	0.84	9.25	0.00	5.15	13.74
12/5/13 3:18 PM	0.84	9.12	0.00	5.15	13.73
12/5/13 3:19 PM	0.84	9.05	0.00	5.15	13.73
12/5/13 3:20 PM	0.88	9.15	0.00	5.14	13.74
12/5/13 3:21 PM	0.88	9.33	0.00	5.15	13.74
12/5/13 3:22 PM	0.84	9.45	0.00	5.15	13.74
12/5/13 3:23 PM	0.91	9.50	0.00	5.14	13.74
12/5/13 3:24 PM	0.84	9.53	0.00	5.14	13.73
12/5/13 3:25 PM	0.84	9.47	0.00	5.14	13.73
12/5/13 3:26 PM	0.88	9.25	0.00	5.15	13.73
12/5/13 3:27 PM	0.91	9.35	0.00	5.15	13.73
12/5/13 3:28 PM	0.91	9.35	0.00	5.15	13.73
12/5/13 3:29 PM	0.88	9.17	0.00	5.15	13.73
12/5/13 3:30 PM	0.88	9.17	0.00	5.15	13.73
12/5/13 3:31 PM	0.91	9.22	0.00	5.15	13.73
12/5/13 3:32 PM	0.88	9.25	0.00	5.15	13.74
12/5/13 3:33 PM	0.91	9.30	0.00	5.14	13.74
12/5/13 3:34 PM	0.91	9.33	0.00	5.15	13.74
12/5/13 3:35 PM	0.91	9.35	0.00	5.15	13.74
12/5/13 3:36 PM	0.88	9.28	0.00	5.15	13.73
12/5/13 3:37 PM	0.88	9.30	0.00	5.15	13.73
12/5/13 3:38 PM	0.88	9.28	0.00	5.15	13.73
12/5/13 3:39 PM	0.91	9.35	0.00	5.15	13.73
12/5/13 3:40 PM	0.88	9.15	0.00	5.16	13.73
12/5/13 3:41 PM	0.88	9.28	0.00	5.15	13.73
12/5/13 3:42 PM	0.88	9.28	0.00	5.15	13.74
12/5/13 3:43 PM	0.91	9.37	0.00	5.16	13.73
12/5/13 3:44 PM	0.91	9.37	0.00	5.16	13.73
12/5/13 3:45 PM	1.06	9.33	1.13	5.16	13.73
12/5/13 3:46 PM	4.00	3.63	0.00	0.86	2.81
12/5/13 3:47 PM	0.00	0.15	0.00	0.03	0.00
12/5/13 3:48 PM	0.00	0.13	0.00	0.03	0.00
12/5/13 3:49 PM	0.00	11.95	0.00	0.02	0.00
12/5/13 3:50 PM	0.00	24.55	0.00	0.02	0.00
12/5/13 3:51 PM	0.00	24.60	0.00	0.01	0.00
12/5/13 3:52 PM	0.00	10.88	0.00	7.94	7.76
12/5/13 3:53 PM	0.00	0.20	0.00	9.79	9.87
12/5/13 3:54 PM	0.00	0.13	2.45	9.81	9.89
12/5/13 3:55 PM	6.63	0.13	10.15	2.12	2.39
12/5/13 3:56 PM	10.59	0.08	10.18	0.07	0.00
12/5/13 3:57 PM	10.63	0.05	10.15	0.03	0.00
12/5/13 4:00 PM	0.94	9.28	0.03	5.13	13.69
12/5/13 4:01 PM	0.88	9.40	0.00	5.14	13.71
12/5/13 4:02 PM	0.88	9.35	0.00	5.14	13.72
12/5/13 4:03 PM	0.88	9.28	0.00	5.15	13.73

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A
12/5/13 4:04 PM	0.88	9.15	0.00	5.15	13.73
12/5/13 4:05 PM	0.88	9.33	0.00	5.15	13.74
12/5/13 4:06 PM	0.91	9.28	0.00	5.15	13.74
12/5/13 4:07 PM	0.91	9.35	0.00	5.15	13.74
12/5/13 4:08 PM	0.84	9.33	0.00	5.16	13.73
12/5/13 4:09 PM	0.84	9.30	0.00	5.15	13.73
12/5/13 4:10 PM	0.78	9.37	0.00	5.18	13.73
12/5/13 4:11 PM	0.81	9.42	0.00	5.19	13.73
12/5/13 4:12 PM	0.84	9.28	0.00	5.18	13.73
12/5/13 4:13 PM	0.88	9.35	0.00	5.16	13.73
12/5/13 4:14 PM	0.84	9.33	0.00	5.16	13.73
12/5/13 4:15 PM	0.88	9.25	0.00	5.16	13.73
12/5/13 4:16 PM	0.91	9.33	0.00	5.16	13.73
12/5/13 4:17 PM	0.91	9.22	0.00	5.16	13.73
12/5/13 4:18 PM	0.84	9.35	0.00	5.16	13.73
12/5/13 4:19 PM	0.88	9.42	0.00	5.16	13.73
12/5/13 4:20 PM	0.88	9.47	0.00	5.15	13.73
12/5/13 4:21 PM	0.91	9.50	0.00	5.15	13.73
12/5/13 4:22 PM	0.94	9.37	0.00	5.15	13.73
12/5/13 4:23 PM	0.91	9.35	0.00	5.15	13.73
12/5/13 4:24 PM	0.84	9.40	0.00	5.15	13.73
12/5/13 4:25 PM	0.88	9.47	0.00	5.16	13.74
12/5/13 4:26 PM	0.88	9.40	0.00	5.15	13.73
12/5/13 4:27 PM	0.91	9.42	0.00	5.15	13.74
12/5/13 4:28 PM	0.88	9.42	0.00	5.15	13.74
12/5/13 4:29 PM	0.91	9.50	0.00	5.15	13.74
12/5/13 4:30 PM	0.94	9.45	0.00	5.15	13.74
12/5/13 4:31 PM	0.97	9.37	0.00	5.15	13.73
12/5/13 4:32 PM	0.97	9.33	0.00	5.15	13.73
12/5/13 4:33 PM	0.94	9.35	0.00	5.15	13.74
12/5/13 4:34 PM	0.94	9.28	0.00	5.15	13.74
12/5/13 4:35 PM	0.97	9.30	0.00	5.15	13.73
12/5/13 4:36 PM	0.97	9.40	0.00	5.16	13.73
12/5/13 4:37 PM	0.97	9.35	0.00	5.16	13.73
12/5/13 4:38 PM	1.00	9.33	0.00	5.16	13.73
12/5/13 4:39 PM	0.97	9.37	0.00	5.16	13.73
12/5/13 4:40 PM	0.94	9.25	0.00	5.16	13.73
12/5/13 4:41 PM	0.91	9.17	0.00	5.15	13.73
12/5/13 4:42 PM	0.97	9.25	0.00	5.16	13.73
12/5/13 4:43 PM	0.94	9.40	0.00	5.16	13.73
12/5/13 4:44 PM	0.97	9.25	0.00	5.15	13.73
12/5/13 4:45 PM	0.94	9.28	0.00	5.15	13.73
12/5/13 4:46 PM	0.97	9.35	0.00	5.15	13.74
12/5/13 4:47 PM	0.94	9.37	0.00	5.15	13.73
12/5/13 4:48 PM	0.94	9.37	0.00	5.15	13.73
12/5/13 4:49 PM	0.97	9.42	0.00	5.15	13.73
12/5/13 4:50 PM	1.00	9.37	0.00	5.15	13.73
12/5/13 4:51 PM	0.94	9.33	0.00	5.15	13.73
12/5/13 4:52 PM	0.97	9.40	0.00	5.15	13.73
12/5/13 4:53 PM	0.97	9.33	0.00	5.15	13.73
12/5/13 4:54 PM	0.97	9.40	0.00	5.15	13.73
12/5/13 4:55 PM	0.94	9.35	0.00	5.15	13.73
12/5/13 4:56 PM	0.97	9.33	0.00	5.15	13.74
12/5/13 4:57 PM	0.97	9.42	0.00	5.15	13.73
12/5/13 4:58 PM	0.94	9.30	0.00	5.14	13.73
12/5/13 4:59 PM	0.94	9.37	0.85	5.15	13.73
12/5/13 5:00 PM	4.22	9.22	0.03	4.69	12.67
12/5/13 5:01 PM	0.78	7.88	0.13	2.99	8.37
12/5/13 5:02 PM	0.00	0.15	0.00	0.03	0.00
12/5/13 5:03 PM	0.00	0.10	0.00	0.02	0.00
12/5/13 5:04 PM	0.00	12.25	0.00	0.01	0.00
12/5/13 5:05 PM	0.00	24.53	0.00	0.01	0.00
12/5/13 5:06 PM	0.00	24.60	0.00	0.01	0.00
12/5/13 5:07 PM	0.00	11.60	0.00	7.63	7.45
12/5/13 5:08 PM	0.00	0.20	0.00	9.79	9.89
12/5/13 5:09 PM	0.00	0.13	1.85	9.81	9.89
12/5/13 5:10 PM	6.19	0.10	10.05	2.46	2.73
12/5/13 5:11 PM	10.63	0.05	10.10	0.04	0.00
12/5/13 5:12 PM	10.66	0.05	10.05	0.03	0.00

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A

12/5/13 5:15 PM	1.00	9.25	0.03	5.14	13.68
12/5/13 5:16 PM	1.00	9.28	0.00	5.14	13.71
12/5/13 5:17 PM	1.03	9.33	0.00	5.15	13.72
12/5/13 5:18 PM	0.97	9.25	0.00	5.16	13.72
12/5/13 5:19 PM	0.97	9.28	0.00	5.16	13.73
12/5/13 5:20 PM	0.97	9.25	0.00	5.16	13.74
12/5/13 5:21 PM	0.97	9.25	0.00	5.16	13.73
12/5/13 5:22 PM	0.94	9.40	0.00	5.16	13.73
12/5/13 5:23 PM	0.91	9.28	0.00	5.16	13.73
12/5/13 5:24 PM	0.97	9.40	0.00	5.15	13.73
12/5/13 5:25 PM	0.94	9.35	0.00	5.16	13.73
12/5/13 5:26 PM	0.94	9.30	0.00	5.16	13.73
12/5/13 5:27 PM	0.94	9.37	0.00	5.16	13.73
12/5/13 5:28 PM	0.94	9.60	0.00	5.16	13.73
12/5/13 5:29 PM	0.94	9.40	0.00	5.16	13.73
12/5/13 5:30 PM	0.91	9.33	0.00	5.16	13.73
12/5/13 5:31 PM	0.94	9.35	0.00	5.16	13.74
12/5/13 5:32 PM	0.91	9.33	0.00	5.16	13.73
12/5/13 5:33 PM	0.94	9.25	0.00	5.16	13.74
12/5/13 5:34 PM	0.97	9.30	0.00	5.16	13.73
12/5/13 5:35 PM	0.94	9.33	0.00	5.16	13.74
12/5/13 5:36 PM	0.94	9.37	0.00	5.16	13.74
12/5/13 5:37 PM	0.97	9.28	0.00	5.15	13.74
12/5/13 5:38 PM	0.97	9.33	0.00	5.14	13.74
12/5/13 5:39 PM	0.97	9.28	0.00	5.15	13.74
12/5/13 5:40 PM	0.97	9.25	0.00	5.14	13.73
12/5/13 5:41 PM	0.91	9.33	0.00	5.15	13.74
12/5/13 5:42 PM	0.91	9.37	0.00	5.15	13.73
12/5/13 5:43 PM	0.94	9.30	0.00	5.16	13.74
12/5/13 5:44 PM	0.91	9.33	0.00	5.16	13.74
12/5/13 5:45 PM	0.91	9.40	0.00	5.15	13.74
12/5/13 5:46 PM	0.91	9.33	0.00	5.16	13.73
12/5/13 5:47 PM	0.91	9.33	0.00	5.15	13.73
12/5/13 5:48 PM	0.94	9.30	0.00	5.15	13.74
12/5/13 5:49 PM	0.94	9.28	0.00	5.15	13.74
12/5/13 5:50 PM	0.97	9.37	0.00	5.15	13.74
12/5/13 5:51 PM	0.94	9.33	0.00	5.15	13.74
12/5/13 5:52 PM	0.94	9.30	0.00	5.15	13.74
12/5/13 5:53 PM	0.94	9.35	0.00	5.15	13.74
12/5/13 5:54 PM	0.94	9.28	0.00	5.15	13.74
12/5/13 5:55 PM	0.94	9.22	0.00	5.15	13.74
12/5/13 5:56 PM	0.97	9.25	0.00	5.15	13.74
12/5/13 5:57 PM	0.94	9.33	0.00	5.15	13.74
12/5/13 5:58 PM	0.97	9.35	0.00	5.15	13.74
12/5/13 5:59 PM	0.94	9.42	0.00	5.15	13.74
12/5/13 6:00 PM	0.97	9.33	0.00	5.15	13.74
12/5/13 6:01 PM	0.97	9.42	0.00	5.15	13.74
12/5/13 6:02 PM	0.97	9.42	0.00	5.14	13.74
12/5/13 6:03 PM	0.97	9.42	0.00	5.15	13.74
12/5/13 6:04 PM	0.94	9.40	0.00	5.14	13.74
12/5/13 6:05 PM	0.94	9.33	0.00	5.15	13.74
12/5/13 6:06 PM	1.00	9.30	0.00	5.15	13.74
12/5/13 6:07 PM	1.00	9.28	0.00	5.15	13.74
12/5/13 6:08 PM	1.00	9.30	0.00	5.15	13.74
12/5/13 6:09 PM	1.00	9.33	0.00	5.15	13.74
12/5/13 6:10 PM	0.97	9.25	0.00	5.14	13.74
12/5/13 6:11 PM	0.97	9.30	0.00	5.14	13.74
12/5/13 6:12 PM	1.03	9.35	0.00	5.14	13.74
12/5/13 6:13 PM	1.00	9.35	0.00	5.15	13.74
12/5/13 6:14 PM	1.38	9.35	0.30	5.14	13.74
12/5/13 6:15 PM	3.63	8.45	0.25	4.51	12.52
12/5/13 6:16 PM	0.38	1.90	0.00	0.07	0.19
12/5/13 6:17 PM	0.00	0.10	0.00	0.01	0.00
12/5/13 6:18 PM	0.00	0.10	0.00	0.01	0.00
12/5/13 6:19 PM	0.00	12.48	0.00	0.01	0.00
12/5/13 6:20 PM	0.00	24.58	0.00	0.01	0.00
12/5/13 6:21 PM	0.00	24.60	0.00	0.01	0.00
12/5/13 6:22 PM	0.00	11.28	0.00	7.86	7.68

	Pollutant:	CO	NO _x	THC	CO ₂	O ₂
	Method:	10.00	7E	25A	3A	3A
12/5/13 6:23 PM		0.00	0.20	0.00	9.81	9.89
12/5/13 6:24 PM		0.00	0.13	2.30	9.83	9.89
12/5/13 6:25 PM		6.56	0.13	10.03	2.14	2.40
12/5/13 6:26 PM		10.66	0.08	10.23	0.05	0.00
12/5/13 6:27 PM		10.63	0.05	10.28	0.03	0.00

Pollutant:	CO	NO _x	THC	CO ₂	O ₂
Method:	10.00	7E	25A	3A	3A

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10.00	7E	25A	3A	3A

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**Unit 33C Annual Compliance Emission
Measurements 12-05-13.**

Gases Field Data Sheets

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KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Compliance

KOOGLER AND ASSOCIATES, INC.
INSTRUMENTAL GAS SAMPLING FIELD DATA RECORD

PLANT FPL				DATE 12/7/13			
LOCATION Port Canaveral, FL				EMISSION UNIT Unit # 33			
TEST(s) CO, NOx, THC, CO2, O2				SYSTEM LEAK CHECK (Limit 1 inHg/2min)			
				Init. VAC inHg 10		Final VAC inHg 10	
Cylinder Identification				Calibration Gas Certified Concentration Value			
Instrument	Low	Mid	High	Test	Zero / Low-Gas	Mid-Gas	High-Gas(span)
CO (M10)				CO (M10)			
SO2 (M6C)				SO2 (M6C)			
NOx (M7E)				NOx (M7E)			
THC (M25A)				THC (M25A)			
CH4				CH4			
NMHC				NMHC			
CO2 (M3A)				CO2 (M3A)			
O2 (M3A)				O2 (M3A)			
TIME	Action / Comment			TIME	Action / Comment		
14:45	Start Run # 1						
15:48	End Run # 1 N2 on						
15:47	CO=0.0 NOx=0.1 THC= CO2=9.8 O2=0.0						
15:49	24.7 NOx on						
15:50	NOx = 24.6						
15:52	9.74 CO2 / 9.82 O2 on						
15:53	CO2=9.80 O2=9.88						
15:55	10.1 prop 10.5 CO on						
15:56	THC=10.12 CO=10.6						
16:00	Start Run # 2						
17:00	End Run # 2 N2 on						
17:02	CO=0 NOx=0.2 THC=0 CO2=0.03 O2=0.01						
17:04	24.7 NOx on						
17:05	NOx = 24.5						
17:07	9.74 CO2 / 9.82 O2 on						
17:08	CO2=9.76 O2=9.87						
17:10	10.1 prop 10.5 CO on						
17:11	THC=10.0 CO=10.6						
17:15	Start Run # 3						
18:16	End Run # 3 N2 on						
18:17	CO=0 NOx=0.2 THC=0 CO2=0.03 O2=0.01						
18:19	24.7 NOx on						
18:20	NOx = 24.5						
18:22	9.74 CO2 / 9.82 O2						
18:23	CO2=9.76 O2=9.88						
18:25	10.1 prop 10.5 CO on						
18:26	THC=10.2 CO=10.63						

CO NOx
0.68 7.53
0.71 7.64
0.75 7.63

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Unit 33C Annual Compliance Emission
Measurements 12-05-13.

Ammonia Slip (NH₃) Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Spectrum	Date	Time	NH3 (300) 191C (1o NH3 dry)	H2O% (40) 191C	CO2% (40) 191C	Ethylene (100,3000) 191C	Calibration Transfer Std., Section 8.6.1 ethylene = 98.6 ppm in N2					
							98.6 ppm					
Start Ethylene Spike												
12052013_000012.LAB	12/5/2013	7:33:51	-0.17	-0.17	0.05	0.00	103.82	105.29%				
N/A	12/5/2013	7:34:50	-0.14	-0.14	0.01	0.00	98.25	99.64%	Is CT gas +-5% of surrogate value?			
12052013_000013.LAB	12/5/2013	7:35:49	-0.13	-0.13	0.01	-0.01	98.41	99.81%	YES			
N/A	12/5/2013	7:36:18	-0.14	-0.14	0.01	-0.01	98.44	99.83%				
N/A	12/5/2013	7:36:48	-0.10	-0.10	0.02	0.00	98.04	99.43%				
End Ethylene Spike												
							Quality Assurance Spike, Section 8.6.2					
							DF	C _{Sm}	Diff	unspike estimated at 0.4 ppm		
							fraction of	expected		Spike = 25 ppm		
							spike ratio	NH3 ppm	%	Is recovery within		
QA spike	12052013_001043.LAB	12/5/2013	17:24:42	5.28	5.63	6.17	3.74	0.24	23.3%	6.13	86%	70 to 130 % ?
							YES					
Start Run 1												
12052013_000717.LAB	12/5/2013	14:45:01	1.29	1.42	9.38	4.79	0.24					
12052013_000718.LAB	12/5/2013	14:45:31	1.20	1.32	9.23	4.80	0.16					
12052013_000719.LAB	12/5/2013	14:46:00	1.08	1.17	7.97	4.89	0.29					
12052013_000720.LAB	12/5/2013	14:46:29	0.95	1.02	7.11	4.94	0.18					
12052013_000721.LAB	12/5/2013	14:46:59	0.89	0.96	6.64	4.97	0.24					
12052013_000722.LAB	12/5/2013	14:47:28	0.90	0.96	6.56	4.96	0.19					
12052013_000723.LAB	12/5/2013	14:47:58	1.16	1.27	8.80	4.85	0.29					
12052013_000724.LAB	12/5/2013	14:48:27	1.01	1.09	7.35	4.91	0.25					
12052013_000725.LAB	12/5/2013	14:48:56	0.97	1.04	7.52	4.91	0.24					
12052013_000726.LAB	12/5/2013	14:49:26	0.90	0.97	7.05	4.93	0.19					
12052013_000727.LAB	12/5/2013	14:49:55	0.80	0.86	6.28	4.98	0.23					
12052013_000728.LAB	12/5/2013	14:50:25	1.10	1.23	10.49	4.73	0.27					
12052013_000729.LAB	12/5/2013	14:50:54	0.94	1.03	8.59	4.84	0.24					
12052013_000730.LAB	12/5/2013	14:51:23	0.86	0.93	7.47	4.90	0.15					
12052013_000731.LAB	12/5/2013	14:51:53	0.76	0.81	6.36	4.96	0.26					
12052013_000732.LAB	12/5/2013	14:52:22	0.68	0.72	5.86	5.01	0.17					
12052013_000733.LAB	12/5/2013	14:52:52	0.70	0.75	6.01	5.00	0.17					
12052013_000734.LAB	12/5/2013	14:53:21	0.72	0.77	6.61	4.97	0.18					
12052013_000735.LAB	12/5/2013	14:53:50	0.79	0.86	7.77	4.90	0.27					
12052013_000736.LAB	12/5/2013	14:54:20	0.73	0.79	7.35	4.92	0.17					
12052013_000737.LAB	12/5/2013	14:54:49	0.77	0.84	8.04	4.87	0.23					
12052013_000738.LAB	12/5/2013	14:55:18	0.99	1.11	11.43	4.69	0.31					
12052013_000739.LAB	12/5/2013	14:55:48	1.03	1.18	12.05	4.64	0.32					
12052013_000740.LAB	12/5/2013	14:56:17	0.85	0.93	9.59	4.79	0.28					
12052013_000741.LAB	12/5/2013	14:56:47	0.75	0.82	8.34	4.86	0.22					
12052013_000742.LAB	12/5/2013	14:57:16	0.71	0.76	7.42	4.91	0.22					
12052013_000743.LAB	12/5/2013	14:57:45	0.70	0.74	6.38	4.95	0.23					
12052013_000744.LAB	12/5/2013	14:58:15	0.65	0.69	5.78	5.01	0.19					
12052013_000745.LAB	12/5/2013	14:58:44	0.63	0.67	5.60	5.01	0.22					
12052013_000746.LAB	12/5/2013	14:59:13	0.80	0.88	8.36	4.84	0.18					
12052013_000747.LAB	12/5/2013	14:59:43	0.86	0.96	10.17	4.74	0.27					
12052013_000748.LAB	12/5/2013	15:00:12	0.75	0.82	8.44	4.85	0.23					
12052013_000749.LAB	12/5/2013	15:00:42	0.84	0.93	9.95	4.76	0.35					
12052013_000750.LAB	12/5/2013	15:01:11	0.75	0.82	8.63	4.83	0.25					
12052013_000751.LAB	12/5/2013	15:01:40	0.70	0.76	7.55	4.89	0.29					
12052013_000752.LAB	12/5/2013	15:02:10	0.67	0.72	6.93	4.92	0.20					
12052013_000753.LAB	12/5/2013	15:02:39	0.63	0.67	6.59	4.95	0.20					
12052013_000754.LAB	12/5/2013	15:03:09	0.70	0.76	7.57	4.89	0.23					
12052013_000755.LAB	12/5/2013	15:03:38	0.82	0.90	9.45	4.79	0.25					
12052013_000756.LAB	12/5/2013	15:04:07	0.74	0.80	7.83	4.87	0.20					
12052013_000757.LAB	12/5/2013	15:04:37	0.66	0.71	6.71	4.93	0.22					
12052013_000758.LAB	12/5/2013	15:05:06	0.70	0.76	7.34	4.90	0.33					
12052013_000759.LAB	12/5/2013	15:05:36	0.87	0.97	10.88	4.70	0.22					
12052013_000760.LAB	12/5/2013	15:06:05	0.75	0.82	8.98	4.80	0.24					
12052013_000761.LAB	12/5/2013	15:06:34	0.69	0.75	8.00	4.86	0.32					
12052013_000762.LAB	12/5/2013	15:07:04	0.65	0.70	7.31	4.89	0.19					
12052013_000763.LAB	12/5/2013	15:07:33	0.62	0.67	6.89	4.92	0.24					
12052013_000764.LAB	12/5/2013	15:08:02	0.59	0.63	6.63	4.96	0.15					
12052013_000765.LAB	12/5/2013	15:08:32	0.77	0.85	9.59	4.78	0.21					
12052013_000766.LAB	12/5/2013	15:09:01	0.82	0.93	11.45	4.69	0.21					
12052013_000767.LAB	12/5/2013	15:09:31	0.75	0.83	9.37	4.80	0.34					
12052013_000768.LAB	12/5/2013	15:10:00	0.71	0.77	7.99	4.88	0.30					
12052013_000769.LAB	12/5/2013	15:10:30	0.63	0.70	7.08	4.93	0.32					
12052013_000770.LAB	12/5/2013	15:10:59	0.66	0.72	7.55	4.92	0.28					
12052013_000771.LAB	12/5/2013	15:11:28	0.68	0.75	8.54	4.84	0.28					
12052013_000772.LAB	12/5/2013	15:11:58	0.74	0.81	9.37	4.81	0.28					
12052013_000773.LAB	12/5/2013	15:12:27	0.63	0.69	7.73	4.90	0.23					
12052013_000774.LAB	12/5/2013	15:12:56	0.59	0.64	7.13	4.93	0.16					
12052013_000775.LAB	12/5/2013	15:13:26	0.58	0.62	6.61	4.97	0.16					
12052013_000776.LAB	12/5/2013	15:13:55	0.56	0.60	6.29	5.00	0.11					
12052013_000777.LAB	12/5/2013	15:14:24	0.55	0.59	5.97	5.01	0.15					
12052013_000778.LAB	12/5/2013	15:14:54	0.70	0.77	9.24	4.81	0.20					
12052013_000779.LAB	12/5/2013	15:15:23	0.72	0.79	9.46	4.80	0.27					
12052013_000780.LAB	12/5/2013	15:15:53	0.70	0.78	9.83	4.78	0.29					
12052013_000781.LAB	12/5/2013	15:16:22	0.71	0.79	9.95	4.77	0.25					
12052013_000782.LAB	12/5/2013	15:16:52	0.64	0.70	8.24	4.86	0.23					
12052013_000783.LAB	12/5/2013	15:17:21	0.60	0.64	7.30	4.92	0.25					
12052013_000784.LAB	12/5/2013	15:17:50	0.54	0.58	6.89	4.95	0.18					
12052013_000785.LAB	12/5/2013	15:18:20	0.58	0.62	6.48	4.98	0.16					
12052013_000786.LAB	12/5/2013	15:18:49	0.78	0.87	10.55	4.72	0.28					
12052013_000787.LAB	12/5/2013	15:19:18	0.72	0.80	10.31	4.75	0.30					
12052013_000788.LAB	12/5/2013	15:19:48	0.64	0.70	8.84	4.84	0.29					
12052013_000789.LAB	12/5/2013	15:20:17	0.63	0.69	8.07	4.88	0.25					
12052013_000790.LAB	12/5/2013	15:20:47	0.62	0.67	7.40	4.92	0.27					
12052013_000791.LAB	12/5/2013	15:21:16	0.58	0.62	6.99	4.94	0.24					
12052013_000792.LAB	12/5/2013	15:21:46	0.68	0.75	9.16	4.81	0.16					
12052013_000793.LAB	12/5/2013	15:22:15	0.65	0.71	8.68	4.84	0.28					
12052013_000794.LAB	12/5/2013	15:22:44	0.63	0.69	8.99	4.82	0.30					
12052013_000795.LAB	12/5/2013	15:23:13	0.65	0.71	8.61	4.85	0.28					
12052013_000796.LAB	12/5/2013	15:23:43	0.62	0.68	7.57	4.91	0.22					
12052013_000797.LAB	12/5/2013	15:24:12	0.56	0.60	7.11	4.92	0.22					
12052013_000798.LAB	12/5/2013	15:24:42	0.59	0.64	6.95	4.95	0.25					
12052013_000799.LAB	12/5/2013	15:25:11	0.57	0.62	7.35	4.92	0.21					
12052013_000800.LAB	12/5/2013	15:25:40	0.73	0.82	10.86	4.72	0.25					
12052013_000801.LAB	12/5/2013	15:26:10	0.63	0.70	8.95	4.81	0.30					
12052013_000802.LAB	12/5/2013	15:26:39	0.66	0.72	8.31	4.86	0.23					
12052013_000803.LAB	12/5/2013	15:27:09	0.64	0.70	7.62	4.91	0.26					

12052013_000804.LAB	12/5/2013	15:27:38	0.61	0.66	6.90	4.95	0.21	
12052013_000805.LAB	12/5/2013	15:28:07	0.59	0.63	6.60	4.96	0.18	
12052013_000806.LAB	12/5/2013	15:28:37	0.55	0.59	6.28	4.99	0.16	
12052013_000807.LAB	12/5/2013	15:29:06	0.54	0.58	6.24	5.00	0.23	
12052013_000808.LAB	12/5/2013	15:29:35	0.77	0.86	10.89	4.71	0.22	
12052013_000809.LAB	12/5/2013	15:30:05	0.70	0.78	10.24	4.74	0.29	
12052013_000810.LAB	12/5/2013	15:30:34	0.75	0.84	10.39	4.73	0.32	
12052013_000811.LAB	12/5/2013	15:31:04	0.66	0.72	8.93	4.82	0.27	
12052013_000812.LAB	12/5/2013	15:31:33	0.66	0.72	9.04	4.82	0.31	
12052013_000813.LAB	12/5/2013	15:32:02	0.63	0.69	8.24	4.86	0.29	
12052013_000814.LAB	12/5/2013	15:32:32	0.59	0.64	7.68	4.89	0.25	
12052013_000815.LAB	12/5/2013	15:33:01	0.59	0.64	7.32	4.90	0.20	
12052013_000816.LAB	12/5/2013	15:33:31	0.58	0.62	7.03	4.93	0.25	
12052013_000817.LAB	12/5/2013	15:34:00	0.58	0.63	6.80	4.95	0.23	
12052013_000818.LAB	12/5/2013	15:34:29	0.59	0.63	6.60	4.96	0.16	
12052013_000819.LAB	12/5/2013	15:34:59	1.02	1.14	10.50	4.70	0.29	
12052013_000820.LAB	12/5/2013	15:35:28	0.85	0.95	10.52	4.72	0.29	
12052013_000821.LAB	12/5/2013	15:35:58	0.72	0.80	9.16	4.80	0.26	
12052013_000822.LAB	12/5/2013	15:36:27	0.63	0.68	7.93	4.88	0.18	
12052013_000823.LAB	12/5/2013	15:36:56	0.59	0.63	7.19	4.92	0.16	
12052013_000824.LAB	12/5/2013	15:37:26	0.55	0.58	6.71	4.95	0.18	
12052013_000825.LAB	12/5/2013	15:37:55	0.60	0.65	7.63	4.89	0.31	
12052013_000826.LAB	12/5/2013	15:38:24	0.63	0.69	8.46	4.85	0.23	
12052013_000827.LAB	12/5/2013	15:38:54	0.63	0.69	7.90	4.88	0.24	
12052013_000828.LAB	12/5/2013	15:39:23	0.57	0.62	7.34	4.92	0.23	
12052013_000829.LAB	12/5/2013	15:39:53	0.63	0.69	8.24	4.87	0.24	
12052013_000830.LAB	12/5/2013	15:40:22	0.66	0.74	9.77	4.78	0.26	
12052013_000831.LAB	12/5/2013	15:40:51	0.64	0.70	9.48	4.80	0.36	
12052013_000832.LAB	12/5/2013	15:41:21	0.58	0.63	8.29	4.87	0.21	
12052013_000833.LAB	12/5/2013	15:41:50	0.62	0.68	8.65	4.85	0.30	
12052013_000834.LAB	12/5/2013	15:42:20	0.57	0.62	7.80	4.90	0.22	
12052013_000835.LAB	12/5/2013	15:42:49	0.57	0.61	7.17	4.93	0.18	
12052013_000836.LAB	12/5/2013	15:43:18	0.58	0.62	6.86	4.95	0.17	
12052013_000837.LAB	12/5/2013	15:43:48	0.62	0.68	7.77	4.90	0.25	
12052013_000838.LAB	12/5/2013	15:44:17	0.67	0.72	7.38	4.92	0.32	
12052013_000839.LAB	12/5/2013	15:44:46	0.82	0.90	9.14	4.82	0.23	
12052013_000840.LAB	12/5/2013	15:45:16	0.69	0.76	9.11	4.82	0.35	
12052013_000841.LAB	12/5/2013	15:45:45	0.63	0.69	8.03	4.88	0.30	
12052013_000842.LAB	12/5/2013	15:46:15	0.58	0.63	7.54	4.92	0.28	
12052013_000843.LAB	12/5/2013	15:46:44	0.54	0.58	7.31	4.93	0.20	
12052013_000844.LAB	12/5/2013	15:47:13	0.53	0.57	6.94	4.95	0.25	
12052013_000845.LAB	12/5/2013	15:47:43	0.58	0.63	7.92	4.89	0.26	
12052013_000846.LAB	12/5/2013	15:48:12	0.62	0.68	8.97	4.83	0.24	
12052013_000847.LAB	12/5/2013	15:48:42	0.58	0.63	7.81	4.90	0.15	
12052013_000848.LAB	12/5/2013	15:49:11	0.64	0.71	9.71	4.79	0.22	
12052013_000849.LAB	12/5/2013	15:49:40	0.63	0.69	9.34	4.81	0.32	
12052013_000850.LAB	12/5/2013	15:50:10	0.65	0.72	9.71	4.79	0.30	
12052013_000851.LAB	12/5/2013	15:50:39	0.59	0.65	8.88	4.83	0.24	
12052013_000852.LAB	12/5/2013	15:51:08	0.61	0.66	7.91	4.89	0.23	
12052013_000853.LAB	12/5/2013	15:51:38	0.59	0.64	7.39	4.91	0.20	
12052013_000854.LAB	12/5/2013	15:52:08	0.59	0.63	6.71	4.94	0.24	
End Run 1	12052013_000855.LAB	12/5/2013	15:52:37	0.55	0.59	6.47	4.96	0.19
Start Run 2	12052013_000856.LAB	12/5/2013	15:53:06	0.64	0.70	8.32	4.87	0.31
	12052013_000857.LAB	12/5/2013	15:53:35	0.73	0.81	10.52	4.72	0.28
	12052013_000858.LAB	12/5/2013	15:54:05	0.64	0.70	9.00	4.79	0.30
	12052013_000859.LAB	12/5/2013	15:54:34	0.62	0.68	8.40	4.84	0.27
	12052013_000860.LAB	12/5/2013	15:55:04	0.61	0.66	7.83	4.88	0.30
	12052013_000861.LAB	12/5/2013	15:55:33	0.59	0.64	7.28	4.91	0.22
	12052013_000862.LAB	12/5/2013	15:56:02	0.54	0.58	6.76	4.96	0.16
	12052013_000863.LAB	12/5/2013	15:56:32	0.76	0.86	11.41	4.68	0.24
	12052013_000864.LAB	12/5/2013	15:57:01	0.70	0.78	10.31	4.74	0.20
	12052013_000865.LAB	12/5/2013	15:57:31	0.65	0.72	9.66	4.77	0.34
	12052013_000866.LAB	12/5/2013	15:58:00	0.62	0.68	8.64	4.84	0.25
	12052013_000867.LAB	12/5/2013	15:58:29	0.66	0.73	9.28	4.80	0.20
	12052013_000868.LAB	12/5/2013	15:58:59	0.64	0.70	7.89	4.87	0.21
	12052013_000869.LAB	12/5/2013	15:59:28	0.65	0.70	8.07	4.88	0.25
	12052013_000870.LAB	12/5/2013	15:59:57	0.59	0.64	7.16	4.92	0.23
	12052013_000871.LAB	12/5/2013	16:00:27	0.53	0.57	6.76	4.95	0.18
	12052013_000872.LAB	12/5/2013	16:00:56	0.55	0.58	6.55	4.96	0.23
	12052013_000873.LAB	12/5/2013	16:01:26	0.50	0.54	6.41	4.96	0.22
	12052013_000874.LAB	12/5/2013	16:01:55	0.50	0.53	6.32	4.97	0.17
	12052013_000875.LAB	12/5/2013	16:02:24	0.57	0.63	8.37	4.85	0.27
	12052013_000876.LAB	12/5/2013	16:02:54	0.58	0.62	7.91	4.87	0.20
	12052013_000877.LAB	12/5/2013	16:03:23	0.58	0.62	7.45	4.90	0.30
	12052013_000878.LAB	12/5/2013	16:03:53	0.56	0.60	7.05	4.93	0.23
	12052013_000879.LAB	12/5/2013	16:04:22	0.76	0.86	11.46	4.66	0.34
	12052013_000880.LAB	12/5/2013	16:04:51	0.69	0.77	10.34	4.73	0.29
	12052013_000881.LAB	12/5/2013	16:05:21	0.63	0.69	8.73	4.83	0.24
	12052013_000882.LAB	12/5/2013	16:05:50	0.61	0.66	7.86	4.88	0.20
	12052013_000883.LAB	12/5/2013	16:06:19	0.59	0.64	7.43	4.90	0.19
	12052013_000884.LAB	12/5/2013	16:06:49	0.58	0.63	7.49	4.90	0.24
	12052013_000885.LAB	12/5/2013	16:07:18	0.67	0.74	9.27	4.80	0.30
	12052013_000886.LAB	12/5/2013	16:07:48	0.73	0.81	9.78	4.77	0.25
	12052013_000887.LAB	12/5/2013	16:08:17	0.73	0.80	8.62	4.84	0.21
	12052013_000888.LAB	12/5/2013	16:08:47	0.70	0.77	8.85	4.83	0.32
	12052013_000889.LAB	12/5/2013	16:09:16	0.64	0.69	7.84	4.89	0.30
	12052013_000890.LAB	12/5/2013	16:09:45	0.58	0.63	7.34	4.91	0.30
	12052013_000891.LAB	12/5/2013	16:10:15	0.58	0.62	7.08	4.92	0.29
	12052013_000892.LAB	12/5/2013	16:10:44	0.60	0.65	6.63	4.96	0.16
	12052013_000893.LAB	12/5/2013	16:11:13	0.62	0.66	6.05	5.01	0.19
	12052013_000894.LAB	12/5/2013	16:11:43	0.60	0.64	6.99	4.93	0.21
	12052013_000895.LAB	12/5/2013	16:12:12	0.79	0.90	11.70	4.66	0.30
	12052013_000896.LAB	12/5/2013	16:12:41	0.69	0.76	9.68	4.78	0.26
	12052013_000897.LAB	12/5/2013	16:13:11	0.66	0.73	9.12	4.82	0.24
	12052013_000898.LAB	12/5/2013	16:13:40	0.58	0.63	7.98	4.87	0.26
	12052013_000899.LAB	12/5/2013	16:14:10	0.55	0.59	7.39	4.90	0.19
	12052013_000900.LAB	12/5/2013	16:14:39	0.49	0.52	6.97	4.94	0.16
	12052013_000901.LAB	12/5/2013	16:15:08	0.49	0.53	6.76	4.95	0.19
	12052013_000902.LAB	12/5/2013	16:15:38	0.53	0.56	6.62	4.96	0.18
	12052013_000903.LAB	12/5/2013	16:16:07	0.52	0.56	6.88	4.95	0.26
	12052013_000904.LAB	12/5/2013	16:16:37	0.65	0.72	10.05	4.75	0.32
	12052013_000905.LAB	12/5/2013	16:17:06	0.58	0.63	8.46	4.85	0.24
	12052013_000906.LAB	12/5/2013	16:17:35	0.52	0.57	7.90	4.87	0.28
	12052013_000907.LAB	12/5/2013	16:18:05	0.54	0.59	7.58	4.90	0.30
	12052013_000908.LAB	12/5/2013	16:18:34	0.53	0.57	7.39	4.91	0.25
	12052013_000909.LAB	12/5/2013	16:19:04	0.64	0.69	7.21	4.92	0.16
	12052013_000910.LAB	12/5/2013	16:19:33	0.77	0.83	6.82	4.95	0.21
	12052013_000911.LAB	12/5/2013	16:20:02	0.72	0.79	8.74	4.83	0.21

12052013_000912.LAB	12/5/2013	16:20:32	0.69	0.76	9.19	4.81	0.24
12052013_000913.LAB	12/5/2013	16:21:01	0.67	0.74	9.22	4.80	0.31
12052013_000914.LAB	12/5/2013	16:21:30	0.59	0.64	8.14	4.86	0.30
12052013_000915.LAB	12/5/2013	16:22:00	0.56	0.60	7.44	4.90	0.20
12052013_000916.LAB	12/5/2013	16:22:29	0.58	0.62	7.03	4.93	0.27
12052013_000917.LAB	12/5/2013	16:22:59	0.54	0.58	6.41	4.96	0.18
12052013_000918.LAB	12/5/2013	16:23:28	0.53	0.57	6.22	4.97	0.26
12052013_000919.LAB	12/5/2013	16:23:57	0.52	0.55	6.51	4.96	0.21
12052013_000920.LAB	12/5/2013	16:24:27	0.70	0.79	10.68	4.71	0.29
12052013_000921.LAB	12/5/2013	16:24:56	0.61	0.68	9.28	4.79	0.22
12052013_000922.LAB	12/5/2013	16:25:26	0.59	0.65	8.57	4.84	0.24
12052013_000923.LAB	12/5/2013	16:25:55	0.69	0.77	10.72	4.70	0.29
12052013_000924.LAB	12/5/2013	16:26:24	0.61	0.68	9.75	4.75	0.27
12052013_000925.LAB	12/5/2013	16:26:54	0.68	0.76	10.10	4.75	0.26
12052013_000926.LAB	12/5/2013	16:27:23	0.74	0.84	11.76	4.64	0.25
12052013_000927.LAB	12/5/2013	16:27:52	0.64	0.71	9.83	4.76	0.25
12052013_000928.LAB	12/5/2013	16:28:22	0.58	0.63	8.24	4.84	0.16
12052013_000929.LAB	12/5/2013	16:28:51	0.54	0.59	7.66	4.88	0.26
12052013_000930.LAB	12/5/2013	16:29:21	0.54	0.58	7.25	4.90	0.16
12052013_000931.LAB	12/5/2013	16:29:50	0.55	0.60	7.49	4.89	0.27
12052013_000932.LAB	12/5/2013	16:30:19	0.63	0.69	8.73	4.82	0.29
12052013_000933.LAB	12/5/2013	16:30:49	0.61	0.66	8.12	4.85	0.32
12052013_000934.LAB	12/5/2013	16:31:18	0.56	0.60	7.50	4.89	0.21
12052013_000935.LAB	12/5/2013	16:31:48	0.52	0.56	7.05	4.91	0.28
12052013_000936.LAB	12/5/2013	16:32:17	0.53	0.57	6.74	4.95	0.23
12052013_000937.LAB	12/5/2013	16:32:46	0.50	0.53	6.50	4.95	0.22
12052013_000938.LAB	12/5/2013	16:33:16	0.74	0.83	11.20	4.69	0.27
12052013_000939.LAB	12/5/2013	16:33:45	0.68	0.76	10.39	4.73	0.27
12052013_000940.LAB	12/5/2013	16:34:14	0.57	0.62	8.87	4.82	0.32
12052013_000941.LAB	12/5/2013	16:34:44	0.52	0.57	7.92	4.89	0.20
12052013_000942.LAB	12/5/2013	16:35:13	0.59	0.65	9.33	4.80	0.24
12052013_000943.LAB	12/5/2013	16:35:43	0.62	0.68	9.73	4.79	0.21
12052013_000944.LAB	12/5/2013	16:36:12	0.56	0.61	8.76	4.84	0.21
12052013_000945.LAB	12/5/2013	16:36:41	0.55	0.60	8.20	4.87	0.24
12052013_000946.LAB	12/5/2013	16:37:11	0.51	0.55	7.78	4.90	0.21
12052013_000947.LAB	12/5/2013	16:37:40	0.52	0.56	7.45	4.92	0.24
12052013_000948.LAB	12/5/2013	16:38:10	0.69	0.77	10.68	4.73	0.22
12052013_000949.LAB	12/5/2013	16:38:39	0.60	0.66	9.39	4.80	0.24
12052013_000950.LAB	12/5/2013	16:39:08	0.57	0.62	8.65	4.86	0.21
12052013_000951.LAB	12/5/2013	16:39:38	0.56	0.61	7.61	4.91	0.21
12052013_000952.LAB	12/5/2013	16:40:07	0.54	0.58	7.63	4.91	0.23
12052013_000953.LAB	12/5/2013	16:40:37	0.52	0.57	7.83	4.90	0.24
12052013_000954.LAB	12/5/2013	16:41:06	0.53	0.58	7.83	4.90	0.20
12052013_000955.LAB	12/5/2013	16:41:36	0.51	0.56	7.76	4.91	0.18
12052013_000956.LAB	12/5/2013	16:42:05	0.50	0.54	7.14	4.93	0.25
12052013_000957.LAB	12/5/2013	16:42:34	0.51	0.55	7.25	4.94	0.22
12052013_000958.LAB	12/5/2013	16:43:04	0.48	0.52	7.48	4.93	0.25
12052013_000959.LAB	12/5/2013	16:43:33	0.50	0.54	7.74	4.90	0.16
12052013_000960.LAB	12/5/2013	16:44:02	0.49	0.54	7.81	4.90	0.23
12052013_000961.LAB	12/5/2013	16:44:32	0.51	0.56	8.46	4.87	0.18
12052013_000962.LAB	12/5/2013	16:45:01	0.54	0.60	8.90	4.85	0.22
12052013_000963.LAB	12/5/2013	16:45:30	0.51	0.55	8.26	4.87	0.17
12052013_000964.LAB	12/5/2013	16:46:00	0.56	0.62	9.06	4.82	0.19
12052013_000965.LAB	12/5/2013	16:46:29	0.51	0.56	8.68	4.84	0.28
12052013_000966.LAB	12/5/2013	16:46:59	0.52	0.57	8.15	4.88	0.23
12052013_000967.LAB	12/5/2013	16:47:28	0.47	0.50	7.71	4.91	0.26
12052013_000968.LAB	12/5/2013	16:47:57	0.62	0.69	10.84	4.72	0.29
12052013_000969.LAB	12/5/2013	16:48:27	0.62	0.69	10.45	4.74	0.24
12052013_000970.LAB	12/5/2013	16:48:56	0.61	0.67	9.67	4.78	0.29
12052013_000971.LAB	12/5/2013	16:49:26	0.61	0.67	8.85	4.83	0.25
12052013_000972.LAB	12/5/2013	16:49:55	0.63	0.69	7.76	4.90	0.23
12052013_000973.LAB	12/5/2013	16:50:24	0.60	0.64	7.39	4.92	0.24
12052013_000974.LAB	12/5/2013	16:50:54	0.59	0.65	8.21	4.88	0.24
12052013_000975.LAB	12/5/2013	16:51:23	0.62	0.68	8.87	4.83	0.32
12052013_000976.LAB	12/5/2013	16:51:52	0.53	0.58	7.83	4.90	0.22
12052013_000977.LAB	12/5/2013	16:52:22	0.51	0.55	7.36	4.91	0.15
12052013_000978.LAB	12/5/2013	16:52:51	0.52	0.56	7.74	4.92	0.21
12052013_000979.LAB	12/5/2013	16:53:21	0.63	0.71	11.02	4.71	0.28
12052013_000980.LAB	12/5/2013	16:53:50	0.59	0.65	9.70	4.78	0.26
12052013_000981.LAB	12/5/2013	16:54:19	0.60	0.66	8.51	4.86	0.24
12052013_000982.LAB	12/5/2013	16:54:49	0.56	0.61	7.55	4.93	0.20
12052013_000983.LAB	12/5/2013	16:55:18	0.57	0.62	8.93	4.82	0.27
12052013_000984.LAB	12/5/2013	16:55:48	0.53	0.58	8.74	4.85	0.23
12052013_000985.LAB	12/5/2013	16:56:17	0.50	0.55	8.06	4.89	0.18
12052013_000986.LAB	12/5/2013	16:56:46	0.51	0.55	7.65	4.92	0.27
12052013_000987.LAB	12/5/2013	16:57:16	0.48	0.52	7.29	4.93	0.28
12052013_000988.LAB	12/5/2013	16:57:45	0.52	0.56	7.22	4.94	0.22
12052013_000989.LAB	12/5/2013	16:58:15	0.54	0.60	8.84	4.84	0.19
12052013_000990.LAB	12/5/2013	16:58:44	0.58	0.65	10.16	4.76	0.23
12052013_000991.LAB	12/5/2013	16:59:13	0.55	0.61	8.78	4.84	0.24
12052013_000992.LAB	12/5/2013	16:59:43	0.56	0.62	9.51	4.80	0.18
12052013_000993.LAB	12/5/2013	17:00:12	0.55	0.61	9.20	4.81	0.28
12052013_000994.LAB	12/5/2013	17:00:42	0.57	0.63	9.13	4.82	0.27
12052013_000995.LAB	12/5/2013	17:01:11	0.56	0.61	8.37	4.86	0.28
End Run 2	12/5/2013	17:01:40	1.19	1.27	6.40	3.69	0.18
Start Run 3	12/5/2013	17:40:22	0.96	1.01	4.47	5.08	0.06
12052013_001076.LAB	12/5/2013	17:40:52	0.92	0.96	4.56	5.08	0.12
12052013_001077.LAB	12/5/2013	17:41:21	0.91	0.96	4.61	5.07	0.14
12052013_001078.LAB	12/5/2013	17:41:50	0.87	0.91	4.63	5.08	0.17
12052013_001079.LAB	12/5/2013	17:42:20	0.83	0.87	4.67	5.08	0.07
12052013_001080.LAB	12/5/2013	17:42:49	0.76	0.80	4.68	5.08	0.12
12052013_001081.LAB	12/5/2013	17:43:18	0.74	0.78	4.69	5.07	0.11
12052013_001082.LAB	12/5/2013	17:43:48	0.74	0.78	4.69	5.07	0.14
12052013_001083.LAB	12/5/2013	17:44:17	0.70	0.73	4.69	5.08	0.20
12052013_001084.LAB	12/5/2013	17:44:47	0.67	0.70	4.72	5.08	0.24
12052013_001085.LAB	12/5/2013	17:45:16	0.64	0.67	4.72	5.07	0.13
12052013_001086.LAB	12/5/2013	17:45:45	0.64	0.67	4.73	5.07	0.23
12052013_001087.LAB	12/5/2013	17:46:15	1.00	1.07	6.95	4.95	0.18
12052013_001088.LAB	12/5/2013	17:46:44	1.02	1.09	6.67	4.96	0.18
12052013_001089.LAB	12/5/2013	17:47:14	0.97	1.03	6.35	4.98	0.17
12052013_001090.LAB	12/5/2013	17:47:43	0.98	1.05	6.09	5.00	0.21
12052013_001091.LAB	12/5/2013	17:48:12	0.96	1.02	5.87	5.01	0.26
12052013_001092.LAB	12/5/2013	17:48:42	1.04	1.11	6.55	4.97	0.22
12052013_001093.LAB	12/5/2013	17:49:11	1.35	1.53	11.36	4.68	0.32
12052013_001094.LAB	12/5/2013	17:49:40	1.16	1.29	10.43	4.74	0.35
12052013_001095.LAB	12/5/2013	17:50:10	1.23	1.38	11.06	4.71	0.33
12052013_001096.LAB	12/5/2013	17:50:39	1.12	1.25	10.30	4.75	0.32
12052013_001097.LAB	12/5/2013	17:51:09	1.01	1.11	9.17	4.82	0.30

12052013_001098.LAB	12/5/2013	17:51:38	0.91	1.00	8.49	4.85	0.23
12052013_001099.LAB	12/5/2013	17:52:07	0.91	0.98	7.30	4.92	0.24
12052013_001100.LAB	12/5/2013	17:52:37	0.78	0.84	6.90	4.95	0.26
12052013_001101.LAB	12/5/2013	17:53:06	0.77	0.83	7.35	4.93	0.19
12052013_001102.LAB	12/5/2013	17:53:36	0.69	0.74	6.76	4.96	0.29
12052013_001103.LAB	12/5/2013	17:54:05	0.70	0.75	7.43	4.93	0.26
12052013_001104.LAB	12/5/2013	17:54:35	0.71	0.77	8.04	4.88	0.27
12052013_001105.LAB	12/5/2013	17:55:04	0.74	0.81	8.56	4.85	0.21
12052013_001106.LAB	12/5/2013	17:55:33	0.74	0.80	8.62	4.85	0.29
12052013_001107.LAB	12/5/2013	17:56:03	0.75	0.82	8.89	4.83	0.27
12052013_001108.LAB	12/5/2013	17:56:32	0.71	0.78	8.41	4.86	0.28
12052013_001109.LAB	12/5/2013	17:57:01	0.70	0.76	8.47	4.85	0.25
12052013_001110.LAB	12/5/2013	17:57:31	0.66	0.72	8.27	4.87	0.29
12052013_001111.LAB	12/5/2013	17:58:00	0.72	0.80	9.36	4.80	0.31
12052013_001112.LAB	12/5/2013	17:58:30	0.77	0.85	9.44	4.79	0.22
12052013_001113.LAB	12/5/2013	17:58:59	0.83	0.91	9.30	4.81	0.32
12052013_001114.LAB	12/5/2013	17:59:28	0.86	0.94	9.07	4.82	0.26
12052013_001115.LAB	12/5/2013	17:59:58	0.80	0.87	8.43	4.86	0.35
12052013_001116.LAB	12/5/2013	18:00:27	0.73	0.79	7.87	4.89	0.20
12052013_001117.LAB	12/5/2013	18:00:57	0.65	0.70	7.11	4.93	0.19
12052013_001118.LAB	12/5/2013	18:01:26	0.64	0.69	7.53	4.91	0.26
12052013_001119.LAB	12/5/2013	18:01:55	0.65	0.70	7.81	4.89	0.25
12052013_001120.LAB	12/5/2013	18:02:25	0.65	0.71	8.54	4.85	0.27
12052013_001121.LAB	12/5/2013	18:02:54	0.62	0.68	8.81	4.84	0.30
12052013_001122.LAB	12/5/2013	18:03:24	0.62	0.67	8.20	4.86	0.18
12052013_001123.LAB	12/5/2013	18:03:53	0.62	0.68	8.91	4.83	0.29
12052013_001124.LAB	12/5/2013	18:04:22	0.65	0.71	8.82	4.84	0.20
12052013_001125.LAB	12/5/2013	18:04:52	0.58	0.63	8.02	4.89	0.28
12052013_001126.LAB	12/5/2013	18:05:21	0.60	0.66	8.50	4.86	0.24
12052013_001127.LAB	12/5/2013	18:05:50	0.64	0.70	9.36	4.81	0.34
12052013_001128.LAB	12/5/2013	18:06:20	0.63	0.70	9.09	4.83	0.29
12052013_001129.LAB	12/5/2013	18:06:49	0.59	0.64	8.36	4.85	0.29
12052013_001130.LAB	12/5/2013	18:07:19	0.60	0.65	8.01	4.89	0.25
12052013_001131.LAB	12/5/2013	18:07:48	0.63	0.69	8.64	4.85	0.31
12052013_001132.LAB	12/5/2013	18:08:18	0.62	0.68	8.44	4.86	0.27
12052013_001133.LAB	12/5/2013	18:08:47	0.63	0.70	9.51	4.79	0.24
12052013_001134.LAB	12/5/2013	18:09:16	0.75	0.84	10.10	4.77	0.30
12052013_001135.LAB	12/5/2013	18:09:45	0.81	0.89	9.34	4.81	0.18
12052013_001136.LAB	12/5/2013	18:10:15	0.76	0.83	9.07	4.82	0.31
12052013_001137.LAB	12/5/2013	18:10:44	0.74	0.81	9.22	4.81	0.24
12052013_001138.LAB	12/5/2013	18:11:14	0.71	0.79	9.21	4.81	0.27
12052013_001139.LAB	12/5/2013	18:11:43	0.70	0.77	9.06	4.82	0.25
12052013_001140.LAB	12/5/2013	18:12:12	0.62	0.67	7.84	4.89	0.26
12052013_001141.LAB	12/5/2013	18:12:42	0.63	0.69	7.73	4.89	0.22
12052013_001142.LAB	12/5/2013	18:13:11	0.57	0.61	7.22	4.92	0.19
12052013_001143.LAB	12/5/2013	18:13:41	0.59	0.63	6.79	4.95	0.24
12052013_001144.LAB	12/5/2013	18:14:10	0.63	0.69	8.69	4.84	0.30
12052013_001145.LAB	12/5/2013	18:14:39	0.63	0.70	8.79	4.83	0.28
12052013_001146.LAB	12/5/2013	18:15:09	0.59	0.64	8.72	4.83	0.23
12052013_001147.LAB	12/5/2013	18:15:39	0.60	0.66	9.13	4.80	0.21
12052013_001148.LAB	12/5/2013	18:16:08	0.58	0.63	8.80	4.82	0.20
12052013_001149.LAB	12/5/2013	18:16:37	0.53	0.58	8.14	4.87	0.29
12052013_001150.LAB	12/5/2013	18:17:06	0.54	0.59	8.14	4.88	0.25
12052013_001151.LAB	12/5/2013	18:17:36	0.56	0.61	8.01	4.88	0.30
12052013_001152.LAB	12/5/2013	18:18:05	0.51	0.55	7.66	4.90	0.29
12052013_001153.LAB	12/5/2013	18:18:34	0.50	0.54	7.09	4.92	0.22
12052013_001154.LAB	12/5/2013	18:19:04	0.59	0.65	9.09	4.81	0.31
12052013_001155.LAB	12/5/2013	18:19:33	0.59	0.65	9.15	4.82	0.25
12052013_001156.LAB	12/5/2013	18:20:03	0.58	0.64	9.02	4.81	0.24
12052013_001157.LAB	12/5/2013	18:20:32	0.58	0.64	9.06	4.81	0.31
12052013_001158.LAB	12/5/2013	18:21:01	0.57	0.63	9.04	4.82	0.27
12052013_001159.LAB	12/5/2013	18:21:31	0.57	0.62	8.40	4.85	0.32
12052013_001160.LAB	12/5/2013	18:22:00	0.63	0.69	9.12	4.82	0.27
12052013_001161.LAB	12/5/2013	18:22:30	0.72	0.79	8.90	4.83	0.25
12052013_001162.LAB	12/5/2013	18:22:59	0.64	0.70	8.36	4.86	0.25
12052013_001163.LAB	12/5/2013	18:23:29	0.62	0.68	8.24	4.86	0.27
12052013_001164.LAB	12/5/2013	18:23:58	0.57	0.62	7.82	4.89	0.25
12052013_001165.LAB	12/5/2013	18:24:28	0.61	0.67	8.69	4.83	0.18
12052013_001166.LAB	12/5/2013	18:24:57	0.61	0.66	8.73	4.84	0.22
12052013_001167.LAB	12/5/2013	18:25:26	0.65	0.71	8.74	4.84	0.31
12052013_001168.LAB	12/5/2013	18:25:55	0.75	0.82	8.13	4.87	0.29
12052013_001169.LAB	12/5/2013	18:26:25	0.74	0.81	7.55	4.90	0.26
12052013_001170.LAB	12/5/2013	18:26:54	0.67	0.74	8.87	4.83	0.35
12052013_001171.LAB	12/5/2013	18:27:24	0.66	0.73	8.84	4.82	0.28
12052013_001172.LAB	12/5/2013	18:27:53	0.60	0.66	8.54	4.84	0.29
12052013_001173.LAB	12/5/2013	18:28:22	0.53	0.58	7.77	4.89	0.22
12052013_001174.LAB	12/5/2013	18:28:52	0.54	0.59	7.96	4.88	0.24
12052013_001175.LAB	12/5/2013	18:29:21	0.51	0.55	7.74	4.89	0.37
12052013_001176.LAB	12/5/2013	18:29:50	0.48	0.52	7.22	4.93	0.26
12052013_001177.LAB	12/5/2013	18:30:20	0.54	0.58	7.78	4.91	0.34
12052013_001178.LAB	12/5/2013	18:30:50	0.54	0.59	7.77	4.89	0.28
12052013_001179.LAB	12/5/2013	18:31:19	0.49	0.52	7.49	4.90	0.19
12052013_001180.LAB	12/5/2013	18:31:48	0.49	0.54	7.74	4.88	0.22
12052013_001181.LAB	12/5/2013	18:32:17	0.52	0.57	7.86	4.89	0.17
12052013_001182.LAB	12/5/2013	18:32:47	0.52	0.57	7.95	4.87	0.28
12052013_001183.LAB	12/5/2013	18:33:16	0.49	0.54	7.91	4.88	0.29
12052013_001184.LAB	12/5/2013	18:33:46	0.50	0.54	7.61	4.89	0.28
12052013_001185.LAB	12/5/2013	18:34:15	0.55	0.60	8.42	4.85	0.27
12052013_001186.LAB	12/5/2013	18:34:44	0.54	0.59	8.00	4.88	0.35
12052013_001187.LAB	12/5/2013	18:35:14	0.59	0.64	8.22	4.86	0.22
12052013_001188.LAB	12/5/2013	18:35:43	0.53	0.58	8.15	4.86	0.19
12052013_001189.LAB	12/5/2013	18:36:13	0.48	0.52	7.98	4.87	0.21
12052013_001190.LAB	12/5/2013	18:36:42	0.50	0.54	7.95	4.88	0.32
12052013_001191.LAB	12/5/2013	18:37:11	0.49	0.53	8.31	4.86	0.22
12052013_001192.LAB	12/5/2013	18:37:41	0.45	0.49	8.56	4.85	0.27
12052013_001193.LAB	12/5/2013	18:38:10	0.47	0.51	8.24	4.85	0.28
12052013_001194.LAB	12/5/2013	18:38:40	0.47	0.51	7.82	4.88	0.24
12052013_001195.LAB	12/5/2013	18:39:09	0.50	0.55	8.19	4.87	0.25
12052013_001196.LAB	12/5/2013	18:39:38	0.47	0.51	8.37	4.86	0.28
12052013_001197.LAB	12/5/2013	18:40:08	0.44	0.48	8.19	4.86	0.35
12052013_001198.LAB	12/5/2013	18:40:37	0.47	0.51	8.16	4.86	0.26

END R3

Calibration Transfer Std., Section 8.6.1
ethylene = 98.6 ppm in N2

98.6 ppm

Ethylene on at 3 l/min

12052013_001209.LAB

12/5/2013

18:46:00

0.44

0.45

2.03

0.02

96.46

97.83%

12052013_001210.LAB	12/5/2013	18:46:30	0.40	0.41	1.79	0.01	96.64	98.22% Is CT gas +5% of surrogate value?
12052013_001211.LAB	12/5/2013	18:46:59	0.38	0.38	1.51	0.00	97.15	98.53% YES
12052013_001212.LAB	12/5/2013	18:47:29	0.36	0.37	1.20	0.01	97.47	98.86%
12052013_001213.LAB	12/5/2013	18:47:58	0.39	0.39	0.91	-0.01	97.69	99.07%

Ethylene Off

A-4

Unit 33C Annual Compliance Emission
Measurements 12-05-13.

Ammonia Slip (NH₃) Field Data Sheet

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L
D

D
A
T
A

S
H
E
E
T
S



12/5/13 Ffir 3-3C South stack

0735 Ethylene start

0737 stop; N₂ start @ 2L

0740 new N₂ background

0743 N₂ off start stack gas

1445 start R1-2

1700 End R1-2

1701 start 0.5 l/min NH₃ spike

1725 start N₂ flush @ 4 l/min

1735 N₂ off start stack gas

1740 start R3

1840 END R3

1841 Ethylene spike @ 3L/min

1847 Ethylene off N₂ start @ 3L/min

A-5

Unit 33C Annual Compliance Emission
Measurements 12-05-13.

Visible Emission Calculations

C
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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES									
SUMMARY OF 180 MINUTE VISIBLE EMISSIONS									
PLANT : Florida Power & Light- Cape Canaveral, FJ					TIME START: 14:35				
SOURCE: EU-033 "C"					TIME FINISH: 17:37				
DATE : December 5, 2013									
RESULTS:									
AVERAGE OPACITY:					0.0 %				
MAXIMUM OPACITY:					0.0 %				
HIGHEST SIX-MINUTE ROLLING AVERAGE:					0.0 %				
OBSERVATIONS:									
SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
1	0	0	0	0	46	0	0	0	0
2	0	0	0	0	47	0	0	0	0
3	0	0	0	0	48	0	0	0	0
4	0	0	0	0	49	0	0	0	0
5	0	0	0	0	50	0	0	0	0
6	0	0	0	0	51	0	0	0	0
7	0	0	0	0	52	0	0	0	0
8	0	0	0	0	53	0	0	0	0
9	0	0	0	0	54	0	0	0	0
10	0	0	0	0	55	0	0	0	0
11	0	0	0	0	56	0	0	0	0
12	0	0	0	0	57	0	0	0	0
13	0	0	0	0	58	0	0	0	0
14	0	0	0	0	59	0	0	0	0
15	0	0	0	0	60	0	0	0	0
16	0	0	0	0	61	0	0	0	0
17	0	0	0	0	62	0	0	0	0
18	0	0	0	0	63	0	0	0	0
19	0	0	0	0	64	0	0	0	0
20	0	0	0	0	65	0	0	0	0
21	0	0	0	0	66	0	0	0	0
22	0	0	0	0	67	0	0	0	0
23	0	0	0	0	68	0	0	0	0
24	0	0	0	0	69	0	0	0	0
25	0	0	0	0	70	0	0	0	0
26	0	0	0	0	71	0	0	0	0
27	0	0	0	0	72	0	0	0	0
28	0	0	0	0	73	0	0	0	0
29	0	0	0	0	74	0	0	0	0
30	0	0	0	0	75	0	0	0	0
31	0	0	0	0	76	0	0	0	0
32	0	0	0	0	77	0	0	0	0
33	0	0	0	0	78	0	0	0	0
34	0	0	0	0	79	0	0	0	0
35	0	0	0	0	80	0	0	0	0
36	0	0	0	0	81	0	0	0	0
37	0	0	0	0	82	0	0	0	0
38	0	0	0	0	83	0	0	0	0
39	0	0	0	0	84	0	0	0	0
40	0	0	0	0	85	0	0	0	0
41	0	0	0	0	86	0	0	0	0
42	0	0	0	0	87	0	0	0	0
43	0	0	0	0	88	0	0	0	0
44	0	0	0	0	89	0	0	0	0
45	0	0	0	0	90	0	0	0	0

KOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES

SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 14:35

SOURCE: EU-033 "C"

TIME FINISH: 17:37

DATE : December 5, 2013

OBSERVATIONS:

SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
91	0	0	0	0	136	0	0	0	0
92	0	0	0	0	137	0	0	0	0
93	0	0	0	0	138	0	0	0	0
94	0	0	0	0	139	0	0	0	0
95	0	0	0	0	140	0	0	0	0
96	0	0	0	0	141	0	0	0	0
97	0	0	0	0	142	0	0	0	0
98	0	0	0	0	143	0	0	0	0
99	0	0	0	0	144	0	0	0	0
100	0	0	0	0	145	0	0	0	0
101	0	0	0	0	146	0	0	0	0
102	0	0	0	0	147	0	0	0	0
103	0	0	0	0	148	0	0	0	0
104	0	0	0	0	149	0	0	0	0
105	0	0	0	0	150	0	0	0	0
106	0	0	0	0	151	0	0	0	0
107	0	0	0	0	152	0	0	0	0
108	0	0	0	0	153	0	0	0	0
109	0	0	0	0	154	0	0	0	0
110	0	0	0	0	155	0	0	0	0
111	0	0	0	0	156	0	0	0	0
112	0	0	0	0	157	0	0	0	0
113	0	0	0	0	158	0	0	0	0
114	0	0	0	0	159	0	0	0	0
115	0	0	0	0	160	0	0	0	0
116	0	0	0	0	161	0	0	0	0
117	0	0	0	0	162	0	0	0	0
118	0	0	0	0	163	0	0	0	0
119	0	0	0	0	164	0	0	0	0
120	0	0	0	0	165	0	0	0	0
121	0	0	0	0	166	0	0	0	0
122	0	0	0	0	167	0	0	0	0
123	0	0	0	0	168	0	0	0	0
124	0	0	0	0	169	0	0	0	0
125	0	0	0	0	170	0	0	0	0
126	0	0	0	0	171	0	0	0	0
127	0	0	0	0	172	0	0	0	0
128	0	0	0	0	173	0	0	0	0
129	0	0	0	0	174	0	0	0	0
130	0	0	0	0	175	0	0	0	0
131	0	0	0	0	176	0	0	0	0
132	0	0	0	0	177	0	0	0	0
133	0	0	0	0	178	0	0	0	0
134	0	0	0	0	179	0	0	0	0
135	0	0	0	0	180	0	0	0	0

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES									
SUMMARY OF 180 MINUTE VISIBLE EMISSIONS									
PLANT : Florida Power & Light- Cape Canaveral, FJ					TIME START:	14:35			
SOURCE: EU-033 "C"					TIME FINISH:	17:37			
DATE : December 5, 2013					CALCULATIONS:				
SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS									
1	-	-	-	-	46	0.0	0.0	0.0	0.0
2	-	-	-	-	47	0.0	0.0	0.0	0.0
3	-	-	-	-	48	0.0	0.0	0.0	0.0
4	-	-	-	-	49	0.0	0.0	0.0	0.0
5	-	-	-	-	50	0.0	0.0	0.0	0.0
6	-	-	-	0.0	51	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	58	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	65	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	72	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	78	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	79	0.0	0.0	0.0	0.0
35	0.0	0.0	0.0	0.0	80	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	81	0.0	0.0	0.0	0.0
37	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0
38	0.0	0.0	0.0	0.0	83	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	84	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	85	0.0	0.0	0.0	0.0
41	0.0	0.0	0.0	0.0	86	0.0	0.0	0.0	0.0
42	0.0	0.0	0.0	0.0	87	0.0	0.0	0.0	0.0
43	0.0	0.0	0.0	0.0	88	0.0	0.0	0.0	0.0
44	0.0	0.0	0.0	0.0	89	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	90	0.0	0.0	0.0	0.0

KOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES

SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FJ TIME START: 14:35

SOURCE: EU-033 "C" TIME FINISH: 17:37

DATE : December 5, 2013

CALCULATIONS:

SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS

91	0.0	0.0	0.0	0.0	136	0.0	0.0	0.0	0.0
92	0.0	0.0	0.0	0.0	137	0.0	0.0	0.0	0.0
93	0.0	0.0	0.0	0.0	138	0.0	0.0	0.0	0.0
94	0.0	0.0	0.0	0.0	139	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	140	0.0	0.0	0.0	0.0
96	0.0	0.0	0.0	0.0	141	0.0	0.0	0.0	0.0
97	0.0	0.0	0.0	0.0	142	0.0	0.0	0.0	0.0
98	0.0	0.0	0.0	0.0	143	0.0	0.0	0.0	0.0
99	0.0	0.0	0.0	0.0	144	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	145	0.0	0.0	0.0	0.0
101	0.0	0.0	0.0	0.0	146	0.0	0.0	0.0	0.0
102	0.0	0.0	0.0	0.0	147	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	148	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	149	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	150	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	151	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	152	0.0	0.0	0.0	0.0
108	0.0	0.0	0.0	0.0	153	0.0	0.0	0.0	0.0
109	0.0	0.0	0.0	0.0	154	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	155	0.0	0.0	0.0	0.0
111	0.0	0.0	0.0	0.0	156	0.0	0.0	0.0	0.0
112	0.0	0.0	0.0	0.0	157	0.0	0.0	0.0	0.0
113	0.0	0.0	0.0	0.0	158	0.0	0.0	0.0	0.0
114	0.0	0.0	0.0	0.0	159	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	160	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	161	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	162	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	163	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	164	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	165	0.0	0.0	0.0	0.0
121	0.0	0.0	0.0	0.0	166	0.0	0.0	0.0	0.0
122	0.0	0.0	0.0	0.0	167	0.0	0.0	0.0	0.0
123	0.0	0.0	0.0	0.0	168	0.0	0.0	0.0	0.0
124	0.0	0.0	0.0	0.0	169	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	170	0.0	0.0	0.0	0.0
126	0.0	0.0	0.0	0.0	171	0.0	0.0	0.0	0.0
127	0.0	0.0	0.0	0.0	172	0.0	0.0	0.0	0.0
128	0.0	0.0	0.0	0.0	173	0.0	0.0	0.0	0.0
129	0.0	0.0	0.0	0.0	174	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	175	0.0	0.0	0.0	0.0
131	0.0	0.0	0.0	0.0	176	0.0	0.0	0.0	0.0
132	0.0	0.0	0.0	0.0	177	0.0	0.0	0.0	0.0
133	0.0	0.0	0.0	0.0	178	0.0	0.0	0.0	0.0
134	0.0	0.0	0.0	0.0	179	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	180	0.0	0.0	0.0	0.0

A-6

Unit 33C Annual Compliance Emission
Measurements 12-05-13.

Visible Emission Field Data Sheet

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

SOURCE NAME
Florida Power and Light

ADDRESS
6000 North U.S. Highway 1

CITY **Cape Canaveral Cocoa** STATE **FL** ZIP **32927 33470**

PHONE SOURCE ID NUMBER
EU-033 "C"

PROCESS EQUIPMENT OPERATING MODE
ULSD Fuel oil Combustion Base Load

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START **Large circular stack on south end of plant** STOP

HEIGHT ABOVE GROUND LEVEL START **~150'** STOP **~150'** HEIGHT RELATIVE TO OBSERVER START **~145'** STOP **~445'**

DISTANCE FROM OBSERVER START **~500'** STOP **~500'** DIRECTION FROM OBSERVER START **32°** STOP **32°**

DESCRIBE EMISSIONS
START **None** STOP **None**

EMISSION COLOR START **None** STOP **None** PLUME TYPE: CONTINUOUS FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: NO YES IF WATER DROPLET PLUME: ATTACHED DETACHED

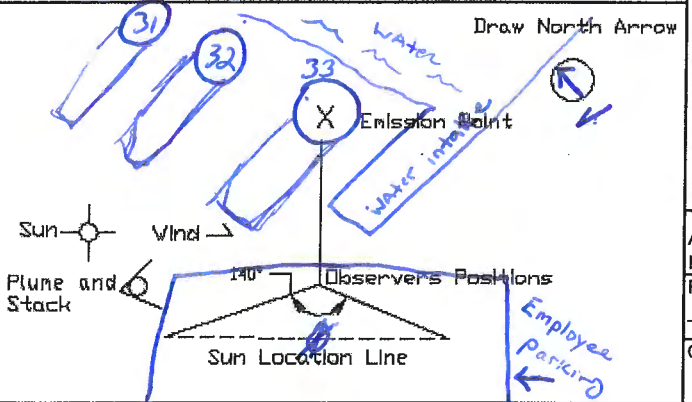
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START **Approximately 10 ft above the stack exit** STOP

DESCRIBE BACKGROUND
START **Sky** STOP **Sky**

BACKGROUND COLOR START **Blue** STOP **Blue** SKY CONDITIONS START **Clear** STOP **Clear**

WIND SPEED START **0-20** STOP **6SE** WIND DIRECTION START **6SE** STOP **ESE SE**

AMBIENT TEMP: START **78** STOP **76** WET BULB TEMP **71** RH.percent **68**



SEC MIN	OBSERVATION DATE				START TIME				STOP TIME				
	0	15	30	45	MIN	0	15	30	45	MIN	0	15	30
1	0	0	0	0	31	0	0	0	0				
2	0	0	0	0	32	0	0	0	0				
3	0	0	0	0	33	0	0	0	0				
4	0	0	0	0	34	0	0	0	0				
5	0	0	0	0	35	0	0	0	0				
6	0	0	0	0	36	0	0	0	0				
7	0	0	0	0	37	0	0	0	0				
8	0	0	0	0	38	0	0	0	0				
9	0	0	0	0	39	0	0	0	0				
10	0	0	0	0	40	0	0	0	0				
11	0	0	0	0	41	0	0	0	0				
12	0	0	0	0	42	0	0	0	0				
13	0	0	0	0	43	0	0	0	0				
14	0	0	0	0	44	0	0	0	0				
15	0	0	0	0	45	0	0	0	0				
16	0	0	0	0	46	0	0	0	0				
17	0	0	0	0	47	0	0	0	0				
18	0	0	0	0	48	0	0	0	0				
19	0	0	0	0	49	0	0	0	0				
20	0	0	0	0	50	0	0	0	0				
21	0	0	0	0	51	0	0	0	0				
22	0	0	0	0	52	0	0	0	0				
23	0	0	0	0	53	0	0	0	0				
24	0	0	0	0	54	0	0	0	0				
25	0	0	0	0	55	0	0	0	0				
26	0	0	0	0	56	0	0	0	0				
27	0	0	0	0	57	0	0	0	0				
28	0	0	0	0	58	0	0	0	0				
29	0	0	0	0	59	0	0	0	0				
30	0	0	0	0	60	0	0	0	0				

AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE % WERE _____

RANGE OF OPACITY READINGS
MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Enwall

OBSERVER'S SIGNATURE _____ DATE **12-05-13**

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

CERTIFIED BY **Whitlow** DATE **July 2013**

VERIFIED BY _____ DATE _____

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____

TITLE _____ DATE _____



SOURCE NAME Florida Power & Light		
ADDRESS 6000 North U.S. Highway 1		
CITY Cape Canaveral Cocoa	STATE FL	ZIP 32927 33470
PHONE	SOURCE ID NUMBER EU-033 "C"	
PROCESS EQUIPMENT UKSD Fuel oil combustion	OPERATING MODE Base load	
CONTROL EQUIPMENT	OPERATING MODE 100%	
DESCRIBE EMISSION POINT START Large Circular Stack STOP located on side end of Plant		
HEIGHT ABOVE GROUND LEVEL START ~150' STOP ~150'	HEIGHT RELATIVE TO OBSERVER START ~145' STOP ~145'	
DISTANCE FROM OBSERVER START ~500' STOP ~500'	DIRECTION FROM OBSERVER START ~26° STOP ~26°	
DESCRIBE EMISSIONS START None STOP None		
EMISSION COLOR START None STOP None	PLUME TYPE: CONTINUOUS <input checked="" type="checkbox"/> FUGITIVE <input type="checkbox"/> INTERMITTENT <input type="checkbox"/>	
WATER DROPLETS PRESENT: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>	IF WATER DROPLET PLUME: ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START 10ft above the STOP Stack Exit		
DESCRIBE BACKGROUND START sky STOP sky		
BACKGROUND COLOR START blue STOP blue	SKY CONDITIONS START clear STOP clear	
WIND SPEED START 0-20 STOP 0-20	WIND DIRECTION START SE STOP SE	
AMBIENT TEMP: START 76 STOP 76	WET BULB TEMP	RH. percent 67
COMMENTS		

OBSERVATION DATE 12-05-13	START TIME 15:36				STOP TIME 16:36				
	SEC MIN	0	15	30	45	SEC MIN	0	15	30
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD	NUMBER OF READINGS ABOVE % WERE
RANGE OF OPACITY READINGS MINIMUM _____ MAXIMUM _____	
OBSERVER'S NAME (PRINT) Christian K. Enwall	
OBSERVER'S SIGNATURE 	DATE 12-05-13
ORGANIZATION KOUGLER AND ASSOCIATES, INC.	
CERTIFIED BY Whitlow	DATE July 2013
VERIFIED BY	DATE



SOURCE NAME
Florida Power & Light

ADDRESS
6000 North U.S. Highway 1

CITY *Cape Canaveral* STATE *FL* ZIP *32927*
Cocoa *33470*

PHONE SOURCE ID NUMBER
60-033 "c"

PROCESS EQUIPMENT OPERATING MODE
ULSD fuel oil combustion *Base load*

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START *large circular stack on south end of plant* STOP

HEIGHT ABOVE GROUND LEVEL START *~150'* STOP *~150'* HEIGHT RELATIVE TO OBSERVER START *~145'* STOP *~145'*

DISTANCE FROM OBSERVER START *~500'* STOP *~500'* DIRECTION FROM OBSERVER START *~26°* STOP *~26°*

DESCRIBE EMISSIONS
START *None* STOP *None*

EMISSION COLOR START *None* STOP *None* PLUME TYPE: CONTINUOUS FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: NO YES IF WATER DROPLET PLUME: ATTACHED DETACHED

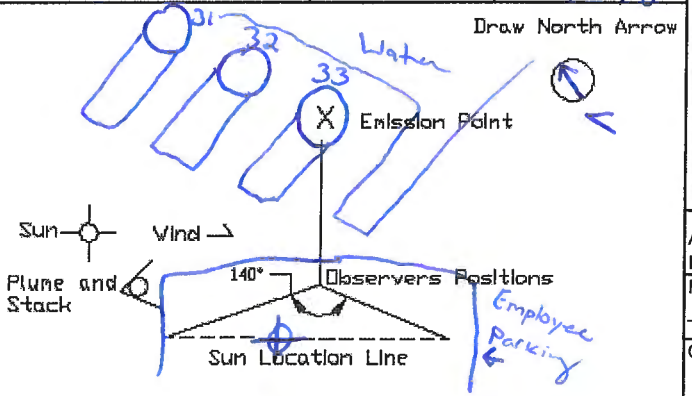
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START *10 feet above the stack exit* STOP

DESCRIBE BACKGROUND
START *Sky* STOP *Sky*

BACKGROUND COLOR START *Blue* STOP *Blue* SKY CONDITIONS START *Clear* STOP *Clear*

WIND SPEED START *0-20* STOP *0-20* WIND DIRECTION START *SE* STOP

AMBIENT TEMP: START *76* STOP WET BULB TEMP RH.percent *70%*



OBSERVATION DATE	START TIME				STOP TIME				
	0	15	30	45	0	15	30	45	
<i>12-05-13</i>					<i>16:37</i>				
	0	15	30	45	0	15	30	45	
1	0	0	0	0	31	0	0	0	
2	0	0	0	0	32	0	0	0	
3	0	0	0	0	33	0	0	0	
4	0	0	0	0	34	0	0	0	
5	0	0	0	0	35	0	0	0	
6	0	0	0	0	36	0	0	0	
7	0	0	0	0	37	0	0	0	
8	0	0	0	0	38	0	0	0	
9	0	0	0	0	39	0	0	0	
10	0	0	0	0	40	0	0	0	
11	0	0	0	0	41	0	0	0	
12	0	0	0	0	42	0	0	0	
13	0	0	0	0	43	0	0	0	
14	0	0	0	0	44	0	0	0	
15	0	0	0	0	45	0	0	0	
16	0	0	0	0	46	0	0	0	
17	0	0	0	0	47	0	0	0	
18	0	0	0	0	48	0	0	0	
19	0	0	0	0	49	0	0	0	
20	0	0	0	0	50	0	0	0	
21	0	0	0	0	51	0	0	0	
22	0	0	0	0	52	0	0	0	
23	0	0	0	0	53	0	0	0	
24	0	0	0	0	54	0	0	0	
25	0	0	0	0	55	0	0	0	
26	0	0	0	0	56	0	0	0	
27	0	0	0	0	57	0	0	0	
28	0	0	0	0	58	0	0	0	
29	0	0	0	0	59	0	0	0	
30	0	0	0	0	60	0	0	0	

AVERAGE OPACITY FOR HIGHEST PERIOD RANGE OF OPACITY READINGS
MINIMUM _____ MAXIMUM _____

NUMBER OF READINGS ABOVE _____ % WERE _____

OBSERVER'S NAME (PRINT)
Christian K. Enuall

OBSERVER'S SIGNATURE *[Signature]* DATE *12-05-13*

ORGANIZATION **KOUGLER AND ASSOCIATES, INC.**

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE

CERTIFIED BY *Whitlow* DATE *July 2013*

TITLE DATE

VERIFIED BY DATE



A-7

Unit 33C Annual Compliance Emission
Measurements 12-05-13.

Plant Operating Data

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

flowrate calculation

Date / Time	GT LOAD	GT LOAD (%)	TOTAL FUEL OIL FLOW	TOTAL WATER INJECTION FLOW	EPA Method 19
	MW	%	KPPH	PPH	
2013/12/05 08:00:00	272.668	100.3%	107.453	50,029.300	scf/hr
2013/12/05 08:01:00	272.668	100.3%	107.546	50,029.300	mmbtu/hr
2013/12/05 08:02:00	222.806	100.4%	107.546	50,029.300	2,134
2013/12/05 08:03:00	222.916	100.4%	107.452	50,101.900	67,497,945
2013/12/05 08:04:00	222.641	100.3%	107.452	50,101.900	67,556,364
2013/12/05 08:05:00	222.174	100.1%	107.544	50,235.500	67,497,317
2013/12/05 08:06:00	222.641	100.3%	107.500	50,257.100	67,555,108
2013/12/05 08:07:00	222.888	100.4%	107.500	50,189.900	67,527,468
2013/12/05 08:08:00	216.023	97.3%	104.455	42,945.100	65,614,714
2013/12/05 08:09:00	206.303	92.9%	100.624	38,998.500	63,208,223
2013/12/05 08:10:00	196.499	88.5%	97.089	35,826.700	60,987,794
2013/12/05 08:11:00	186.559	84.0%	93.477	30,919.900	58,718,683
2013/12/05 08:12:00	180.051	81.1%	91.104	28,087.700	57,228,053
2013/12/05 08:13:00	179.996	81.1%	91.210	28,882.700	57,294,576
2013/12/05 08:14:00	179.996	81.1%	91.210	29,667.600	57,294,576
2013/12/05 08:15:00	179.996	81.1%	91.293	30,335.200	57,346,650
2013/12/05 08:16:00	179.996	81.1%	91.293	30,676.100	57,346,650
2013/12/05 08:17:00	172.967	77.9%	88.851	25,179.100	55,812,615
2013/12/05 08:18:00	162.889	73.4%	85.245	22,566.300	53,547,963
2013/12/05 08:19:00	156.216	70.4%	82.634	20,782.800	51,907,266
2013/12/05 08:20:00	155.942	70.2%	82.712	22,251.500	51,956,702
2013/12/05 08:21:00	155.942	70.2%	82.872	22,769.400	52,057,020
2013/12/05 08:22:00	155.997	70.3%	82.775	23,230.600	51,996,402
2013/12/05 08:23:00	155.997	70.3%	82.899	23,692.500	52,073,729
2013/12/05 08:24:00	155.997	70.3%	82.831	24,061.800	52,031,139
2013/12/05 08:25:00	155.997	70.3%	82.963	24,537.500	52,114,308
2013/12/05 08:26:00	155.997	70.3%	82.865	24,444.800	52,052,811
2013/12/05 08:27:00	155.997	70.3%	82.892	24,466.000	52,069,520
2013/12/05 08:28:00	155.997	70.3%	82.892	24,665.500	52,069,520
2013/12/05 08:29:00	155.997	70.3%	82.942	24,682.100	52,100,928
2013/12/05 08:30:00	155.997	70.3%	82.896	24,854.300	52,071,970
2013/12/05 08:31:00	156.052	70.3%	82.896	24,854.300	52,071,970
2013/12/05 08:32:00	156.052	70.3%	82.896	25,147.400	52,071,970
2013/12/05 08:33:00	155.832	70.2%	82.896	25,090.200	52,071,970
2013/12/05 08:34:00	156.052	70.3%	82.896	24,916.800	52,071,970
2013/12/05 08:35:00	156.052	70.3%	82.846	24,740.900	52,040,562
2013/12/05 08:36:00	156.052	70.3%	82.882	24,921.700	52,063,364
2013/12/05 08:37:00	155.530	70.1%	82.862	24,795.100	52,045,364
2013/12/05 08:38:00	155.859	70.3%	82.963	25,005.600	52,102,122
2013/12/05 08:39:00	156.189	70.4%	82.944	25,050.200	52,102,122
2013/12/05 08:40:00	155.997	70.3%	82.889	25,033.600	52,067,573
2013/12/05 08:41:00	155.997	70.3%	82.934	25,140.700	52,095,777
2013/12/05 08:42:00	155.997	70.3%	82.934	25,262.300	52,095,777
2013/12/05 08:43:00	155.997	70.3%	82.934	25,217.500	52,095,777
2013/12/05 08:44:00	155.997	70.3%	82.990	24,449.800	52,131,143
2013/12/05 08:45:00	155.997	70.3%	82.890	24,573.700	52,068,327
2013/12/05 08:46:00	155.997	70.3%	82.861	23,900.600	52,050,298
2013/12/05 08:47:00	155.997	70.3%	83.002	24,110.500	52,138,681
2013/12/05 08:48:00	155.997	70.3%	82.874	23,616.900	52,058,088
2013/12/05 08:49:00	155.997	70.3%	82.874	23,681.400	52,058,088
2013/12/05 08:50:00	155.997	70.3%	82.864	23,786.500	52,055,964
2013/12/05 08:51:00	155.997	70.3%	82.951	23,755.000	52,106,896
2013/12/05 08:52:00	155.914	70.2%	82.951	23,931.300	52,106,896
2013/12/05 08:53:00	155.914	70.2%	82.909	23,931.300	52,080,387
2013/12/05 08:54:00	156.107	70.3%	82.909	24,017.000	52,080,387
2013/12/05 08:55:00	156.107	70.3%	82.909	23,953.600	52,080,387
2013/12/05 08:56:00	155.997	70.3%	82.944	24,193.400	52,102,747
2013/12/05 08:57:00	155.997	70.3%	82.944	24,459.800	52,102,747
2013/12/05 08:58:00	155.997	70.3%	82.944	24,459.800	52,102,747
2013/12/05 08:59:00	155.997	70.3%	82.944	24,572.000	52,102,747
2013/12/05 09:00:00	155.997	70.3%	82.944	24,572.000	52,102,747
2013/12/05 09:01:00	155.997	70.3%	83.032	24,652.300	52,157,274
2013/12/05 09:02:00	155.997	70.3%	82.983	24,821.200	52,126,746
2013/12/05 09:03:00	155.997	70.3%	82.983	25,037.000	52,126,746
2013/12/05 09:04:00	155.997	70.3%	82.983	24,978.000	52,126,746
2013/12/05 09:05:00	155.997	70.3%	82.983	24,978.000	52,126,746
2013/12/05 09:06:00	155.997	70.3%	83.021	25,201.400	52,150,867
2013/12/05 09:07:00	155.997	70.3%	83.021	25,212.800	52,150,867
2013/12/05 09:08:00	155.997	70.3%	83.021	25,141.200	52,150,867
2013/12/05 09:09:00	155.997	70.3%	82.945	24,979.100	52,102,624
2013/12/05 09:10:00	155.997	70.3%	83.091	24,994.700	52,194,399
2013/12/05 09:11:00	155.997	70.3%	82.982	25,355.000	52,125,929
2013/12/05 09:12:00	155.997	70.3%	83.105	25,205.900	52,203,256
2013/12/05 09:13:00	155.997	70.3%	83.022	25,210.100	52,151,244
2013/12/05 09:14:00	155.997	70.3%	83.022	25,159.900	52,151,244
2013/12/05 09:15:00	155.997	70.3%	83.022	25,221.600	52,151,244
2013/12/05 09:16:00	155.997	70.3%	83.022	25,697.200	52,151,244
2013/12/05 09:17:00	155.997	70.3%	83.022	25,546.000	52,151,244
2013/12/05 09:18:00	155.969	70.3%	83.116	25,480.200	52,210,103
2013/12/05 09:19:00	155.969	70.3%	83.082	25,636.700	52,188,871
2013/12/05 09:20:00	155.969	70.3%	83.055	25,471.000	52,171,911
2013/12/05 09:21:00	155.942	70.2%	83.055	25,865.800	52,171,911
2013/12/05 09:22:00	155.942	70.2%	83.055	25,921.600	52,171,911
2013/12/05 09:23:00	156.216	70.4%	83.055	25,921.600	52,171,911
2013/12/05 09:24:00	155.887	70.2%	83.055	25,906.400	52,171,911
2013/12/05 09:25:00	156.052	70.3%	83.151	25,814.000	52,232,026
2013/12/05 09:26:00	156.052	70.3%	83.040	25,788.700	52,162,551
2013/12/05 09:27:00	155.832	70.2%	83.059	26,181.500	52,174,298
2013/12/05 09:28:00	155.969	70.3%	83.059	25,952.000	52,174,298
2013/12/05 09:29:00	155.969	70.3%	83.059	26,173.100	52,174,298
2013/12/05 09:30:00	155.969	70.3%	83.114	26,175.300	52,209,286
2013/12/05 09:31:00	156.079	70.3%	83.114	26,214.400	52,209,286
2013/12/05 09:32:00	155.997	70.3%	83.044	26,129.800	52,165,189
2013/12/05 09:33:00	155.997	70.3%	83.159	26,184.500	52,237,114
2013/12/05 09:34:00	155.997	70.3%	83.061	26,403.500	52,175,617
2013/12/05 09:35:00	155.997	70.3%	83.061	26,256.200	52,175,617
2013/12/05 09:36:00	155.997	70.3%	83.061	26,256.200	52,175,617
2013/12/05 09:37:00	155.997	70.3%	83.061	26,435.100	52,175,617
2013/12/05 09:38:00	155.997	70.3%	83.061	26,292.500	52,175,617
2013/12/05 09:39:00	155.997	70.3%	83.097	26,498.300	52,198,293
2013/12/05 09:40:00	155.997	70.3%	83.097	27,195.100	52,198,293
2013/12/05 09:41:00	155.997	70.3%	83.097	27,109.900	52,198,293
2013/12/05 09:42:00	155.997	70.3%	83.200	27,354.000	52,265,806
2013/12/05 09:43:00	155.997	70.3%	83.067	27,510.800	52,175,260
2013/12/05 09:44:00	155.997	70.3%	83.131	27,626.300	52,219,588
2013/12/05 09:45:00	155.997	70.3%	83.131	27,732.400	52,219,588
2013/12/05 09:46:00	155.997	70.3%	83.131	27,811.400	52,219,588
2013/12/05 09:47:00	155.997	70.3%	83.152	27,811.400	52,233,156
2013/12/05 09:48:00	155.997	70.3%	83.152	27,811.400	52,233,156
2013/12/05 09:49:00	155.997	70.3%	83.152	27,607.400	52,233,156
2013/12/05 09:50:00	155.997	70.3%	83.152	27,767.900	52,233,156
2013/12/05 09:51:00	155.997	70.3%	83.275	27,767.900	52,278,949
2013/12/05 09:52:00	155.997	70.3%	83.120	27,646.300	52,212,930
2013/12/05 09:53:00	155.997	70.3%	83.195	27,873.700	52,259,853
2013/12/05 09:54:00	155.997	70.3%	83.195	27,874.000	52,259,853
2013/12/05 09:55:00	155.997	70.3%	83.150	27,788.700	52,231,523

$$\frac{\text{scf}}{\text{hr}} = \left(\frac{1000 \times \text{fuel lb}}{\text{hr}} \right) \left(\frac{\text{gal}}{7.05 \text{ lb}} \right) \left(\frac{137,000 \text{ btu}}{\text{gal}} \right) \left(\frac{\text{mmbtu}}{1,000,000 \text{ btu}} \right) \left(\frac{9,190 \text{ dscf}}{\text{mmbtu}} \right) (20.9)\% \text{ O}_2 (20.9 - 15.0)$$

2013/12/05 09:56:00:000	155.997	70.3%	83.150	27,466.500	52,231,523
2013/12/05 09:57:00:000	156.326	70.4%	83.214	27,643.300	52,272,165
2013/12/05 09:58:00:000	155.777	70.2%	83.130	27,655.500	52,219,023
2013/12/05 09:59:00:000	156.381	70.4%	83.130	27,575.400	52,249,023
2013/12/05 10:00:00:000	155.969	70.3%	83.204	27,575.400	52,265,318
2013/12/05 10:01:00:000	155.969	70.3%	83.098	27,575.400	52,199,173
2013/12/05 10:02:00:000	155.475	70.0%	83.157	27,326.400	52,236,172
2013/12/05 10:03:00:000	156.134	70.3%	83.157	27,548.500	52,236,172
2013/12/05 10:04:00:000	155.969	70.3%	83.157	27,643.400	52,236,172
2013/12/05 10:05:00:000	155.969	70.3%	83.157	27,546.000	52,236,172
2013/12/05 10:06:00:000	155.969	70.3%	83.157	27,565.400	52,236,172
2013/12/05 10:07:00:000	156.216	70.4%	83.220	27,699.100	52,275,557
2013/12/05 10:08:00:000	155.887	70.2%	83.220	27,581.700	52,275,557
2013/12/05 10:09:00:000	156.052	70.3%	83.080	27,886.300	52,187,615
2013/12/05 10:10:00:000	156.052	70.3%	83.170	27,826.100	52,244,463
2013/12/05 10:11:00:000	156.134	70.3%	83.259	27,882.100	52,300,656
2013/12/05 10:12:00:000	156.052	70.3%	83.169	27,985.300	52,243,898
2013/12/05 10:13:00:000	156.052	70.3%	83.275	27,862.000	52,278,824
2013/12/05 10:14:00:000	155.969	70.3%	83.275	27,791.000	52,278,824
2013/12/05 10:15:00:000	155.969	70.3%	83.183	27,720.500	52,252,692
2013/12/05 10:16:00:000	155.887	70.2%	83.183	27,922.500	52,252,692
2013/12/05 10:17:00:000	155.859	70.2%	83.183	27,901.700	52,252,692
2013/12/05 10:18:00:000	155.997	70.3%	83.192	28,063.000	52,258,220
2013/12/05 10:19:00:000	155.997	70.3%	83.192	28,067.100	52,258,220
2013/12/05 10:20:00:000	155.997	70.3%	83.247	28,211.000	52,292,643
2013/12/05 10:21:00:000	155.997	70.3%	83.247	28,281.200	52,292,643
2013/12/05 10:22:00:000	155.997	70.3%	83.247	28,286.000	52,292,643
2013/12/05 10:23:00:000	155.997	70.3%	83.212	28,061.000	52,270,595
2013/12/05 10:24:00:000	155.997	70.3%	83.212	28,331.300	52,270,595
2013/12/05 10:25:00:000	155.997	70.3%	83.212	28,281.700	52,270,595
2013/12/05 10:26:00:000	155.997	70.3%	83.212	28,149.900	52,270,595
2013/12/05 10:27:00:000	155.997	70.3%	83.212	28,080.800	52,270,595
2013/12/05 10:28:00:000	155.997	70.3%	83.212	28,328.200	52,270,595
2013/12/05 10:29:00:000	155.997	70.3%	83.212	28,227.700	52,270,595
2013/12/05 10:30:00:000	155.997	70.3%	83.212	28,147.500	52,270,595
2013/12/05 10:31:00:000	155.997	70.3%	83.212	28,147.500	52,270,595
2013/12/05 10:32:00:000	155.997	70.3%	83.175	28,218.000	52,247,667
2013/12/05 10:33:00:000	155.997	70.3%	83.175	27,978.400	52,247,667
2013/12/05 10:34:00:000	155.997	70.3%	83.175	28,306.700	52,247,667
2013/12/05 10:35:00:000	155.997	70.3%	83.086	28,306.700	52,191,384
2013/12/05 10:36:00:000	155.997	70.3%	83.303	28,616.400	52,328,072
2013/12/05 10:37:00:000	155.997	70.3%	83.270	28,703.100	52,275,871
2013/12/05 10:38:00:000	155.997	70.3%	83.220	28,856.200	52,275,871
2013/12/05 10:39:00:000	155.997	70.3%	83.271	28,974.700	52,307,656
2013/12/05 10:40:00:000	155.997	70.3%	83.271	29,190.800	52,307,656
2013/12/05 10:41:00:000	155.997	70.3%	83.271	29,350.900	52,307,656
2013/12/05 10:42:00:000	155.997	70.3%	83.271	29,352.600	52,307,656
2013/12/05 10:43:00:000	155.997	70.3%	83.271	29,523.500	52,307,656
2013/12/05 10:44:00:000	155.997	70.3%	83.271	29,469.800	52,307,656
2013/12/05 10:45:00:000	155.997	70.3%	83.271	29,633.600	52,307,656
2013/12/05 10:46:00:000	155.997	70.3%	83.271	29,795.900	52,307,656
2013/12/05 10:47:00:000	155.997	70.3%	83.297	29,940.800	52,323,863
2013/12/05 10:48:00:000	155.997	70.3%	83.297	29,801.700	52,323,863
2013/12/05 10:49:00:000	155.997	70.3%	83.368	29,921.700	52,368,923
2013/12/05 10:50:00:000	155.997	70.3%	83.245	30,225.300	52,291,638
2013/12/05 10:51:00:000	155.997	70.3%	83.245	30,083.700	52,291,513
2013/12/05 10:52:00:000	155.997	70.3%	83.337	30,192.400	52,348,864
2013/12/05 10:53:00:000	155.997	70.3%	83.337	30,281.700	52,348,864
2013/12/05 10:54:00:000	155.997	70.3%	83.401	30,281.700	52,389,443
2013/12/05 10:55:00:000	155.997	70.3%	83.401	30,484.000	52,389,443
2013/12/05 10:56:00:000	155.997	70.3%	83.330	30,508.000	52,344,655
2013/12/05 10:57:00:000	155.997	70.3%	83.330	30,362.200	52,344,655
2013/12/05 10:58:00:000	156.299	70.4%	83.330	30,411.200	52,344,655
2013/12/05 10:59:00:000	155.859	70.2%	83.260	30,503.700	52,300,998
2013/12/05 11:00:00:000	155.914	70.2%	83.361	30,395.500	52,364,191
2013/12/05 11:01:00:000	156.326	70.4%	83.245	30,487.900	52,291,199
2013/12/05 11:02:00:000	155.969	70.3%	83.321	30,487.900	52,339,253
2013/12/05 11:03:00:000	155.969	70.3%	83.321	30,487.900	52,339,253
2013/12/05 11:04:00:000	155.695	70.1%	83.321	30,487.900	52,339,253
2013/12/05 11:05:00:000	155.997	70.3%	83.390	30,543.500	52,382,722
2013/12/05 11:06:00:000	155.997	70.3%	83.400	30,603.500	52,388,878
2013/12/05 11:07:00:000	155.997	70.3%	83.342	30,532.300	52,352,507
2013/12/05 11:08:00:000	155.997	70.3%	83.342	30,557.400	52,352,507
2013/12/05 11:09:00:000	155.997	70.3%	83.342	30,557.400	52,352,507
2013/12/05 11:10:00:000	155.997	70.3%	83.342	30,557.400	52,352,507
2013/12/05 11:11:00:000	155.997	70.3%	83.342	30,814.800	52,352,507
2013/12/05 11:12:00:000	155.997	70.3%	83.342	30,671.500	52,352,507
2013/12/05 11:13:00:000	155.997	70.3%	83.438	30,606.900	52,412,434
2013/12/05 11:14:00:000	155.997	70.3%	83.438	30,573.100	52,412,434
2013/12/05 11:15:00:000	155.997	70.3%	83.369	30,573.100	52,339,154
2013/12/05 11:16:00:000	155.997	70.3%	83.369	30,683.500	52,369,154
2013/12/05 11:17:00:000	155.997	70.3%	83.369	30,683.500	52,369,154
2013/12/05 11:18:00:000	155.997	70.3%	83.326	30,929.700	52,342,394
2013/12/05 11:19:00:000	155.997	70.3%	83.423	30,787.900	52,403,137
2013/12/05 11:20:00:000	155.997	70.3%	83.423	30,787.900	52,403,137
2013/12/05 11:21:00:000	155.997	70.3%	83.323	30,630.100	52,340,509
2013/12/05 11:22:00:000	155.997	70.3%	83.478	30,795.900	52,437,686
2013/12/05 11:23:00:000	155.997	70.3%	83.298	30,864.800	52,324,680
2013/12/05 11:24:00:000	155.997	70.3%	83.298	30,661.000	52,324,680
2013/12/05 11:25:00:000	155.997	70.3%	83.401	30,989.900	52,389,569
2013/12/05 11:26:00:000	155.997	70.3%	83.401	30,782.200	52,389,569
2013/12/05 11:27:00:000	155.997	70.3%	83.401	30,782.200	52,389,569
2013/12/05 11:28:00:000	155.997	70.3%	83.401	30,800.600	52,389,569
2013/12/05 11:29:00:000	155.997	70.3%	83.401	30,800.600	52,389,569
2013/12/05 11:30:00:000	155.750	70.2%	83.401	31,000.200	52,389,569
2013/12/05 11:31:00:000	155.997	70.3%	83.255	31,108.100	52,297,543
2013/12/05 11:32:00:000	155.997	70.3%	83.306	30,980.100	52,329,831
2013/12/05 11:33:00:000	155.997	70.3%	83.330	30,953.700	52,344,969
2013/12/05 11:34:00:000	155.997	70.3%	83.330	30,953.700	52,344,969
2013/12/05 11:35:00:000	155.997	70.3%	83.339	30,954.000	52,350,686
2013/12/05 11:36:00:000	155.997	70.3%	83.339	30,954.000	52,350,686
2013/12/05 11:37:00:000	155.997	70.3%	83.339	31,083.700	52,350,686
2013/12/05 11:38:00:000	155.997	70.3%	83.337	30,994.600	52,348,990
2013/12/05 11:39:00:000	155.997	70.3%	83.337	30,970.200	52,348,990
2013/12/05 11:40:00:000	155.997	70.3%	83.337	30,970.200	52,348,990
2013/12/05 11:41:00:000	155.997	70.3%	83.309	30,970.200	52,331,464
2013/12/05 11:42:00:000	155.997	70.3%	83.200	30,849.800	52,325,685
2013/12/05 11:43:00:000	155.997	70.3%	83.300	31,138.700	52,325,685
2013/12/05 11:44:00:000	155.997	70.3%	83.363	31,138.700	52,365,573
2013/12/05 11:45:00:000	155.997	70.3%	83.237	31,042.000	52,286,487
2013/12/05 11:46:00:000	155.997	70.3%	83.318	31,042.000	52,337,431
2013/12/05 11:47:00:000	155.997	70.3%	83.397	30,855.000	52,386,616
2013/12/05 11:48:00:000	155.997	70.3%	83.397	30,968.800	52,386,616
2013/12/05 11:49:00:000	155.997	70.3%	83.298	30,888.300	52,324,805
2013/12/05 11:50:00:000	155.997	70.3%	83.322	30,888.300	52,340,007
2013/12/05 11:51:00:000	155.997	70.3%	83.322	30,781.200	52,340,007
2013/12/05 11:52:00:000	155.859	70.2%	83.322	30,929.300	52,340,007
2013/12/05 11:53:00:000	155.859	70.2%	83.322	30,774.600	52,340,007
2013/12/05 11:54:00:000	155.914	70.2%	83.317	31,019.400	52,333,411
2013/12/05 11:55:00:000	155.914	70.2%	83.312	31,008.300	52,333,411
2013/12/05 11:56:00:000	156.107	70.3%	83.374	31,155.000	52,372,546
2013/12/05 11:57:00:000	155.310	70.0%	83.333	30,992.800	52,346,728
2013/12/05 11:58:00:000	156.189	70.4%	83.333	30,992.800	52,346,728

2013/12/05 11:59:00:000	155.805	70.2%	83.333	31,059.000	52,346,728
2013/12/05 12:00:00:000	155.914	70.2%	83.333	31,133.800	52,346,728
2013/12/05 12:01:00:000	156.299	70.4%	83.333	31,224.900	52,346,728
2013/12/05 12:02:00:000	155.997	70.3%	83.333	31,237.000	52,346,728
2013/12/05 12:03:00:000	155.997	70.3%	83.333	31,059.200	52,346,728
2013/12/05 12:04:00:000	155.997	70.3%	83.394	31,049.700	52,384,732
2013/12/05 12:05:00:000	155.997	70.3%	83.394	31,017.300	52,384,732
2013/12/05 12:06:00:000	155.997	70.3%	83.410	31,256.700	52,399,845
2013/12/05 12:07:00:000	155.997	70.3%	83.282	31,178.600	52,321,036
2013/12/05 12:08:00:000	155.997	70.3%	83.436	31,111.300	52,411,617
2013/12/05 12:09:00:000	155.997	70.3%	83.338	31,111.300	52,369,743
2013/12/05 12:10:00:000	155.997	70.3%	83.314	31,036.400	52,334,919
2013/12/05 12:11:00:000	155.997	70.3%	83.314	30,979.600	52,334,919
2013/12/05 12:12:00:000	155.997	70.3%	83.242	31,125.800	52,289,188
2013/12/05 12:13:00:000	155.997	70.3%	83.427	31,081.900	52,405,524
2013/12/05 12:14:00:000	155.997	70.3%	83.399	31,081.900	52,388,313
2013/12/05 12:15:00:000	155.997	70.3%	83.399	31,081.900	52,388,313
2013/12/05 12:16:00:000	155.997	70.3%	83.399	31,081.900	52,388,313
2013/12/05 12:17:00:000	155.997	70.3%	83.339	31,172.200	52,350,246
2013/12/05 12:18:00:000	155.997	70.3%	83.266	31,020.500	52,304,390
2013/12/05 12:19:00:000	155.997	70.3%	83.331	31,020.500	52,345,221
2013/12/05 12:20:00:000	155.997	70.3%	83.258	31,020.500	52,299,742
2013/12/05 12:21:00:000	155.997	70.3%	83.313	31,143.700	52,334,102
2013/12/05 12:22:00:000	155.997	70.3%	83.313	30,922.200	52,334,102
2013/12/05 12:23:00:000	155.997	70.3%	83.397	30,991.800	52,386,554
2013/12/05 12:24:00:000	155.997	70.3%	83.397	30,991.800	52,386,554
2013/12/05 12:25:00:000	156.436	70.5%	83.283	31,123.600	52,315,383
2013/12/05 12:26:00:000	156.107	70.3%	83.283	31,069.700	52,315,383
2013/12/05 12:27:00:000	155.640	70.1%	83.283	31,068.300	52,315,383
2013/12/05 12:28:00:000	156.024	70.3%	83.402	31,283.400	52,390,134
2013/12/05 12:29:00:000	156.024	70.3%	83.275	31,122.100	52,309,918
2013/12/05 12:30:00:000	156.024	70.3%	83.369	31,366.200	52,369,405
2013/12/05 12:31:00:000	156.024	70.3%	83.221	31,179.300	52,276,437
2013/12/05 12:32:00:000	156.271	70.4%	83.380	31,213.900	52,385,282
2013/12/05 12:33:00:000	155.969	70.3%	83.390	31,063.300	52,385,282
2013/12/05 12:34:00:000	155.969	70.3%	83.285	31,232.200	52,316,765
2013/12/05 12:35:00:000	155.969	70.3%	83.285	31,201.600	52,316,765
2013/12/05 12:36:00:000	156.079	70.3%	83.387	31,316.400	52,380,712
2013/12/05 12:37:00:000	155.832	70.2%	83.242	31,141.400	52,289,440
2013/12/05 12:38:00:000	155.942	70.2%	83.307	31,215.300	52,330,082
2013/12/05 12:39:00:000	155.942	70.2%	83.307	31,197.100	52,330,082
2013/12/05 12:40:00:000	155.969	70.3%	83.307	31,170.900	52,330,082
2013/12/05 12:41:00:000	155.969	70.3%	83.307	31,433.400	52,330,082
2013/12/05 12:42:00:000	155.969	70.3%	83.307	31,277.500	52,330,082
2013/12/05 12:43:00:000	155.942	70.2%	83.307	31,277.500	52,330,082
2013/12/05 12:44:00:000	156.107	70.3%	83.307	31,159.900	52,330,082
2013/12/05 12:45:00:000	155.887	70.2%	83.307	31,113.100	52,330,082
2013/12/05 12:46:00:000	155.805	70.2%	83.307	31,236.000	52,330,082
2013/12/05 12:47:00:000	155.969	70.3%	83.242	31,337.900	52,289,754
2013/12/05 12:48:00:000	155.969	70.3%	83.301	31,203.000	52,326,564
2013/12/05 12:49:00:000	155.969	70.3%	83.301	31,118.600	52,326,564
2013/12/05 12:50:00:000	155.969	70.3%	83.301	31,118.600	52,326,564
2013/12/05 12:51:00:000	155.887	70.2%	83.301	31,333.900	52,326,564
2013/12/05 12:52:00:000	155.777	70.2%	83.301	31,363.400	52,326,564
2013/12/05 12:53:00:000	156.079	70.3%	83.301	30,968.600	52,326,564
2013/12/05 12:54:00:000	156.079	70.3%	83.301	31,088.200	52,326,564
2013/12/05 12:55:00:000	155.640	70.1%	83.301	31,329.200	52,326,564
2013/12/05 12:56:00:000	156.079	70.3%	83.360	31,274.000	52,363,689
2013/12/05 12:57:00:000	156.079	70.3%	83.360	31,271.100	52,363,689
2013/12/05 12:58:00:000	155.969	70.3%	83.284	31,183.700	52,265,318
2013/12/05 12:59:00:000	155.969	70.3%	83.360	31,144.000	52,363,814
2013/12/05 01:00:00:000	155.969	70.3%	83.265	30,991.600	52,303,887
2013/12/05 01:01:00:000	156.134	70.3%	83.265	31,027.400	52,303,887
2013/12/05 01:02:00:000	155.914	70.2%	83.342	31,027.400	52,352,256
2013/12/05 01:03:00:000	155.805	70.2%	83.342	31,027.400	52,352,256
2013/12/05 01:04:00:000	156.656	70.6%	83.322	31,027.400	52,339,441
2013/12/05 01:05:00:000	156.189	70.4%	83.322	30,997.900	52,339,441
2013/12/05 01:06:00:000	155.832	70.2%	83.236	31,030.900	52,285,796
2013/12/05 01:07:00:000	155.969	70.3%	83.392	31,081.000	52,383,978
2013/12/05 01:08:00:000	155.969	70.3%	83.225	30,979.800	52,278,887
2013/12/05 01:09:00:000	155.969	70.3%	83.374	31,252.500	52,372,546
2013/12/05 01:10:00:000	155.502	70.0%	83.320	31,123.500	52,338,456
2013/12/05 01:11:00:000	156.750	70.2%	83.227	31,378.300	52,311,677
2013/12/05 01:12:00:000	156.134	70.3%	83.277	31,413.200	52,311,677
2013/12/05 01:13:00:000	156.601	70.5%	83.338	31,344.900	52,349,995
2013/12/05 01:14:00:000	156.079	70.3%	83.338	31,268.300	52,349,995
2013/12/05 01:15:00:000	155.942	70.2%	83.247	31,543.300	52,292,455
2013/12/05 01:16:00:000	156.271	70.4%	83.234	31,278.900	52,284,666
2013/12/05 01:17:00:000	156.024	70.3%	83.327	31,205.600	52,342,959
2013/12/05 01:18:00:000	156.024	70.3%	83.300	31,253.600	52,326,124
2013/12/05 01:19:00:000	156.024	70.3%	83.300	31,178.200	52,326,124
2013/12/05 01:20:00:000	156.024	70.3%	83.300	31,070.900	52,326,124
2013/12/05 01:21:00:000	156.601	70.5%	83.219	31,163.700	52,275,243
2013/12/05 01:22:00:000	155.914	70.2%	83.299	31,271.500	52,325,496
2013/12/05 01:23:00:000	155.805	70.2%	83.299	31,267.400	52,325,496
2013/12/05 01:24:00:000	156.216	70.4%	83.248	31,133.900	52,309,038
2013/12/05 01:25:00:000	156.244	70.4%	83.428	31,297.100	52,406,404
2013/12/05 01:26:00:000	155.914	70.2%	83.240	31,082.200	52,288,058
2013/12/05 01:27:00:000	156.244	70.4%	83.327	31,150.200	52,342,959
2013/12/05 01:28:00:000	155.914	70.2%	83.289	31,415.900	52,319,277
2013/12/05 01:29:00:000	155.859	70.2%	83.289	31,233.300	52,319,277
2013/12/05 01:30:00:000	156.216	70.4%	83.289	31,289.200	52,319,277
2013/12/05 01:31:00:000	156.079	70.3%	83.289	31,034.800	52,319,277
2013/12/05 01:32:00:000	156.189	70.4%	83.289	31,003.500	52,319,277
2013/12/05 01:33:00:000	155.750	70.2%	83.289	30,830.700	52,319,277
2013/12/05 01:34:00:000	155.997	70.3%	83.289	30,951.300	52,319,277
2013/12/05 01:35:00:000	155.997	70.3%	83.360	30,990.200	52,363,689
2013/12/05 01:36:00:000	155.997	70.3%	83.360	30,990.200	52,363,689
2013/12/05 01:37:00:000	155.997	70.3%	83.371	31,115.500	52,374,179
2013/12/05 01:38:00:000	155.997	70.3%	83.298	30,937.100	52,324,680
2013/12/05 01:39:00:000	155.997	70.3%	83.298	31,169.600	52,324,680
2013/12/05 01:40:00:000	155.997	70.3%	83.270	31,092.900	52,306,965
2013/12/05 01:41:00:000	155.997	70.3%	83.270	31,256.800	52,306,965
2013/12/05 01:42:00:000	155.997	70.3%	83.260	31,106.400	52,300,747
2013/12/05 01:43:00:000	155.997	70.3%	83.260	31,106.400	52,300,747
2013/12/05 01:44:00:000	155.997	70.3%	83.260	31,184.000	52,300,747
2013/12/05 01:45:00:000	155.997	70.3%	83.314	31,184.000	52,334,793
2013/12/05 01:46:00:000	155.997	70.3%	83.314	31,161.900	52,334,793
2013/12/05 01:47:00:000	155.997	70.3%	83.314	31,036.800	52,334,793
2013/12/05 01:48:00:000	155.997	70.3%	83.273	31,278.200	52,309,038
2013/12/05 01:49:00:000	155.997	70.3%	83.273	31,138.500	52,309,038
2013/12/05 01:50:00:000	155.997	70.3%	83.273	31,138.500	52,309,038
2013/12/05 01:51:00:000	155.997	70.3%	83.313	31,092.800	52,334,291
2013/12/05 01:52:00:000	155.997	70.3%	83.313	31,257.600	52,334,291
2013/12/05 01:53:00:000	155.997	70.3%	83.313	31,109.700	52,334,291
2013/12/05 01:54:00:000	155.997	70.3%	83.313	31,109.700	52,334,291
2013/12/05 01:55:00:000	155.365	70.0%	83.272	31,099.200	52,308,536
2013/12/05 01:56:00:000	156.161	70.3%	83.239	30,948.800	52,287,618
2013/12/05 01:57:00:000	155.557	70.1%	83.239	30,888.400	52,287,618
2013/12/05 01:58:00:000	155.338	70.0%	83.343	31,046.900	52,352,696
2013/12/05 01:59:00:000	155.942	70.2%	83.159	30,912.800	52,237,554
2013/12/05 02:00:00:000	155.942	70.2%	83.271	31,182.300	52,307,468
2013/12/05 02:01:00:000	155.667	70.1%	83.271	31,213.700	52,307,468

2013/12/05 02:02:00.000	155.914	70.2%	83.422	31,232.100			52,402,635
2013/12/05 02:03:00.000	155.640	70.1%	83.250	31,339.800			52,794,339
2013/12/05 02:04:00.000	156.052	70.3%	83.314	31,203.800			52,334,416
2013/12/05 02:05:00.000	156.052	70.3%	83.314	31,203.800			52,334,416
2013/12/05 02:06:00.000	156.107	70.3%	83.314	31,174.500			52,334,416
2013/12/05 02:07:00.000	155.832	70.2%	83.314	30,832.600			52,334,416
2013/12/05 02:08:00.000	155.777	70.2%	83.314	30,973.400			52,334,416
2013/12/05 02:09:00.000	155.326	70.1%	83.263	30,973.400			52,302,631
2013/12/05 02:10:00.000	155.942	70.2%	83.263	30,973.400			52,302,631
2013/12/05 02:11:00.000	156.079	70.3%	83.260	31,024.000			52,300,935
2013/12/05 02:12:00.000	155.942	70.2%	83.412	31,024.000			52,396,039
2013/12/05 02:13:00.000	156.244	70.4%	83.312	30,957.100			52,333,662
2013/12/05 02:14:00.000	164.399	74.1%	86.425	29,745.900			54,288,755
2013/12/05 02:15:00.000	174.093	78.4%	89.365	31,908.100			56,135,616
2013/12/05 02:16:00.000	184.088	82.9%	93.547	35,573.000			58,762,591
2013/12/05 02:17:00.000	193.891	87.3%	97.072	41,665.500			60,976,801
2013/12/05 02:18:00.000	203.666	91.7%	100.793	44,515.900			63,314,383
2013/12/05 02:19:00.000	214.733	96.7%	104.832	48,389.100			65,851,531
2013/12/05 02:20:00.000	218.961	98.6%	106.493	51,368.000			66,894,909
2013/12/05 02:21:00.000	226.472	99.3%	107.424	55,141.800			67,475,728
2013/12/05 02:22:00.000	219.730	99.0%	107.138	55,233.100			67,300,074
2013/12/05 02:23:00.000	219.730	99.0%	107.001	54,835.800			67,214,015
2013/12/05 02:24:00.000	219.126	98.7%	106.830	55,012.100			67,144,289
2013/12/05 02:25:00.000	219.044	98.7%	106.690	54,653.300			67,018,657
2013/12/05 02:26:00.000	218.412	98.4%	106.699	54,653.300			67,024,310
2013/12/05 02:27:00.000	218.687	98.5%	106.699	54,671.900			67,024,310
2013/12/05 02:28:00.000	218.824	98.6%	106.699	54,694.300			67,024,310
2013/12/05 02:29:00.000	218.440	98.4%	106.600	54,543.400			66,962,122
2013/12/05 02:30:00.000	218.440	98.4%	106.600	54,510.700			66,962,122
2013/12/05 02:31:00.000	218.440	98.4%	106.600	54,510.700			66,962,122
2013/12/05 02:32:00.000	218.440	98.4%	106.600	54,524.200			66,962,122
2013/12/05 02:33:00.000	218.577	98.5%	106.354	54,524.200			66,807,594
2013/12/05 02:34:00.000	217.973	98.1%	106.358	54,341.700			66,810,107
2013/12/05 02:35:00.000	217.835	98.1%	106.358	54,341.700			66,810,107
2013/12/05 02:36:00.000	217.726	98.1%	106.627	54,444.600			66,979,083
2013/12/05 02:37:00.000	218.275	98.3%	106.508	54,411.800			66,904,331
2013/12/05 02:38:00.000	218.275	98.3%	106.585	54,442.100			66,952,700
2013/12/05 02:39:00.000	218.275	98.3%	106.463	53,868.600			66,876,064
2013/12/05 02:40:00.000	218.028	98.2%	106.315	53,533.400			66,783,096
2013/12/05 02:41:00.000	217.973	98.2%	106.365	53,464.500			66,814,504
2013/12/05 02:42:00.000	217.753	98.1%	106.251	53,272.200			66,742,893
2013/12/05 02:43:00.000	217.753	98.1%	106.310	53,464.100			66,779,955
2013/12/05 02:44:00.000	217.973	98.2%	106.310	53,225.100			66,779,955
2013/12/05 02:45:00.000	217.973	98.2%	106.296	53,509.100	Run 1	66,771,161	66,771,161
2013/12/05 02:46:00.000	217.973	98.2%	106.327	53,348.700	66,875,008	66,787,493	66,787,493
2013/12/05 02:47:00.000	217.973	98.2%	106.312	53,308.800		66,781,211	66,781,211
2013/12/05 02:48:00.000	217.973	98.2%	106.439	53,562.000		66,860,988	66,860,988
2013/12/05 02:49:00.000	217.863	98.1%	106.306	53,471.400		66,777,442	66,777,442
2013/12/05 02:50:00.000	218.083	98.2%	106.434	53,795.600		66,857,847	66,857,847
2013/12/05 02:51:00.000	218.714	98.5%	106.434	53,547.000		66,857,847	66,857,847
2013/12/05 02:52:00.000	218.083	98.2%	106.434	53,655.900		66,857,847	66,857,847
2013/12/05 02:53:00.000	218.083	98.2%	106.360	53,579.300		66,811,363	66,811,363
2013/12/05 02:54:00.000	218.357	98.4%	106.360	53,759.500		66,811,363	66,811,363
2013/12/05 02:55:00.000	218.330	98.3%	106.360	53,613.200		66,811,363	66,811,363
2013/12/05 02:56:00.000	217.945	98.2%	106.434	53,585.600		66,857,847	66,857,847
2013/12/05 02:57:00.000	218.275	98.3%	106.388	53,585.600		66,828,952	66,828,952
2013/12/05 02:58:00.000	217.835	98.1%	106.388	53,607.300		66,828,952	66,828,952
2013/12/05 02:59:00.000	218.577	98.5%	106.347	53,464.200		66,800,056	66,800,056
2013/12/05 03:00:00.000	218.110	98.2%	106.347	53,537.600		66,800,056	66,800,056
2013/12/05 03:01:00.000	218.110	98.2%	106.347	53,623.000		66,800,056	66,800,056
2013/12/05 03:02:00.000	218.577	98.5%	106.453	53,623.000		66,869,782	66,869,782
2013/12/05 03:03:00.000	218.055	98.2%	106.297	53,623.000		66,771,789	66,771,789
2013/12/05 03:04:00.000	218.083	98.2%	106.407	53,633.700		66,840,887	66,840,887
2013/12/05 03:05:00.000	218.604	98.5%	106.319	53,697.300		66,785,609	66,785,609
2013/12/05 03:06:00.000	218.220	98.3%	106.417	53,583.900		66,847,168	66,847,168
2013/12/05 03:07:00.000	218.220	98.3%	106.297	53,544.200		66,771,789	66,771,789
2013/12/05 03:08:00.000	218.220	98.3%	106.327	53,780.500		66,790,634	66,790,634
2013/12/05 03:09:00.000	218.220	98.3%	106.358	53,570.100		66,810,107	66,810,107
2013/12/05 03:10:00.000	218.220	98.3%	106.358	53,843.800		66,810,107	66,810,107
2013/12/05 03:11:00.000	218.220	98.3%	106.358	53,684.300		66,810,107	66,810,107
2013/12/05 03:12:00.000	218.220	98.3%	106.358	53,773.600		66,810,107	66,810,107
2013/12/05 03:13:00.000	218.055	98.2%	106.358	53,773.600		66,810,107	66,810,107
2013/12/05 03:14:00.000	218.055	98.2%	106.260	53,427.200		66,748,547	66,748,547
2013/12/05 03:15:00.000	217.973	98.2%	106.330	53,545.600		66,792,518	66,792,518
2013/12/05 03:16:00.000	217.973	98.2%	106.200	53,611.900		66,710,857	66,710,857
2013/12/05 03:17:00.000	217.973	98.2%	106.200	53,596.000		66,710,857	66,710,857
2013/12/05 03:18:00.000	218.604	98.5%	106.344	53,532.800		66,801,313	66,801,313
2013/12/05 03:19:00.000	218.330	98.3%	106.344	53,580.600		66,801,313	66,801,313
2013/12/05 03:20:00.000	218.247	98.3%	106.344	53,681.900		66,801,313	66,801,313
2013/12/05 03:21:00.000	218.247	98.3%	106.344	53,644.100		66,801,313	66,801,313
2013/12/05 03:22:00.000	218.961	98.6%	106.482	53,854.200		66,887,999	66,887,999
2013/12/05 03:23:00.000	218.852	98.6%	106.482	54,015.600		66,887,999	66,887,999
2013/12/05 03:24:00.000	218.467	98.4%	106.482	54,131.600		66,887,999	66,887,999
2013/12/05 03:25:00.000	218.467	98.4%	106.429	53,791.000		66,854,706	66,854,706
2013/12/05 03:26:00.000	218.385	98.4%	106.329	53,601.900		66,854,706	66,854,706
2013/12/05 03:27:00.000	218.385	98.4%	106.311	53,616.500		66,780,583	66,780,583
2013/12/05 03:28:00.000	218.385	98.4%	106.364	53,937.400		66,813,876	66,813,876
2013/12/05 03:29:00.000	218.385	98.4%	106.482	53,763.800		66,887,999	66,887,999
2013/12/05 03:30:00.000	218.495	98.4%	106.482	53,763.800		66,887,999	66,887,999
2013/12/05 03:31:00.000	218.330	98.3%	106.359	53,887.600		66,810,735	66,810,735
2013/12/05 03:32:00.000	218.714	98.5%	106.438	53,575.000		66,860,360	66,860,360
2013/12/05 03:33:00.000	218.714	98.5%	106.438	53,782.500		66,860,360	66,860,360
2013/12/05 03:34:00.000	218.714	98.5%	106.530	53,782.500		66,918,151	66,918,151
2013/12/05 03:35:00.000	218.714	98.5%	106.395	53,862.000		66,833,349	66,833,349
2013/12/05 03:36:00.000	218.302	98.3%	106.395	53,771.200		66,833,349	66,833,349
2013/12/05 03:37:00.000	218.412	98.4%	106.395	53,965.500		66,833,349	66,833,349
2013/12/05 03:38:00.000	218.412	98.4%	106.395	53,775.800		66,833,349	66,833,349
2013/12/05 03:39:00.000	219.016	98.7%	106.395	53,808.600		66,833,349	66,833,349
2013/12/05 03:40:00.000	218.906	98.6%	106.395	53,808.600		66,833,349	66,833,349
2013/12/05 03:41:00.000	218.275	98.3%	106.473	53,765.400		66,882,346	66,882,346
2013/12/05 03:42:00.000	218.687	98.5%	106.490	53,641.700		66,893,024	66,893,024
2013/12/05 03:43:00.000	218.604	98.5%	106.490	53,750.100		66,893,024	66,893,024
2013/12/05 03:44:00.000	218.247	98.3%	106.394	53,750.100		66,832,721	66,832,721
2013/12/05 03:45:00.000	218.412	98.4%	106.394	53,750.100		66,832,721	66,832,721
2013/12/05 03:46:00.000	218.330	98.3%	106.394	53,932.100		66,832,721	66,832,721
2013/12/05 03:47:00.000	219.071	98.7%	106.629	53,903.800		66,980,339	66,980,339
2013/12/05 03:48:00.000	218.961	98.6%	106.438	53,889.400		66,860,360	66,860,360
2013/12/05 03:49:00.000	218.961	98.6%	106.477	53,826.200		66,884,858	66,884,858
2013/12/05 03:50:00.000	218.961	98.6%	106.623	53,826.200		66,976,570	66,976,570
2013/12/05 03:51:00.000	218.385	98.4%	106.450	53,826.200		66,867,898	66,867,898
2013/12/05 03:52:00.000	218.961	98.6%	106.553	53,747.400		66,932,599	66,932,599
2013/12/05 03:53:00.000	218.769	98.5%	10				

2013/12/05 04:05:00.000	218.742	98.5%	106.544	53,631.300	66,926,945	66,926,945
2013/12/05 04:06:00.000	218.742	98.5%	106.544	53,731.500	66,926,945	66,926,945
2013/12/05 04:07:00.000	219.593	98.9%	106.658	53,815.300	66,998,556	66,998,556
2013/12/05 04:08:00.000	219.181	98.7%	106.658	53,867.100	66,998,556	66,998,556
2013/12/05 04:09:00.000	219.181	98.7%	106.572	53,984.600	66,944,534	66,944,534
2013/12/05 04:10:00.000	219.181	98.7%	106.572	54,066.400	66,944,534	66,944,534
2013/12/05 04:11:00.000	219.784	98.7%	106.572	53,831.300	66,944,534	66,944,534
2013/12/05 04:12:00.000	220.037	99.1%	106.677	53,719.800	67,010,491	67,010,491
2013/12/05 04:13:00.000	219.346	98.8%	106.677	53,765.500	67,010,491	67,010,491
2013/12/05 04:14:00.000	219.099	98.7%	106.677	53,695.100	67,010,491	67,010,491
2013/12/05 04:15:00.000	219.346	98.8%	106.636	53,691.700	66,984,736	66,984,736
2013/12/05 04:16:00.000	218.934	98.6%	106.493	53,858.900	66,894,909	66,894,909
2013/12/05 04:17:00.000	219.263	98.8%	106.590	53,702.100	66,955,841	66,955,841
2013/12/05 04:18:00.000	219.263	98.8%	106.590	54,063.400	66,955,841	66,955,841
2013/12/05 04:19:00.000	219.263	98.8%	106.521	53,642.100	66,912,497	66,912,497
2013/12/05 04:20:00.000	219.868	99.0%	106.602	53,608.100	66,963,379	66,963,379
2013/12/05 04:21:00.000	219.346	98.8%	106.602	53,804.500	66,963,379	66,963,379
2013/12/05 04:22:00.000	219.346	98.8%	106.602	53,818.500	66,963,379	66,963,379
2013/12/05 04:23:00.000	219.703	99.0%	106.762	53,577.900	67,063,885	67,063,885
2013/12/05 04:24:00.000	219.703	99.0%	106.762	53,719.500	67,063,885	67,063,885
2013/12/05 04:25:00.000	219.703	99.0%	106.696	53,766.600	67,022,426	67,022,426
2013/12/05 04:26:00.000	219.703	99.0%	106.770	53,767.800	67,068,910	67,068,910
2013/12/05 04:27:00.000	219.703	99.0%	106.670	53,702.300	67,006,094	67,006,094
2013/12/05 04:28:00.000	220.362	99.3%	106.951	53,739.200	67,182,607	67,182,607
2013/12/05 04:29:00.000	219.868	99.0%	106.801	53,739.200	67,088,383	67,088,383
2013/12/05 04:30:00.000	219.868	99.0%	106.801	53,739.200	67,088,383	67,088,383
2013/12/05 04:31:00.000	220.938	99.5%	106.801	53,763.600	67,088,383	67,088,383
2013/12/05 04:32:00.000	220.060	99.1%	106.801	53,482.600	67,088,383	67,088,383
2013/12/05 04:33:00.000	219.703	99.0%	106.699	53,582.800	67,024,310	67,024,310
2013/12/05 04:34:00.000	220.362	99.3%	106.699	53,734.200	67,024,310	67,024,310
2013/12/05 04:35:00.000	219.620	98.9%	106.699	53,809.400	67,024,310	67,024,310
2013/12/05 04:36:00.000	219.813	99.2%	106.699	53,809.400	67,024,310	67,024,310
2013/12/05 04:37:00.000	219.228	98.8%	106.699	53,771.000	67,024,310	67,024,310
2013/12/05 04:38:00.000	219.785	99.0%	106.793	53,929.700	67,083,358	67,083,358
2013/12/05 04:39:00.000	220.170	99.2%	106.793	53,894.300	67,083,358	67,083,358
2013/12/05 04:40:00.000	219.483	98.9%	106.793	53,991.300	67,083,358	67,083,358
2013/12/05 04:41:00.000	220.060	99.1%	106.827	53,865.100	67,104,715	67,104,715
2013/12/05 04:42:00.000	219.922	99.1%	106.774	53,771.800	67,071,422	67,071,422
2013/12/05 04:43:00.000	219.648	98.9%	106.734	53,771.800	67,046,296	67,046,296
2013/12/05 04:44:00.000	219.648	98.9%	106.734	53,730.200	67,046,296	67,046,296
2013/12/05 04:45:00.000	219.813	99.0%	106.734	53,787.700	67,046,296	67,046,296
2013/12/05 04:46:00.000	219.813	99.0%	106.795	53,644.500	67,084,614	67,084,614
2013/12/05 04:47:00.000	219.511	98.9%	106.795	53,950.500	67,084,614	67,084,614
2013/12/05 04:48:00.000	219.703	99.0%	106.704	53,669.200	67,027,451	67,027,451
2013/12/05 04:49:00.000	219.511	98.9%	106.794	53,578.500	67,083,596	67,083,596
2013/12/05 04:50:00.000	219.785	99.0%	106.682	53,764.300	67,013,632	67,013,632
2013/12/05 04:51:00.000	219.675	99.0%	106.878	53,764.300	67,136,751	67,136,751
2013/12/05 04:52:00.000	219.648	98.9%	106.745	53,720.100	67,053,206	67,053,206
2013/12/05 04:53:00.000	219.620	98.9%	106.745	53,589.000	67,053,206	67,053,206
2013/12/05 04:54:00.000	219.977	99.1%	106.799	53,588.600	67,087,127	67,087,127
2013/12/05 04:55:00.000	220.252	99.2%	106.926	53,782.400	67,166,903	67,166,903
2013/12/05 04:56:00.000	220.032	99.1%	106.827	53,782.400	67,104,715	67,104,715
2013/12/05 04:57:00.000	220.032	99.1%	106.827	53,664.400	67,104,715	67,104,715
2013/12/05 04:58:00.000	219.730	99.0%	106.827	53,800.100	67,104,715	67,104,715
2013/12/05 04:59:00.000	220.115	99.2%	106.872	53,686.300	67,132,982	67,132,982
2013/12/05 05:00:00.000	220.115	99.2%	106.872	53,790.100	67,132,982	67,132,982
2013/12/05 05:01:00.000	220.307	99.2%	107.079	53,790.100	67,263,012	67,263,012
2013/12/05 05:02:00.000	220.307	99.2%	106.963	53,592.300	67,190,145	67,190,145
2013/12/05 05:03:00.000	220.307	99.2%	107.105	53,828.100	67,229,344	67,229,344
2013/12/05 05:04:00.000	220.444	99.3%	106.992	53,828.100	67,208,362	67,208,362
2013/12/05 05:05:00.000	220.170	99.2%	106.858	53,888.100	67,124,188	67,124,188
2013/12/05 05:06:00.000	220.032	99.1%	106.858	53,670.300	67,124,188	67,124,188
2013/12/05 05:07:00.000	220.170	99.2%	106.858	53,585.900	67,124,188	67,124,188
2013/12/05 05:08:00.000	220.115	99.2%	106.747	53,603.400	67,054,462	67,054,462
2013/12/05 05:09:00.000	220.060	99.1%	106.865	53,655.700	67,128,585	67,128,585
2013/12/05 05:10:00.000	219.922	99.1%	106.865	53,780.100	67,128,585	67,128,585
2013/12/05 05:11:00.000	220.197	99.2%	106.826	53,677.500	67,104,087	67,104,087
2013/12/05 05:12:00.000	220.197	99.2%	106.826	53,677.500	67,104,087	67,104,087
2013/12/05 05:13:00.000	220.087	99.1%	106.826	53,544.600	67,104,087	67,104,087
2013/12/05 05:14:00.000	220.087	99.1%	106.962	53,638.800	67,189,517	67,189,517
2013/12/05 05:15:00.000	220.224	99.2%	107.012	53,501.200	67,220,925	67,220,925
2013/12/05 05:16:00.000	220.224	99.2%	106.927	53,535.300	67,167,531	67,167,531
2013/12/05 05:17:00.000	220.719	99.4%	106.927	53,654.900	67,167,531	67,167,531
2013/12/05 05:18:00.000	220.224	99.2%	106.927	53,654.900	67,167,531	67,167,531
2013/12/05 05:19:00.000	220.224	99.2%	106.927	53,453.300	67,167,531	67,167,531
2013/12/05 05:20:00.000	220.224	99.2%	106.927	53,400.300	67,167,531	67,167,531
2013/12/05 05:21:00.000	220.224	99.2%	106.927	53,647.300	67,167,531	67,167,531
2013/12/05 05:22:00.000	220.279	99.2%	106.927	53,479.600	67,167,531	67,167,531
2013/12/05 05:23:00.000	220.279	99.2%	106.927	53,516.900	67,167,531	67,167,531
2013/12/05 05:24:00.000	220.664	99.4%	107.035	53,674.100	67,235,373	67,235,373
2013/12/05 05:25:00.000	220.142	99.2%	106.931	53,470.600	67,170,044	67,170,044
2013/12/05 05:26:00.000	220.334	99.2%	106.931	53,659.800	67,170,044	67,170,044
2013/12/05 05:27:00.000	220.334	99.2%	106.931	53,572.200	67,170,044	67,170,044
2013/12/05 05:28:00.000	220.334	99.2%	106.931	53,599.500	67,170,044	67,170,044
2013/12/05 05:29:00.000	220.472	99.3%	106.901	53,693.200	67,151,199	67,151,199
2013/12/05 05:30:00.000	220.389	99.3%	106.954	53,599.600	67,184,492	67,184,492
2013/12/05 05:31:00.000	220.389	99.3%	106.954	53,499.700	67,184,492	67,184,492
2013/12/05 05:32:00.000	220.581	99.4%	106.954	53,493.500	67,184,492	67,184,492
2013/12/05 05:33:00.000	220.252	99.2%	106.954	53,502.700	67,184,492	67,184,492
2013/12/05 05:34:00.000	220.499	99.3%	106.954	53,601.200	67,184,492	67,184,492
2013/12/05 05:35:00.000	219.950	99.1%	106.954	53,367.100	67,184,492	67,184,492
2013/12/05 05:36:00.000	220.829	99.5%	106.954	53,536.700	67,184,492	67,184,492
2013/12/05 05:37:00.000	220.527	99.3%	107.090	53,235.800	67,269,922	67,269,922
2013/12/05 05:38:00.000	220.691	99.4%	106.985	53,535.800	67,203,965	67,203,965
2013/12/05 05:39:00.000	220.691	99.4%	107.069	53,535.800	67,256,730	67,256,730
2013/12/05 05:40:00.000	220.499	99.3%	107.009	53,476.800	67,219,041	67,219,041
2013/12/05 05:41:00.000	220.695	99.4%	107.009	53,478.300	67,219,041	67,219,041
2013/12/05 05:42:00.000	220.279	99.2%	107.009	53,469.700	67,219,041	67,219,041
2013/12/05 05:43:00.000	220.581	99.4%	107.009	53,501.200	67,219,041	67,219,041
2013/12/05 05:44:00.000	220.581	99.4%	106.970	53,378.500	67,194,542	67,194,542
2013/12/05 05:45:00.000	220.581	99.4%	106.970	53,378.500	67,194,542	67,194,542
2013/12/05 05:46:00.000	220.581	99.4%	107.035	53,565.200	67,235,373	67,235,373
2013/12/05 05:47:00.000	220.581	99.4%	107.035	53,348.100	67,235,373	67,235,373
2013/12/05 05:48:00.000	220.581	99.4%	106.972	53,540.100	67,195,799	67,195,799
2013/12/05 05:49:00.000	220.581	99.4%	107.017	53,443.100	67,224,066	67,224,066
2013/12/05 05:50:00.000	220.581	99.4%	107.017	53,443.100	67,224,066	67,224,066
2013/12/05 05:51:00.000	220.581	99.4%	107.060	53,411.700	67,251,077	67,251,077
2013/12/05 05:52:00.000	221.405	99.7%	107.060	53,411.700	67,251,077	67,251,077
2013/12/05 05:53:00.000	220.636	99.4%	107.060	53,514.400	67,251,077	67,251,077
2013/12/05 05:54:00.000	220.636	99.4%	106.994	53,633.100	67,209,618	67,209,618
2013/12/05 05:55:00.000	220.444	99.3%	106.994	53,355.700	67,209,618	67,209,618
2013/12/05 05:56:00.0						

2013/12/05 06:08:00.000	220.883	99.5%	107.081	53,431.700	67,264,268	67,264,268
2013/12/05 06:09:00.000	220.609	99.4%	107.081	53,386.100	67,264,268	67,264,268
2013/12/05 06:10:00.000	220.609	99.4%	107.081	53,386.100	67,264,268	67,264,268
2013/12/05 06:11:00.000	220.801	99.5%	107.081	53,505.600	67,264,268	67,264,268
2013/12/05 06:12:00.000	220.636	99.4%	106.988	53,344.900	67,205,849	67,205,849
2013/12/05 06:13:00.000	220.636	99.4%	107.073	53,344.900	67,259,243	67,259,243
2013/12/05 06:14:00.000	220.636	99.4%	107.073	53,657.700	67,259,243	67,259,243
2013/12/05 06:15:00.000	220.829	99.5%	107.073	53,562.000		
2013/12/05 06:16:00.000	220.389	99.3%	107.073	53,361.400		
2013/12/05 06:17:00.000	221.186	99.6%	107.162	53,246.800		
2013/12/05 06:18:00.000	220.966	99.5%	107.162	53,426.500		
2013/12/05 06:19:00.000	220.966	99.5%	107.162	53,318.300		
2013/12/05 06:20:00.000	220.966	99.5%	107.162	53,230.000		
2013/12/05 06:21:00.000	220.883	99.5%	107.114	53,404.700		
2013/12/05 06:22:00.000	220.911	99.5%	107.114	53,228.500		
2013/12/05 06:23:00.000	220.911	99.5%	107.114	53,375.800		
2013/12/05 06:24:00.000	221.076	99.6%	107.031	53,194.800		
2013/12/05 06:25:00.000	220.911	99.5%	107.144	53,275.500		
2013/12/05 06:26:00.000	220.801	99.5%	107.086	53,257.100		
2013/12/05 06:27:00.000	220.801	99.5%	107.086	53,345.700		
2013/12/05 06:28:00.000	220.801	99.5%	107.086	53,361.900		
2013/12/05 06:29:00.000	220.938	99.5%	107.086	53,189.000		
2013/12/05 06:30:00.000	220.938	99.5%	107.163	53,284.800		
2013/12/05 06:31:00.000	220.938	99.5%	107.163	53,360.300		
2013/12/05 06:32:00.000	220.856	99.5%	107.163	53,245.200		
2013/12/05 06:33:00.000	221.076	99.6%	107.163	53,506.400		
2013/12/05 06:34:00.000	221.076	99.6%	107.193	53,248.400		
2013/12/05 06:35:00.000	221.515	99.8%	107.193	53,248.400		
2013/12/05 06:36:00.000	220.746	99.4%	107.193	53,576.000		
2013/12/05 06:37:00.000	221.131	99.6%	107.193	53,250.300		
2013/12/05 06:38:00.000	220.966	99.5%	107.193	53,315.900		
2013/12/05 06:39:00.000	221.103	99.6%	107.193	53,315.900		
2013/12/05 06:40:00.000	221.515	99.8%	107.275	53,429.800		
2013/12/05 06:41:00.000	221.021	99.6%	107.221	53,293.600		
2013/12/05 06:42:00.000	221.021	99.6%	107.221	53,188.200		
2013/12/05 06:43:00.000	221.405	99.7%	107.141	53,401.500		
2013/12/05 06:44:00.000	221.213	99.6%	107.264	53,381.600		
2013/12/05 06:45:00.000	220.856	99.5%	107.177	53,280.400		
2013/12/05 06:46:00.000	221.076	99.6%	107.177	53,442.500		
2013/12/05 06:47:00.000	221.295	99.7%	107.303	53,427.400		
2013/12/05 06:48:00.000	220.911	99.5%	107.257	53,525.100		
2013/12/05 06:49:00.000	221.131	99.6%	107.257	53,363.800		
2013/12/05 06:50:00.000	221.131	99.6%	107.189	53,363.800		
2013/12/05 06:51:00.000	221.131	99.6%	107.189	53,278.900		
2013/12/05 06:52:00.000	221.131	99.6%	107.189	53,312.900		
2013/12/05 06:53:00.000	221.131	99.6%	107.251	53,425.000		
2013/12/05 06:54:00.000	221.076	99.6%	107.116	53,322.600		
2013/12/05 06:55:00.000	221.570	99.8%	107.279	53,322.600		
2013/12/05 06:56:00.000	221.103	99.6%	107.334	53,322.600		
2013/12/05 06:57:00.000	221.268	99.7%	107.250	53,322.600		
2013/12/05 06:58:00.000	221.268	99.7%	107.250	53,361.400		
2013/12/05 06:59:00.000	221.268	99.7%	107.250	53,223.300		
2013/12/05 07:00:00.000	221.268	99.7%	107.250	53,310.600		
2013/12/05 07:01:00.000	221.268	99.7%	107.250	53,235.100		
2013/12/05 07:02:00.000	221.460	99.8%	107.250	53,235.100		
2013/12/05 07:03:00.000	220.115	99.2%	107.197	53,394.600		
2013/12/05 07:04:00.000	221.735	99.9%	107.197	53,086.100		
2013/12/05 07:05:00.000	221.131	99.6%	107.213	53,107.500		
2013/12/05 07:06:00.000	221.048	99.6%	107.213	53,298.500		
2013/12/05 07:07:00.000	221.433	99.7%	107.292	53,328.200		
2013/12/05 07:08:00.000	220.307	99.2%	107.212	53,408.300		
2013/12/05 07:09:00.000	216.765	97.6%	105.233	47,879.300		
2013/12/05 07:10:00.000	207.181	93.3%	100.823	44,964.900		
2013/12/05 07:11:00.000	197.323	88.9%	97.845	42,348.600		
2013/12/05 07:12:00.000	186.175	83.9%	94.043	35,682.900		
2013/12/05 07:13:00.000	176.784	79.6%	90.462	31,879.300		
2013/12/05 07:14:00.000	166.926	75.2%	87.032	28,246.200		
2013/12/05 07:15:00.000	156.821	70.6%	83.378	26,655.900		
2013/12/05 07:16:00.000	147.429	66.4%	79.828	23,172.600		
2013/12/05 07:17:00.000	136.336	61.4%	76.177	19,947.600		
2013/12/05 07:18:00.000	127.274	57.3%	72.536	16,594.700		
2013/12/05 07:19:00.000	116.565	52.5%	68.919	15,115.100		
2013/12/05 07:20:00.000	107.146	48.3%	65.367	13,007.800		
2013/12/05 07:21:00.000	96.163	43.3%	61.873	12,306.900		
2013/12/05 07:22:00.000	86.360	38.9%	59.060	11,947.900		
2013/12/05 07:23:00.000	76.364	34.4%	55.501	11,142.200		
2013/12/05 07:24:00.000	66.946	30.7%	51.686	8,265.300		
2013/12/05 07:25:00.000	56.648	25.5%	48.152	5,690.100		
2013/12/05 07:26:00.000	46.598	21.0%	44.801	5,530.410		
2013/12/05 07:27:00.000	35.999	16.2%	41.845	5,288.320		
2013/12/05 07:28:00.000	35.257	15.9%	41.724	0.000		
2013/12/05 07:29:00.000	35.230	15.9%	31.825	0.000		
2013/12/05 07:30:00.000	34.791	15.7%	21.586	9,057.030		

(A) Based on an approximate maximum load level for the ambient conditions of 222 MW

B-1

**Unit 32B Annual Compliance Emission
Measurements 12-09-13.**

Gases Calculations

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KOGLER & ASSOCIATES, INC.

ENVIRONMENTAL SERVICES

Unit 32B, Pollutant:		CO	NOx	THC	CO2	O2	
Method:		1D	7E	25A	3A	3A	
Info	Instrument Span	60	50	100	25	25	
	Zero Gas Cylinder ID	DBY267	DBY267	DBY267	DBY267	DBY267	
	Low Gas Cylinder ID	NA	NA	CC-184994	NA	NA	
	Mid Gas Cylinder ID	EB0021641	EB0015940	EB0021641	EB-0050207	EB-0050207	
	Span Gas Cylinder ID	CC166547	EB0000520	CC166547	CC-107906	CC-107906	
	Zero Gas Concentration ($C_{V,zero}$)	0	0	0	0	0	
	Low Gas Concentration ($C_{V,low}$)	NA	NA	10.1	NA	NA	
	Mid Gas Concentration ($C_{V,mid}$)	10.5	24.7	52	9.74	9.8	
	Span Gas Concentration (CS)	51.3	48.7	100.7	19.6	20	
	Calibration Gas Concentration ($C_{V,cal}$)	10.5	24.7	10.1	9.74	9.82	
Pre-Sampling Calibrations	Direct Loop (System Loop for HCs)	Zero Gas Start	06:48 (0.000)	07:13 (0.000)	06:48 (0.000)	06:48 (0.038)	06:48 (0.000)
		Zero Gas Stop	06:49 (0.031)	07:14 (0.025)	06:49 (0.000)	06:49 (0.006)	06:49 (0.000)
		Zero Gas Response ($C_{dir,zero}$)	0.016	0.013	0.000	0.022	0.000
		Zero Gas Accuracy ¹ (ACE _{zero})	0.030% < 2%	0.026% < 2%	NA	0.112% < 2%	0.000% < 2%
		Low Gas Start	NA	NA	11:43 (10.125)	NA	NA
		Low Gas Stop	NA	NA	11:44 (10.125)	NA	NA
		Low Gas Response ($C_{dir,low}$)	NA	NA	10.125	NA	NA
		Low Gas Accuracy ^{1,3} (ACE _{low})	NA	NA	0.123% < 5%	NA	NA
	Mid Gas Start	07:10 (11.031)	06:55 (25.125)	07:30 (51.675)	07:02 (9.875)	07:02 (9.969)	
	Mid Gas Stop	07:11 (11.031)	06:56 (25.425)	07:31 (52.000)	07:03 (9.869)	07:03 (9.969)	
	Mid Gas Response ($C_{dir,mid}$)	11.031	25.275	51.838	9.872	9.969	
	Mid Gas Accuracy ^{1,3} (ACE _{mid})	1.036% < 2%	1.181% < 2%	0.437% < 5%	0.673% < 2%	0.744% < 2%	
	Span Gas Start	07:06 (51.250)	06:52 (48.775)	07:27 (100.900)	06:59 (19.594)	06:59 (20.006)	
	Span Gas Stop	07:07 (51.250)	06:53 (48.875)	07:28 (100.750)	07:00 (19.594)	07:00 (20.000)	
	Span Gas Response ($C_{dir,span}$)	51.250	48.825	100.825	19.594	20.003	
	Span Gas Accuracy ¹ (ACE _{span})	0.097% < 2%	0.257% < 2%	NA	0.032% < 2%	0.016% < 2%	
System Loop	Zero Gas Start	11:33 (0.281)	11:33 (0.500)	11:33 (0.000)	11:33 (0.000)	11:33 (0.038)	
	Zero Gas Stop	11:34 (0.281)	11:34 (0.400)	11:34 (0.000)	11:34 (0.006)	11:34 (0.031)	
	Zero Gas Response ($C_{sys,zero}$)	0.281	0.450	0.000	0.003	0.034	
	Zero Gas Accuracy ² (SB _{zero})	0.518% < 5%	0.898% < 5%	NA	0.096% < 5%	0.172% < 5%	
	Calibration Gas Start	11:43 (11.313)	11:47 (24.725)	11:43 (10.125)	11:39 (9.787)	11:39 (9.963)	
	Calibration Gas Stop	11:44 (11.313)	11:48 (24.725)	11:44 (10.125)	11:40 (9.806)	11:40 (9.963)	
	Calibration Gas Response ($C_{sys,cal}$)	11.313	24.725	10.125	9.797	9.963	
	Calibration Gas Accuracy ² (SB _{cal})	0.548% < 5%	1.129% < 5%	NA	0.383% < 5%	0.031% < 5%	
References and Formulas	1. Section 12.2, Equation 7E-1 (2% of span plus analyzer calibration error) 2. Section 12.3, Equation 7E-2 (5% of span) 3. Method 25A, Section 8.4 (5% of predicted values from 2-point calibration curve zero-span)						

Unit 32B, Pollutant:		CO	NO _x	THC	CO ₂	O ₂	
Method:		10	7E	25A	3A	3A	
Stack Gas Analysis 1	Compliance 1	Start	12:30 (1.594)	12:30 (6.975)	12:30 (0.100)	12:30 (5.163)	12:30 (13.756)
		Stop	13:30 (1.688)	13:30 (8.250)	13:30 (0.350)	13:30 (5.138)	13:30 (13.775)
		Stack Gas Response (C _{avg})	1.691	7.834	0.118	5.151	13.763
		Corrected Stack Gas Response ^{1,2} (C _{gas})	1.353	7.647	0.118	5.129	13.589
	System Loop	Zero Gas Start	13:32 (0.281)	13:32 (0.150)	13:32 (0.000)	13:32 (0.000)	13:32 (0.044)
		Zero Gas Stop	13:33 (0.250)	13:33 (0.100)	13:33 (0.000)	13:33 (0.000)	13:33 (0.038)
		Zero Gas Response (C _{sys, zero})	0.266	0.125	0.000	0.000	0.041
		Average Zero Gas Response (C _{sys, avg})	0.273	0.287	0.000	0.002	0.038
		Zero Gas Accuracy ³ (SB _{zero})	0.487% < 5%	0.231% < 5%	NA	0.112% < 5%	0.203% < 5%
		Zero Gas Drift ^{4,5} (D _{zero})	0.030% < 3%	0.667% < 3%	0.000% < 3%	0.016% < 3%	0.031% < 3%
		Calibration Gas Start	13:42 (11.219)	13:36 (24.575)	13:42 (10.125)	13:39 (9.750)	13:39 (9.944)
		Calibration Gas Stop	13:43 (11.250)	13:37 (24.625)	13:43 (9.775)	13:40 (9.775)	13:40 (9.956)
		Calibration Gas Response (C _{sys, cal})	11.234	24.600	9.950	9.762	9.950
		Average Calibration Gas Response (C _{sys, avg})	11.273	24.663	10.038	9.780	9.956
		Calibration Gas Accuracy ³ (SB _{cal})	0.396% < 5%	1.386% < 5%	NA	0.558% < 5%	0.094% < 5%
		Calibration Gas Drift ^{4,5} (D _{cal})	0.152% < 3%	0.257% < 3%	0.174% < 3%	0.175% < 3%	0.063% < 3%
		References and Formulas	<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 				

Unit 32B, Pollutant:		CO	NOx	THC	CO2	O2		
Method:		10	7E	25A	3A	3A		
Stack Gas Analysis 2	Compliance 2	Start	13:45 (1.844)	13:45 (7.975)	13:45 (0.225)	13:45 (5.100)	13:45 (13.700)	
		Stop	14:44 (1.719)	14:44 (7.900)	14:44 (0.125)	14:44 (5.131)	14:44 (13.756)	
		Stack Gas Response (C_{avg})	1.758	8.115	0.128	5.141	13.756	
		Corrected Stack Gas Response ^{1,2} (C_{gas})	1.390	8.075	0.128	5.131	13.602	
	System Loop	Zero Gas Start	14:46 (0.469)	14:46 (0.150)	14:46 (0.000)	14:46 (0.006)	14:46 (0.056)	
		Zero Gas Stop	14:47 (0.250)	14:47 (0.100)	14:47 (0.000)	14:47 (0.000)	14:47 (0.038)	
		Zero Gas Response ($C_{sys, zero}$)	0.359	0.125	0.000	0.003	0.047	
		Average Zero Gas Response ($C_{sys, avg}$)	0.313	0.125	0.000	0.002	0.044	
		Zero Gas Accuracy ³ (SB_{zero})	0.670% < 5%	0.231% < 5%	NA	0.096% < 5%	0.234% < 5%	
		Zero Gas Drift ^{4,5} (D_{zero})	0.183% < 3%	0.000% < 3%	0.000% < 3%	0.016% < 3%	0.031% < 3%	
		Calibration Gas Start	14:55 (11.219)	14:49 (24.500)	14:54 (10.075)	14:52 (9.744)	14:52 (9.931)	
		Calibration Gas Stop	14:56 (11.250)	14:50 (24.550)	14:55 (10.075)	14:53 (9.763)	14:53 (9.944)	
		Calibration Gas Response ($C_{sys, cal}$)	11.234	24.525	10.075	9.753	9.937	
		Average Calibration Gas Response ($C_{sys, avg}$)	11.234	24.563	10.013	9.758	9.944	
		Calibration Gas Accuracy ³ (SB_{cal})	0.396% < 5%	1.540% < 5%	NA	0.606% < 5%	0.156% < 5%	
		Calibration Gas Drift ^{4,5} (D_{cal})	0.000% < 3%	0.154% < 3%	0.124% < 3%	0.048% < 3%	0.062% < 3%	
		References and Formulas	<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 					

Unit 32B, Pollutant:		CO	NO _x	THC	CO ₂	O ₂	
Method:		1D	7E	25A	3A	3A	
Stack Gas Analysis 3	Compliance 3	Start	15:00 (1.781)	15:00 (7.825)	15:00 (0.175)	15:00 (5.119)	15:00 (13.738)
		Stop	16:00 (1.594)	16:00 (7.800)	16:00 (0.125)	16:00 (5.119)	16:00 (13.775)
		Stack Gas Response (C _{avg})	1.669	7.844	0.118	5.121	13.772
		Corrected Stack Gas Response ^{1,2} (C _{gas})	1.320	7.846	0.118	5.106	13.622
	System Loop	Zero Gas Start	16:03 (0.250)	16:03 (0.050)	16:03 (0.000)	16:03 (0.000)	16:03 (0.038)
		Zero Gas Stop	16:04 (0.219)	16:04 (0.050)	16:04 (0.000)	16:04 (0.006)	16:04 (0.031)
		Zero Gas Response (C _{sys, zero})	0.234	0.050	0.000	0.003	0.034
		Average Zero Gas Response (C _{sys, avg})	0.297	0.087	0.000	0.003	0.041
		Zero Gas Accuracy ³ (SB _{zero})	0.426% < 5%	0.077% < 5%	0.000% < 5%	0.096% < 5%	0.172% < 5%
		Zero Gas Drift ^{4,5} (D _{zero})	0.244% < 3%	0.154% < 3%	0.000% < 3%	0.000% < 3%	0.063% < 3%
		Calibration Gas Start	16:12 (11.188)	16:06 (24.450)	16:11 (10.050)	16:09 (9.769)	16:09 (9.937)
		Calibration Gas Stop	16:12 (11.188)	16:07 (24.525)	16:12 (10.200)	16:10 (9.787)	16:10 (9.944)
		Calibration Gas Response (C _{sys, cal})	11.188	24.488	10.125	9.778	9.941
		Average Calibration Gas Response (C _{sys, avg})	11.211	24.506	10.100	9.766	9.939
		Calibration Gas Accuracy ³ (SB _{cal})	0.305% < 5%	1.617% < 5%	NA	0.478% < 5%	0.141% < 5%
		Calibration Gas Drift ^{4,5} (D _{cal})	0.091% < 3%	0.077% < 3%	0.050% < 3%	0.128% < 3%	0.016% < 3%
		References and Formulas		1. Method 7E, Section 12.6, Equation 7E-5b. 2. Method 25A, Section 12.1, Equation 25A-1. (as propane) 3. Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) 4. Method 25A, Section 13.1.2, (<3% of span) 5. Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run)			

Pollutant: Method:	CO	NOx	THC	CO2	O2
	10	7E	25A	3A	3A
12/9/2013 6:46	0.1	0.1	0.4	0.1	16.0
12/9/2013 6:47	0.0	0.0	0.0	0.1	0.0
12/9/2013 6:48	0.0	0.0	0.0	0.0	0.0
12/9/2013 6:49	0.0	0.0	0.0	0.0	0.0
12/9/2013 6:50	0.0	0.0	0.0	0.0	0.0
12/9/2013 6:51	0.0	27.3	0.0	0.0	0.0
12/9/2013 6:52	0.0	48.8	0.0	0.0	0.0
12/9/2013 6:53	0.0	48.9	0.0	0.0	0.0
12/9/2013 6:54	0.0	43.3	0.0	0.0	0.2
12/9/2013 6:55	0.0	25.1	0.0	0.0	0.0
12/9/2013 6:56	0.0	25.4	0.0	0.0	0.0
12/9/2013 6:57	0.0	19.6	0.1	8.4	8.1
12/9/2013 6:58	0.0	0.2	0.1	19.6	19.9
12/9/2013 6:59	0.0	0.1	0.1	19.6	20.0
12/9/2013 7:00	0.0	0.0	0.1	19.6	20.0
12/9/2013 7:01	0.0	0.0	0.0	16.4	17.1
12/9/2013 7:02	0.0	0.0	0.0	9.9	10.0
12/9/2013 7:03	0.0	0.0	0.0	9.9	10.0
12/9/2013 7:04	13.6	0.1	45.1	6.1	6.5
12/9/2013 7:05	50.6	0.1	47.3	0.0	0.0
12/9/2013 7:06	51.3	0.0	51.0	0.0	0.0
12/9/2013 7:07	51.3	0.0	52.4	0.0	0.0
12/9/2013 7:08	36.4	0.0	15.4	0.0	0.4
12/9/2013 7:09	11.2	0.0	10.4	0.0	0.0
12/9/2013 7:10	11.0	0.0	10.3	0.0	0.0
12/9/2013 7:11	11.0	0.0	9.3	0.0	0.0
12/9/2013 7:12	4.4	0.0	0.0	0.0	0.0
12/9/2013 7:13	0.0	0.0	0.0	0.0	0.0
12/9/2013 7:14	0.0	0.0	0.0	0.0	0.0
12/9/2013 11:33	0.3	0.5	0.0	0.0	0.0
12/9/2013 11:34	0.3	0.4	0.0	0.0	0.0
12/9/2013 11:35	0.3	29.3	0.0	0.0	0.0
12/9/2013 11:36	0.3	49.3	0.0	0.0	0.0
12/9/2013 11:37	0.3	49.5	0.0	0.0	0.0
12/9/2013 11:38	0.0	20.8	0.1	8.0	7.9
12/9/2013 11:39	0.0	0.4	0.1	9.8	10.0
12/9/2013 11:40	0.0	0.3	0.7	9.8	10.0
12/9/2013 11:41	5.6	0.3	10.1	3.8	4.2
12/9/2013 11:42	11.3	0.2	10.0	0.0	0.0
12/9/2013 11:43	11.3	0.2	10.1	0.0	0.0
12/9/2013 11:44	11.3	0.2	10.1	0.0	0.0
12/9/2013 11:45	6.9	6.1	0.9	0.0	0.0
12/9/2013 11:46	0.3	24.1	0.0	0.0	0.0
12/9/2013 11:47	0.3	24.7	0.0	0.0	0.0
12/9/2013 11:48	0.3	24.7	0.0	0.0	0.0
12/9/2013 7:26	60.4	0.1	101.2	2.7	3.1
12/9/2013 7:27	96.1	0.1	100.9	0.0	0.0
12/9/2013 7:28	96.2	0.1	100.8	0.0	0.0
12/9/2013 7:29	83.2	0.1	60.8	0.0	0.0
12/9/2013 7:30	51.9	0.1	51.7	0.0	0.0
12/9/2013 7:31	51.5	0.1	52.0	0.0	0.0
12/9/2013 7:32	44.2	0.1	24.2	0.0	0.0
12/9/2013 7:33	12.3	0.1	10.4	0.0	0.0
12/9/2013 7:34	11.3	0.0	10.3	0.0	0.0
12/9/2013 7:35	11.3	0.0	10.3	0.0	0.0
12/9/2013 12:30	1.6	7.0	0.1	5.2	13.8
12/9/2013 12:31	1.6	7.1	0.1	5.2	13.8
12/9/2013 12:32	1.6	7.2	0.1	5.2	13.8
12/9/2013 12:33	1.5	7.3	0.1	5.2	13.8
12/9/2013 12:34	1.5	7.4	0.1	5.2	13.8
12/9/2013 12:35	1.5	7.4	0.1	5.2	13.8
12/9/2013 12:36	1.5	7.5	0.1	5.2	13.8
12/9/2013 12:37	1.5	7.6	0.1	5.2	13.8
12/9/2013 12:38	1.5	7.4	0.1	5.1	13.8
12/9/2013 12:39	1.5	7.5	0.1	5.2	13.8
12/9/2013 12:40	1.5	7.6	0.1	5.2	13.8

	Pollutant:	CO	NOx	THC	CO2	O2
	Method:	10	7E	25A	3A	3A
12/9/2013 12:41		1.5	7.6	0.1	5.2	13.8
12/9/2013 12:42		1.6	7.4	0.1	5.2	13.8
12/9/2013 12:43		1.7	7.6	0.1	5.2	13.8
12/9/2013 12:44		1.7	7.7	0.1	5.2	13.8
12/9/2013 12:45		1.7	7.8	0.1	5.2	13.8
12/9/2013 12:46		1.7	7.8	0.1	5.2	13.8
12/9/2013 12:47		1.8	7.8	0.1	5.2	13.8
12/9/2013 12:48		1.7	7.9	0.1	5.2	13.8
12/9/2013 12:49		1.7	8.0	0.1	5.2	13.8
12/9/2013 12:50		1.7	7.9	0.1	5.2	13.8
12/9/2013 12:51		1.8	7.8	0.1	5.2	13.8
12/9/2013 12:52		1.8	7.9	0.1	5.2	13.8
12/9/2013 12:53		1.8	7.9	0.2	5.2	13.8
12/9/2013 12:54		1.7	7.8	0.1	5.2	13.8
12/9/2013 12:55		1.7	7.9	0.1	5.2	13.8
12/9/2013 12:56		1.8	7.9	0.1	5.2	13.8
12/9/2013 12:57		1.7	7.9	0.1	5.2	13.8
12/9/2013 12:58		1.7	8.1	0.1	5.2	13.8
12/9/2013 12:59		1.7	8.1	0.1	5.2	13.8
12/9/2013 13:00		1.8	7.9	0.1	5.2	13.8
12/9/2013 13:01		1.7	7.9	0.1	5.2	13.8
12/9/2013 13:02		1.7	7.9	0.1	5.2	13.8
12/9/2013 13:03		1.8	7.8	0.1	5.2	13.8
12/9/2013 13:04		1.8	7.9	0.1	5.2	13.8
12/9/2013 13:05		1.8	7.9	0.1	5.2	13.8
12/9/2013 13:06		1.7	8.0	0.1	5.2	13.8
12/9/2013 13:07		1.8	8.0	0.1	5.2	13.8
12/9/2013 13:08		1.7	7.9	0.1	5.2	13.8
12/9/2013 13:09		1.7	7.8	0.1	5.2	13.8
12/9/2013 13:10		1.6	7.9	0.1	5.2	13.8
12/9/2013 13:11		1.7	7.9	0.1	5.2	13.8
12/9/2013 13:12		1.8	7.8	0.1	5.2	13.8
12/9/2013 13:13		1.7	7.8	0.1	5.2	13.8
12/9/2013 13:14		1.8	8.0	0.2	5.2	13.8
12/9/2013 13:15		1.8	8.0	0.2	5.2	13.8
12/9/2013 13:16		1.8	8.0	0.1	5.2	13.8
12/9/2013 13:17		1.8	8.0	0.2	5.2	13.8
12/9/2013 13:18		1.8	8.0	0.1	5.2	13.8
12/9/2013 13:19		1.8	8.1	0.1	5.2	13.8
12/9/2013 13:20		1.8	8.3	0.1	5.2	13.8
12/9/2013 13:21		1.8	8.2	0.1	5.2	13.8
12/9/2013 13:22		1.8	8.0	0.1	5.2	13.8
12/9/2013 13:23		1.8	7.9	0.1	5.2	13.8
12/9/2013 13:24		1.8	7.9	0.2	5.1	13.8
12/9/2013 13:25		1.8	8.0	0.2	5.1	13.8
12/9/2013 13:26		1.8	8.1	0.2	5.1	13.8
12/9/2013 13:27		1.8	8.1	0.2	5.1	13.8
12/9/2013 13:28		1.7	8.2	0.1	5.1	13.8
12/9/2013 13:29		1.8	8.2	0.1	5.1	13.8
12/9/2013 13:30		1.7	8.2	0.4	5.1	13.8
12/9/2013 13:31		3.3	4.3	0.0	1.2	4.0
12/9/2013 13:32		0.3	0.2	0.0	0.0	0.0
12/9/2013 13:33		0.3	0.1	0.0	0.0	0.0
12/9/2013 13:34		0.3	4.1	0.1	0.0	0.0
12/9/2013 13:35		0.3	24.4	0.1	0.0	0.0
12/9/2013 13:36		0.3	24.6	0.1	0.0	0.0
12/9/2013 13:37		0.3	24.6	0.0	0.0	0.0
12/9/2013 13:38		0.0	11.7	0.1	7.8	7.8
12/9/2013 13:39		0.0	0.2	0.1	9.7	9.9
12/9/2013 13:40		0.0	0.1	2.5	9.8	10.0
12/9/2013 13:41		7.0	0.1	10.1	2.1	2.5
12/9/2013 13:42		11.2	0.1	10.1	0.0	0.0
12/9/2013 13:43		11.3	0.0	9.8	0.0	0.0
12/9/2013 13:45		1.8	8.0	0.2	5.1	13.7
12/9/2013 13:46		1.9	7.8	0.2	5.1	13.7
12/9/2013 13:47		1.8	7.9	0.2	5.1	13.8
12/9/2013 13:48		1.7	8.2	0.2	5.1	13.8
12/9/2013 13:49		1.7	8.3	0.2	5.1	13.8

	Pollutant:	CO	NOx	THC	CO2	O2
	Method:	10	7E	25A	3A	3A
12/9/2013 13:50		1.8	8.2	0.1	5.1	13.8
12/9/2013 13:51		1.9	8.1	0.1	5.1	13.8
12/9/2013 13:52		1.8	8.1	0.1	5.2	13.8
12/9/2013 13:53		1.8	8.2	0.1	5.2	13.8
12/9/2013 13:54		1.8	8.1	0.1	5.1	13.8
12/9/2013 13:55		1.8	8.2	0.2	5.2	13.8
12/9/2013 13:56		1.8	8.2	0.2	5.2	13.8
12/9/2013 13:57		1.8	8.1	0.2	5.2	13.8
12/9/2013 13:58		1.8	7.9	0.1	5.2	13.8
12/9/2013 13:59		1.8	8.2	0.1	5.2	13.8
12/9/2013 14:00		1.8	8.3	0.1	5.1	13.8
12/9/2013 14:01		1.8	8.4	0.1	5.1	13.8
12/9/2013 14:02		1.8	8.5	0.1	5.2	13.8
12/9/2013 14:03		1.8	8.4	0.1	5.1	13.8
12/9/2013 14:04		1.7	8.2	0.1	5.2	13.8
12/9/2013 14:05		1.8	8.1	0.1	5.1	13.8
12/9/2013 14:06		1.8	8.1	0.2	5.1	13.8
12/9/2013 14:07		1.8	8.3	0.2	5.1	13.8
12/9/2013 14:08		1.8	8.3	0.2	5.1	13.8
12/9/2013 14:09		1.8	7.9	0.1	5.1	13.8
12/9/2013 14:10		1.8	8.0	0.1	5.1	13.8
12/9/2013 14:11		1.7	8.4	0.1	5.1	13.8
12/9/2013 14:12		1.6	8.2	0.1	5.1	13.8
12/9/2013 14:13		1.7	7.8	0.1	5.1	13.8
12/9/2013 14:14		1.8	7.8	0.1	5.1	13.8
12/9/2013 14:15		1.9	7.8	0.1	5.1	13.8
12/9/2013 14:16		1.8	8.1	0.1	5.1	13.8
12/9/2013 14:17		1.7	8.2	0.2	5.1	13.8
12/9/2013 14:18		1.8	8.2	0.2	5.2	13.8
12/9/2013 14:19		1.8	8.0	0.2	5.1	13.8
12/9/2013 14:20		1.8	8.1	0.2	5.1	13.8
12/9/2013 14:21		1.8	8.0	0.1	5.2	13.8
12/9/2013 14:22		1.8	8.0	0.1	5.1	13.8
12/9/2013 14:23		1.8	8.1	0.1	5.1	13.8
12/9/2013 14:24		1.7	8.2	0.1	5.1	13.8
12/9/2013 14:25		1.8	8.2	0.1	5.1	13.8
12/9/2013 14:26		1.8	8.3	0.1	5.1	13.8
12/9/2013 14:27		1.7	8.3	0.1	5.1	13.8
12/9/2013 14:28		1.8	8.3	0.1	5.1	13.8
12/9/2013 14:29		1.8	8.3	0.1	5.1	13.8
12/9/2013 14:30		1.8	8.3	0.1	5.1	13.8
12/9/2013 14:31		1.8	8.1	0.1	5.1	13.8
12/9/2013 14:32		1.7	7.9	0.1	5.1	13.8
12/9/2013 14:33		1.7	8.0	0.1	5.1	13.8
12/9/2013 14:34		1.7	8.1	0.1	5.1	13.8
12/9/2013 14:35		1.6	8.0	0.1	5.1	13.8
12/9/2013 14:36		1.7	8.0	0.1	5.1	13.8
12/9/2013 14:37		1.8	7.8	0.1	5.1	13.8
12/9/2013 14:38		1.7	8.0	0.1	5.1	13.8
12/9/2013 14:39		1.7	8.2	0.1	5.1	13.8
12/9/2013 14:40		1.8	8.1	0.1	5.1	13.8
12/9/2013 14:41		1.6	8.0	0.1	5.1	13.8
12/9/2013 14:42		1.7	8.0	0.1	5.1	13.8
12/9/2013 14:43		1.7	8.0	0.1	5.1	13.8
12/9/2013 14:44		1.7	7.9	0.1	5.1	13.8
12/9/2013 14:45		3.3	6.6	0.8	2.9	8.3
12/9/2013 14:46		0.5	0.2	0.0	0.0	0.1
12/9/2013 14:47		0.3	0.1	0.0	0.0	0.0
12/9/2013 14:48		0.3	12.1	0.0	0.0	0.0
12/9/2013 14:49		0.3	24.5	0.0	0.0	0.0
12/9/2013 14:50		0.3	24.6	0.1	0.0	0.0
12/9/2013 14:51		0.0	12.5	0.1	7.6	7.5
12/9/2013 14:52		0.0	0.2	0.0	9.7	9.9
12/9/2013 14:53		0.0	0.1	1.4	9.8	9.9
12/9/2013 14:54		5.8	0.1	10.1	3.0	3.4
12/9/2013 14:55		11.2	0.1	10.1	0.0	0.0
12/9/2013 14:56		11.3	0.0	8.5	0.0	0.0
12/9/2013 15:00		1.8	7.8	0.2	5.1	13.7

	Pollutant:	CO	NOx	THC	CO2	O2
	Method:	10	7E	25A	3A	3A
12/9/2013 15:01		1.8	7.8	0.2	5.1	13.7
12/9/2013 15:02		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:03		1.6	8.0	0.1	5.1	13.8
12/9/2013 15:04		1.7	8.1	0.1	5.1	13.8
12/9/2013 15:05		1.7	8.0	0.1	5.1	13.8
12/9/2013 15:06		1.6	7.9	0.1	5.1	13.8
12/9/2013 15:07		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:08		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:09		1.6	8.1	0.1	5.1	13.8
12/9/2013 15:10		1.7	8.0	0.1	5.1	13.8
12/9/2013 15:11		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:12		1.7	7.7	0.1	5.1	13.8
12/9/2013 15:13		1.8	7.6	0.1	5.1	13.8
12/9/2013 15:14		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:15		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:16		1.7	7.7	0.1	5.1	13.8
12/9/2013 15:17		1.7	7.4	0.1	5.1	13.8
12/9/2013 15:18		1.7	7.7	0.1	5.1	13.8
12/9/2013 15:19		1.7	8.0	0.1	5.1	13.8
12/9/2013 15:20		1.8	8.1	0.2	5.1	13.8
12/9/2013 15:21		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:22		1.7	7.8	0.2	5.1	13.8
12/9/2013 15:23		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:24		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:25		1.6	8.1	0.1	5.1	13.8
12/9/2013 15:26		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:27		1.8	7.8	0.1	5.1	13.8
12/9/2013 15:28		1.8	7.9	0.1	5.1	13.8
12/9/2013 15:29		1.7	7.7	0.1	5.1	13.8
12/9/2013 15:30		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:31		1.6	7.8	0.1	5.1	13.8
12/9/2013 15:32		1.6	7.8	0.2	5.1	13.8
12/9/2013 15:33		1.6	7.7	0.1	5.1	13.8
12/9/2013 15:34		1.6	7.7	0.1	5.1	13.8
12/9/2013 15:35		1.6	7.8	0.1	5.1	13.8
12/9/2013 15:36		1.5	7.8	0.1	5.1	13.8
12/9/2013 15:37		1.5	7.8	0.1	5.1	13.8
12/9/2013 15:38		1.6	7.8	0.1	5.1	13.8
12/9/2013 15:39		1.6	7.9	0.1	5.1	13.8
12/9/2013 15:40		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:41		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:42		1.6	7.8	0.1	5.1	13.8
12/9/2013 15:43		1.6	8.0	0.1	5.1	13.8
12/9/2013 15:44		1.6	7.9	0.1	5.1	13.8
12/9/2013 15:45		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:46		1.6	7.7	0.1	5.1	13.8
12/9/2013 15:47		1.8	7.8	0.1	5.1	13.8
12/9/2013 15:48		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:49		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:50		1.6	7.8	0.1	5.1	13.8
12/9/2013 15:51		1.6	7.9	0.1	5.1	13.8
12/9/2013 15:52		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:53		1.8	7.8	0.2	5.1	13.8
12/9/2013 15:54		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:55		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:56		1.7	7.8	0.1	5.1	13.8
12/9/2013 15:57		1.7	7.9	0.1	5.1	13.8
12/9/2013 15:58		1.6	8.0	0.1	5.1	13.8
12/9/2013 15:59		1.6	7.8	0.1	5.1	13.8
12/9/2013 16:00		1.6	7.8	0.1	5.1	13.8
12/9/2013 16:01		2.6	6.8	0.2	3.5	9.9
12/9/2013 16:02		0.4	0.1	0.0	0.0	0.1
12/9/2013 16:03		0.3	0.1	0.0	0.0	0.0
12/9/2013 16:04		0.2	0.1	0.0	0.0	0.0
12/9/2013 16:05		0.3	9.7	0.0	0.0	0.0
12/9/2013 16:06		0.2	24.5	0.0	0.0	0.0
12/9/2013 16:07		0.3	24.5	0.0	0.0	0.0
12/9/2013 16:08		0.0	6.8	0.0	8.0	7.9
12/9/2013 16:09		0.0	0.1	0.0	9.8	9.9

Pollutant:	CO	NOx	THC	CO2	O2
Method:	10	7E	25A	3A	3A
12/9/2013 16:10	0.0	0.0	1.7	9.8	9.9
12/9/2013 16:11	6.9	0.1	10.1	2.5	2.8
12/9/2013 16:12	11.2	0.0	10.2	0.0	0.0

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Unit 32B Annual Compliance Emission
Measurements 12-09-13.

Gases Field Data Sheets

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER AND ASSOCIATES, INC.
 INSTRUMENTAL GAS SAMPLING FIELD DATA RECORD

Compliance

PLANT FPL Port Commercial				DATE 12/9/13			
LOCATION Cocoa, FL				EMISSION UNIT Unit #232 100%			
TEST(s) CO, NOx, THC, CO2 O2				SYSTEM LEAK CHECK (Limit 1 inHg/2min)			
				Init. VAC inHg 10		Final VAC inHg 10	
Cylinder Identification				Calibration Gas Certified Concentration Value			
Instrument	Low	Mid	High	Test	Zero / Low-Gas	Mid-Gas	High-Gas(span)
CO (M10)				CO (M10)			
SO2 (M6C)				SO2 (M6C)			
NOx (M7E)				NOx (M7E)			
THC (M25A)				THC (M25A)			
CH4				CH4			
NMHC				NMHC			
CO2 (M3A)				CO2 (M3A)			
O2 (M3A)				O2 (M3A)			
TIME	Action / Comment			TIME	Action / Comment		
11:45	24.7 NOx on			16:11	10.1 prep / 10.5 CO on		
11:47	24.7 NOx = 24.8			16:12	THC = 10.1		
12:30	Start Run #1			16:13	CO = 11.3		
12:31	End Run #1 N2 on						
13:32	CO = 0.3 NOx = 0.2 THC = 0 CO2 = 9.9 O2 = 9.93						
13:34	24.7 NOx on						
13:36	NOx = 24.4						
13:37	9.74 CO2 / 9.84 O2 on						
13:39	CO2 = 9.7 O2 = 9.93						
13:41	10.1 prep 10.5 CO on						
13:42	CO = 11.2 THC = 10.1						
13:45	Start Run #2						
14:15	End Run #2 N2 on						
14:16	CO = 0.3 NOx = 0.1 THC = 0 CO2 = 9.9 O2 = 9.93						
14:18	24.7 NOx on						
14:49	NOx = 24.0						
14:51	9.74 CO2 / 9.84 O2 on						
14:52	CO2 = 9.74 O2 = 9.93						
14:54	10.1 prep 10.5 CO on						
14:54	THC = 10.1						
14:55	CO = 11.3						
15:00	Start Run #3						
16:00	End Run #3 N2 on						
16:03	CO = 0.3 NOx = 0.2 CO2 = 9.9 O2 = 9.93						
16:05	24.7 NOx on						
16:06	NOx = 24.3						
16:06	9.74 CO2 / 9.82 O2 on						
16:09	CO2 = 9.72 O2 = 9.91						

CO NOx THC
 10 8 6

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**Unit 32B Annual Compliance Emission
Measurements 12-09-13.**

Ammonia Slip (NH₃) Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Spectrum	Date	Time	NH3 (300) 191C (1o NH3 dry)	H2O% (40) 191C	CO2% (40) 191C	Ethylene (100,3000) 191C	Calibration Transfer Std., Section 8.6.1 ethylene = 98.6 ppm in N2				
							98.6 ppm				
Start Ethylene Spike											
12092013_000181.LAB	12/9/2013	9:57:27	0.13	0.14	1.45	0.01	97.06	98.44%			
12092013_000182.LAB	12/9/2013	9:57:56	0.14	0.14	1.34	0.01	97.15	98.53%	Is CT gas +-5% of surrogate value?		
12092013_000183.LAB	12/9/2013	9:58:26	0.15	0.15	1.22	0.00	97.21	98.59%	YES		
12092013_000184.LAB	12/9/2013	9:58:55	0.12	0.12	1.12	0.01	97.39	98.77%			
12092013_000185.LAB	12/9/2013	9:59:24	0.12	0.12	1.04	0.01	97.58	98.96%			
12092013_000186.LAB	12/9/2013	9:59:54	0.12	0.12	1.03	0.01	97.62	99.01%			
End Ethylene Spike											
							Quality Assurance Spike, Section 8.6.2			unspike estimated at 0.4 ppm Spike = 25 ppm	
							DF	Csm	Diff		
							fraction of	expected		Is recovery within	
							spike ratio				
QA spike											
12092013_000229.LAB	12/9/2013	10:20:58	5.61	5.01	4.43	3.57	0.10	26.9%	NH3 ppm 7.03	recovery 80%	70 to 130 % ? YES
Start Run 1											
12092013_000538.LAB	12/9/2013	13:00:24	0.40	0.44	7.89	4.91	0.28				
12092013_000539.LAB	12/9/2013	13:00:54	0.50	0.56	10.45	4.76	0.33				
12092013_000540.LAB	12/9/2013	13:01:23	0.42	0.47	9.05	4.83	0.21				
12092013_000541.LAB	12/9/2013	13:01:52	0.44	0.48	8.47	4.88	0.31				
12092013_000542.LAB	12/9/2013	13:02:22	0.42	0.46	8.26	4.90	0.26				
12092013_000543.LAB	12/9/2013	13:02:51	0.46	0.51	8.95	4.86	0.27				
12092013_000544.LAB	12/9/2013	13:03:21	0.47	0.51	8.35	4.90	0.27				
12092013_000545.LAB	12/9/2013	13:03:50	0.40	0.44	8.78	4.87	0.26				
12092013_000546.LAB	12/9/2013	13:04:19	0.45	0.50	8.91	4.86	0.21				
12092013_000547.LAB	12/9/2013	13:04:49	0.42	0.46	8.68	4.88	0.25				
12092013_000548.LAB	12/9/2013	13:05:18	0.45	0.50	8.49	4.89	0.32				
12092013_000549.LAB	12/9/2013	13:05:47	0.42	0.46	8.33	4.90	0.23				
12092013_000550.LAB	12/9/2013	13:06:17	0.41	0.45	8.13	4.91	0.28				
12092013_000551.LAB	12/9/2013	13:06:46	0.45	0.49	8.28	4.89	0.32				
12092013_000552.LAB	12/9/2013	13:07:16	0.47	0.52	9.73	4.81	0.31				
12092013_000553.LAB	12/9/2013	13:07:45	0.48	0.53	9.97	4.79	0.27				
12092013_000554.LAB	12/9/2013	13:08:14	0.46	0.51	9.67	4.81	0.29				
12092013_000555.LAB	12/9/2013	13:08:44	0.44	0.48	8.99	4.86	0.28				
12092013_000556.LAB	12/9/2013	13:09:13	0.44	0.49	8.84	4.86	0.26				
12092013_000557.LAB	12/9/2013	13:09:43	0.41	0.45	8.60	4.88	0.26				
12092013_000558.LAB	12/9/2013	13:10:12	0.41	0.44	8.42	4.89	0.35				
12092013_000559.LAB	12/9/2013	13:10:41	0.43	0.47	8.32	4.90	0.28				
12092013_000560.LAB	12/9/2013	13:11:11	0.41	0.45	8.25	4.92	0.22				
12092013_000561.LAB	12/9/2013	13:11:40	0.42	0.46	8.15	4.91	0.20				
12092013_000562.LAB	12/9/2013	13:12:09	0.39	0.43	8.23	4.90	0.30				
12092013_000563.LAB	12/9/2013	13:12:39	0.45	0.50	9.17	4.84	0.26				
12092013_000564.LAB	12/9/2013	13:13:08	0.39	0.43	8.74	4.87	0.19				
12092013_000565.LAB	12/9/2013	13:13:38	0.42	0.46	8.53	4.88	0.29				
12092013_000566.LAB	12/9/2013	13:14:07	0.42	0.46	8.67	4.88	0.23				
12092013_000567.LAB	12/9/2013	13:14:36	0.46	0.52	9.98	4.81	0.35				
12092013_000568.LAB	12/9/2013	13:15:06	0.44	0.48	9.33	4.84	0.31				
12092013_000569.LAB	12/9/2013	13:15:35	0.44	0.48	9.75	4.82	0.23				
12092013_000570.LAB	12/9/2013	13:16:05	0.46	0.51	9.49	4.83	0.22				
12092013_000571.LAB	12/9/2013	13:16:34	0.41	0.44	8.97	4.84	0.36				
12092013_000572.LAB	12/9/2013	13:17:03	0.45	0.49	8.70	4.88	0.27				
12092013_000573.LAB	12/9/2013	13:17:33	0.62	0.68	8.96	4.86	0.25				
12092013_000574.LAB	12/9/2013	13:18:02	0.50	0.55	8.50	4.88	0.36				
12092013_000575.LAB	12/9/2013	13:18:32	0.48	0.52	8.25	4.90	0.22				
12092013_000576.LAB	12/9/2013	13:19:01	0.49	0.53	7.99	4.91	0.27				
12092013_000577.LAB	12/9/2013	13:19:30	0.47	0.51	7.86	4.91	0.29				
12092013_000578.LAB	12/9/2013	13:20:00	0.47	0.51	7.62	4.92	0.25				
12092013_000579.LAB	12/9/2013	13:20:29	0.45	0.50	8.83	4.86	0.24				
12092013_000580.LAB	12/9/2013	13:20:58	0.48	0.53	8.91	4.85	0.28				
12092013_000581.LAB	12/9/2013	13:21:28	0.46	0.51	8.62	4.88	0.31				
12092013_000582.LAB	12/9/2013	13:21:57	0.41	0.44	8.39	4.89	0.22				
12092013_000583.LAB	12/9/2013	13:22:27	0.48	0.53	8.89	4.86	0.29				
12092013_000584.LAB	12/9/2013	13:22:56	0.42	0.46	9.01	4.85	0.31				
12092013_000585.LAB	12/9/2013	13:23:25	0.46	0.51	8.67	4.87	0.28				
12092013_000586.LAB	12/9/2013	13:23:55	0.40	0.44	8.38	4.89	0.27				
12092013_000587.LAB	12/9/2013	13:24:24	0.41	0.44	8.42	4.89	0.26				
12092013_000588.LAB	12/9/2013	13:24:54	0.43	0.48	9.05	4.84	0.32				
12092013_000589.LAB	12/9/2013	13:25:23	0.48	0.53	9.35	4.83	0.36				
12092013_000590.LAB	12/9/2013	13:25:52	0.43	0.47	8.68	4.87	0.34				
12092013_000591.LAB	12/9/2013	13:26:22	0.41	0.45	8.30	4.89	0.26				
12092013_000592.LAB	12/9/2013	13:26:51	0.46	0.51	8.80	4.87	0.32				
12092013_000593.LAB	12/9/2013	13:27:20	0.38	0.42	8.25	4.90	0.29				
12092013_000594.LAB	12/9/2013	13:27:50	0.39	0.42	8.02	4.91	0.25				
12092013_000595.LAB	12/9/2013	13:28:19	0.38	0.41	8.13	4.90	0.35				
12092013_000596.LAB	12/9/2013	13:28:49	0.37	0.41	8.53	4.88	0.27				
12092013_000597.LAB	12/9/2013	13:29:18	0.39	0.43	8.17	4.90	0.26				
12092013_000598.LAB	12/9/2013	13:29:48	0.40	0.44	7.91	4.90	0.29				
12092013_000599.LAB	12/9/2013	13:30:17	0.37	0.40	7.80	4.91	0.25				
12092013_000600.LAB	12/9/2013	13:30:46	0.42	0.45	7.71	4.91	0.31				
12092013_000601.LAB	12/9/2013	13:31:16	0.41	0.44	7.68	4.92	0.31				
12092013_000602.LAB	12/9/2013	13:31:45	0.45	0.50	9.32	4.83	0.27				
12092013_000603.LAB	12/9/2013	13:32:14	0.40	0.44	8.86	4.85	0.19				
12092013_000604.LAB	12/9/2013	13:32:44	0.39	0.43	8.59	4.87	0.31				
12092013_000605.LAB	12/9/2013	13:33:13	0.38	0.42	8.40	4.87	0.27				
12092013_000606.LAB	12/9/2013	13:33:42	0.45	0.50	9.84	4.80	0.28				
12092013_000607.LAB	12/9/2013	13:34:12	0.40	0.44	9.13	4.84	0.27				
12092013_000608.LAB	12/9/2013	13:34:41	0.40	0.44	8.45	4.87	0.35				
12092013_000609.LAB	12/9/2013	13:35:11	0.38	0.41	7.86	4.89	0.34				
12092013_000610.LAB	12/9/2013	13:35:40	0.38	0.41	7.70	4.91	0.27				
12092013_000611.LAB	12/9/2013	13:36:10	0.39	0.42	7.61	4.92	0.31				
12092013_000612.LAB	12/9/2013	13:36:39	0.36	0.40	8.20	4.89	0.28				
12092013_000613.LAB	12/9/2013	13:37:08	0.37	0.41	8.16	4.88	0.24				
12092013_000614.LAB	12/9/2013	13:37:38	0.39	0.42	7.99	4.90	0.26				
12092013_000615.LAB	12/9/2013	13:38:07	0.39	0.42	7.84	4.91	0.35				
12092013_000616.LAB	12/9/2013	13:38:36	0.37	0.41	8.47	4.87	0.34				
12092013_000617.LAB	12/9/2013	13:39:06	0.39	0.42	8.77	4.86	0.31				
12092013_000618.LAB	12/9/2013	13:39:35	0.40	0.44	8.20	4.90	0.23				
12092013_000619.LAB	12/9/2013	13:40:04	0.41	0.45	8.45	4.87	0.31				
12092013_000620.LAB	12/9/2013	13:40:34	0.40	0.44	9.04	4.84	0.33				

12092013_000624.LAB	12/9/2013	13:42:32	0.40	0.45	9.63	4.81	0.26
12092013_000625.LAB	12/9/2013	13:43:01	0.38	0.42	9.00	4.84	0.29
12092013_000626.LAB	12/9/2013	13:43:30	0.42	0.46	8.78	4.86	0.26
12092013_000627.LAB	12/9/2013	13:44:00	0.38	0.42	8.50	4.87	0.22
12092013_000628.LAB	12/9/2013	13:44:29	0.37	0.41	8.92	4.85	0.27
12092013_000629.LAB	12/9/2013	13:44:58	0.41	0.45	8.51	4.88	0.26
12092013_000630.LAB	12/9/2013	13:45:28	0.40	0.44	8.15	4.90	0.32
12092013_000631.LAB	12/9/2013	13:45:57	0.38	0.42	9.08	4.84	0.29
12092013_000632.LAB	12/9/2013	13:46:27	0.40	0.44	8.67	4.87	0.28
12092013_000633.LAB	12/9/2013	13:46:56	0.42	0.46	8.37	4.90	0.27
12092013_000634.LAB	12/9/2013	13:47:25	0.43	0.47	8.11	4.90	0.23
12092013_000635.LAB	12/9/2013	13:47:55	0.48	0.52	7.73	4.91	0.29
12092013_000636.LAB	12/9/2013	13:48:24	0.42	0.45	7.50	4.93	0.20
12092013_000637.LAB	12/9/2013	13:48:53	0.40	0.44	7.40	4.95	0.23
12092013_000638.LAB	12/9/2013	13:49:23	0.46	0.51	9.44	4.81	0.24
12092013_000639.LAB	12/9/2013	13:49:52	0.44	0.48	8.62	4.87	0.30
12092013_000640.LAB	12/9/2013	13:50:22	0.41	0.45	8.71	4.87	0.34
12092013_000641.LAB	12/9/2013	13:50:51	0.42	0.46	8.31	4.89	0.24
12092013_000642.LAB	12/9/2013	13:51:20	0.39	0.42	8.11	4.90	0.31
12092013_000643.LAB	12/9/2013	13:51:50	0.40	0.43	7.94	4.91	0.26
12092013_000644.LAB	12/9/2013	13:52:22	0.40	0.43	8.63	4.87	0.33
12092013_000645.LAB	12/9/2013	13:52:52	0.43	0.47	9.06	4.85	0.26
12092013_000646.LAB	12/9/2013	13:53:21	0.38	0.42	8.45	4.89	0.32
12092013_000647.LAB	12/9/2013	13:53:50	0.38	0.41	7.75	4.90	0.29
12092013_000648.LAB	12/9/2013	13:54:20	0.37	0.40	7.54	4.93	0.33
12092013_000649.LAB	12/9/2013	13:54:49	0.40	0.43	8.13	4.89	0.33
12092013_000650.LAB	12/9/2013	13:55:19	0.39	0.42	7.72	4.92	0.31
12092013_000651.LAB	12/9/2013	13:55:48	0.41	0.44	7.65	4.92	0.27
12092013_000652.LAB	12/9/2013	13:56:17	0.39	0.42	7.62	4.93	0.36
12092013_000653.LAB	12/9/2013	13:56:47	0.36	0.39	8.52	4.87	0.24
12092013_000654.LAB	12/9/2013	13:57:16	0.41	0.45	9.35	4.83	0.27
12092013_000655.LAB	12/9/2013	13:57:45	0.41	0.45	8.94	4.86	0.19
12092013_000656.LAB	12/9/2013	13:58:15	0.40	0.44	8.75	4.88	0.26
12092013_000657.LAB	12/9/2013	13:58:44	0.39	0.42	8.74	4.88	0.29
12092013_000658.LAB	12/9/2013	13:59:13	0.41	0.45	9.13	4.85	0.29
12092013_000659.LAB	12/9/2013	13:59:43	0.37	0.40	8.38	4.90	0.29
12092013_000660.LAB	12/9/2013	14:00:13	0.36	0.39	7.97	4.91	0.31
12092013_000661.LAB	12/9/2013	14:00:42	0.38	0.42	7.90	4.91	0.23
12092013_000662.LAB	12/9/2013	14:01:11	0.39	0.43	8.93	4.86	0.27
12092013_000663.LAB	12/9/2013	14:01:41	0.38	0.42	8.39	4.89	0.21

End Run 1

Start Run 2

12092013_000664.LAB	12/9/2013	14:02:10	0.41	0.45	8.33	4.90	0.28
12092013_000665.LAB	12/9/2013	14:02:39	0.37	0.40	7.72	4.93	0.25
12092013_000666.LAB	12/9/2013	14:03:09	0.38	0.42	7.57	4.93	0.27
12092013_000667.LAB	12/9/2013	14:03:38	0.36	0.38	7.52	4.95	0.24
12092013_000668.LAB	12/9/2013	14:04:07	0.37	0.40	7.46	4.94	0.31
12092013_000669.LAB	12/9/2013	14:04:37	0.37	0.39	7.32	4.95	0.18
12092013_000670.LAB	12/9/2013	14:05:06	0.39	0.43	7.70	4.93	0.25
12092013_000671.LAB	12/9/2013	14:05:36	0.43	0.47	9.53	4.82	0.28
12092013_000672.LAB	12/9/2013	14:06:05	0.47	0.51	8.89	4.86	0.33
12092013_000673.LAB	12/9/2013	14:06:34	0.40	0.44	8.24	4.89	0.22
12092013_000674.LAB	12/9/2013	14:07:04	0.40	0.44	7.80	4.91	0.30
12092013_000675.LAB	12/9/2013	14:07:33	0.39	0.42	8.05	4.91	0.28
12092013_000676.LAB	12/9/2013	14:08:03	0.41	0.44	7.82	4.91	0.36
12092013_000677.LAB	12/9/2013	14:08:32	0.40	0.44	8.13	4.90	0.21
12092013_000678.LAB	12/9/2013	14:09:01	0.36	0.40	7.68	4.93	0.30
12092013_000679.LAB	12/9/2013	14:09:31	0.37	0.40	7.59	4.93	0.25
12092013_000680.LAB	12/9/2013	14:10:00	0.41	0.45	8.67	4.88	0.21
12092013_000681.LAB	12/9/2013	14:10:29	0.38	0.42	8.84	4.85	0.25
12092013_000682.LAB	12/9/2013	14:10:59	0.39	0.43	8.50	4.88	0.29
12092013_000683.LAB	12/9/2013	14:11:28	0.39	0.42	8.22	4.89	0.30
12092013_000684.LAB	12/9/2013	14:11:58	0.37	0.40	8.23	4.89	0.25
12092013_000685.LAB	12/9/2013	14:12:27	0.36	0.40	8.13	4.89	0.29
12092013_000686.LAB	12/9/2013	14:12:56	0.34	0.36	7.49	4.93	0.29
12092013_000687.LAB	12/9/2013	14:13:26	0.32	0.35	7.27	4.95	0.31
12092013_000688.LAB	12/9/2013	14:13:55	0.32	0.34	7.35	4.95	0.24
12092013_000689.LAB	12/9/2013	14:14:25	0.35	0.38	8.14	4.91	0.25
12092013_000690.LAB	12/9/2013	14:14:54	0.36	0.40	8.61	4.88	0.28
12092013_000691.LAB	12/9/2013	14:15:23	0.38	0.42	9.62	4.82	0.26
12092013_000692.LAB	12/9/2013	14:15:53	0.39	0.43	9.21	4.84	0.34
12092013_000693.LAB	12/9/2013	14:16:22	0.35	0.39	8.93	4.86	0.29
12092013_000694.LAB	12/9/2013	14:16:51	0.40	0.44	10.02	4.80	0.37
12092013_000695.LAB	12/9/2013	14:17:21	0.39	0.44	9.39	4.83	0.29
12092013_000696.LAB	12/9/2013	14:17:50	0.37	0.41	8.89	4.86	0.26
12092013_000697.LAB	12/9/2013	14:18:20	0.39	0.43	8.57	4.88	0.28
12092013_000698.LAB	12/9/2013	14:18:49	0.40	0.44	8.93	4.86	0.28
12092013_000699.LAB	12/9/2013	14:19:18	0.37	0.40	8.18	4.90	0.31
12092013_000700.LAB	12/9/2013	14:19:48	0.34	0.37	8.02	4.90	0.29
12092013_000701.LAB	12/9/2013	14:20:17	0.37	0.40	7.93	4.91	0.31
12092013_000702.LAB	12/9/2013	14:20:47	0.39	0.43	9.27	4.83	0.30
12092013_000703.LAB	12/9/2013	14:21:16	0.41	0.45	8.86	4.87	0.27
12092013_000704.LAB	12/9/2013	14:21:45	0.38	0.42	8.69	4.87	0.29
12092013_000705.LAB	12/9/2013	14:22:15	0.38	0.41	8.51	4.89	0.26
12092013_000706.LAB	12/9/2013	14:22:44	0.38	0.42	9.25	4.84	0.31
12092013_000707.LAB	12/9/2013	14:23:13	0.35	0.38	8.77	4.87	0.25
12092013_000708.LAB	12/9/2013	14:23:43	0.34	0.37	8.45	4.88	0.30
12092013_000709.LAB	12/9/2013	14:24:12	0.36	0.39	8.21	4.90	0.35
12092013_000710.LAB	12/9/2013	14:24:42	0.34	0.37	7.97	4.90	0.29
12092013_000711.LAB	12/9/2013	14:25:11	0.36	0.39	8.32	4.88	0.31
12092013_000712.LAB	12/9/2013	14:25:40	0.41	0.45	9.02	4.84	0.29
12092013_000713.LAB	12/9/2013	14:26:10	0.41	0.45	7.89	4.91	0.34
12092013_000714.LAB	12/9/2013	14:26:40	0.39	0.43	7.72	4.92	0.25
12092013_000715.LAB	12/9/2013	14:27:09	0.38	0.41	7.86	4.92	0.29
12092013_000716.LAB	12/9/2013	14:27:38	0.41	0.44	8.77	4.86	0.21
12092013_000717.LAB	12/9/2013	14:28:07	0.36	0.40	8.34	4.89	0.33
12092013_000718.LAB	12/9/2013	14:28:37	0.38	0.41	8.30	4.88	0.39
12092013_000719.LAB	12/9/2013	14:29:06	0.39	0.43	8.64	4.87	0.32
12092013_000720.LAB	12/9/2013	14:29:36	0.34	0.37	8.16	4.89	0.28
12092013_000721.LAB	12/9/2013	14:30:05	0.37	0.41	8.27	4.88	0.29
12092013_000722.LAB	12/9/2013	14:30:34	0.36	0.40	8.71	4.86	0.27
12092013_000723.LAB	12/9/2013	14:31:04	0.41	0.45	8.83	4.86	0.29
12092013_000724.LAB	12/9/2013	14:31:33	0.38	0.41	8.66	4.87	0.27
12092013_000725.LAB	12/9/2013	14:32:02	0.40	0.44	8.62	4.87	0.25
12092013_000726.LAB	12/9/2013	14:32:32	0.36	0.39	7.98	4.90	0.25
12092013_000727.LAB	12/9/2013	14:33:01	0.34	0.37	7.88	4.91	0.23
12092013_000728.LAB	12/9/2013	14:33:31	0.32	0.35	7.69	4.92	0.33
12092013_000729.LAB	12/9/2013	14:34:00	0.37	0.40	8.95	4.85	0.25

12092013_000730.LAB	12/9/2013	14:34:29	0.34	0.37	8.59	4.88	0.29
12092013_000731.LAB	12/9/2013	14:34:59	0.36	0.39	8.37	4.89	0.27
12092013_000732.LAB	12/9/2013	14:35:28	0.35	0.39	8.43	4.88	0.30
12092013_000733.LAB	12/9/2013	14:35:58	0.39	0.43	9.33	4.82	0.33
12092013_000734.LAB	12/9/2013	14:36:27	0.38	0.42	9.17	4.84	0.32
12092013_000735.LAB	12/9/2013	14:36:57	0.35	0.38	8.70	4.86	0.33
12092013_000736.LAB	12/9/2013	14:37:26	0.33	0.37	8.90	4.86	0.28
12092013_000737.LAB	12/9/2013	14:37:55	0.32	0.35	8.71	4.87	0.28
12092013_000738.LAB	12/9/2013	14:38:25	0.38	0.42	8.53	4.88	0.31
12092013_000739.LAB	12/9/2013	14:38:54	0.32	0.35	8.56	4.88	0.34
12092013_000740.LAB	12/9/2013	14:39:23	0.38	0.42	9.64	4.80	0.26
12092013_000741.LAB	12/9/2013	14:39:53	0.36	0.39	9.12	4.84	0.24
12092013_000742.LAB	12/9/2013	14:40:22	0.36	0.40	8.85	4.85	0.40
12092013_000743.LAB	12/9/2013	14:40:51	0.39	0.43	9.42	4.83	0.34
12092013_000744.LAB	12/9/2013	14:41:21	0.39	0.43	9.28	4.83	0.24
12092013_000745.LAB	12/9/2013	14:41:50	0.37	0.41	8.84	4.86	0.24
12092013_000746.LAB	12/9/2013	14:42:20	0.37	0.41	8.73	4.87	0.25
12092013_000747.LAB	12/9/2013	14:42:49	0.39	0.43	9.40	4.83	0.28
12092013_000748.LAB	12/9/2013	14:43:18	0.38	0.42	9.62	4.81	0.33
12092013_000749.LAB	12/9/2013	14:43:48	0.36	0.40	9.31	4.83	0.31
12092013_000750.LAB	12/9/2013	14:44:17	0.35	0.39	9.05	4.84	0.33
12092013_000751.LAB	12/9/2013	14:44:47	0.37	0.40	8.88	4.86	0.21
12092013_000752.LAB	12/9/2013	14:45:16	0.36	0.39	8.33	4.89	0.28
12092013_000753.LAB	12/9/2013	14:45:45	0.41	0.45	7.91	4.90	0.31
12092013_000754.LAB	12/9/2013	14:46:15	0.41	0.45	8.47	4.88	0.29
12092013_000755.LAB	12/9/2013	14:46:44	0.42	0.47	9.01	4.85	0.27
12092013_000756.LAB	12/9/2013	14:47:13	0.40	0.44	8.70	4.88	0.28
12092013_000757.LAB	12/9/2013	14:47:43	0.36	0.39	8.47	4.89	0.30
12092013_000758.LAB	12/9/2013	14:48:12	0.38	0.41	8.94	4.86	0.22
12092013_000759.LAB	12/9/2013	14:48:42	0.38	0.41	7.92	4.91	0.32
12092013_000760.LAB	12/9/2013	14:49:11	0.35	0.38	7.52	4.94	0.33
12092013_000761.LAB	12/9/2013	14:49:40	0.33	0.35	7.25	4.95	0.27
12092013_000762.LAB	12/9/2013	14:50:10	0.31	0.34	7.38	4.94	0.22
12092013_000763.LAB	12/9/2013	14:50:39	0.37	0.41	8.45	4.89	0.25
12092013_000764.LAB	12/9/2013	14:51:09	0.34	0.37	8.04	4.91	0.32
12092013_000765.LAB	12/9/2013	14:51:38	0.35	0.38	7.82	4.91	0.31
12092013_000766.LAB	12/9/2013	14:52:07	0.34	0.37	7.77	4.91	0.27
12092013_000767.LAB	12/9/2013	14:52:37	0.32	0.35	8.37	4.88	0.29
12092013_000768.LAB	12/9/2013	14:53:06	0.39	0.42	7.79	4.90	0.28
12092013_000769.LAB	12/9/2013	14:53:36	0.31	0.34	7.61	4.91	0.20
12092013_000770.LAB	12/9/2013	14:54:05	0.31	0.34	7.49	4.93	0.25
12092013_000771.LAB	12/9/2013	14:54:34	0.36	0.40	8.60	4.87	0.24
12092013_000772.LAB	12/9/2013	14:55:04	0.35	0.38	8.41	4.88	0.26
12092013_000773.LAB	12/9/2013	14:55:33	0.31	0.34	8.14	4.89	0.28
12092013_000774.LAB	12/9/2013	14:56:03	0.36	0.40	8.60	4.88	0.36
12092013_000775.LAB	12/9/2013	14:56:32	0.37	0.41	9.26	4.83	0.34
12092013_000776.LAB	12/9/2013	14:57:01	0.35	0.38	8.56	4.88	0.38
12092013_000777.LAB	12/9/2013	14:57:31	0.32	0.35	8.03	4.90	0.24
12092013_000778.LAB	12/9/2013	14:58:00	0.37	0.40	8.33	4.89	0.31
12092013_000779.LAB	12/9/2013	14:58:29	0.33	0.36	8.24	4.89	0.29
12092013_000780.LAB	12/9/2013	14:58:59	0.34	0.37	7.88	4.91	0.25
12092013_000781.LAB	12/9/2013	14:59:28	0.34	0.37	7.65	4.92	0.25
12092013_000782.LAB	12/9/2013	14:59:57	0.31	0.34	8.40	4.88	0.56
12092013_000783.LAB	12/9/2013	15:00:27	0.35	0.39	8.91	4.86	0.32
12092013_000784.LAB	12/9/2013	15:00:56	0.34	0.37	8.60	4.88	0.27
12092013_000785.LAB	12/9/2013	15:01:26	0.35	0.38	8.62	4.87	0.36
12092013_000786.LAB	12/9/2013	15:01:55	0.34	0.37	8.13	4.89	0.31
12092013_000787.LAB	12/9/2013	15:02:24	0.34	0.37	8.96	4.85	0.25
12092013_000788.LAB	12/9/2013	15:02:54	0.35	0.38	8.61	4.88	0.34

End Run 2

Start Run 3

12092013_000789.LAB	12/9/2013	15:03:23	0.34	0.37	9.26	4.84	0.28
12092013_000790.LAB	12/9/2013	15:03:53	0.34	0.37	8.59	4.87	0.26
12092013_000791.LAB	12/9/2013	15:04:22	0.32	0.34	8.10	4.89	0.30
12092013_000792.LAB	12/9/2013	15:04:51	0.38	0.41	8.36	4.88	0.29
12092013_000793.LAB	12/9/2013	15:05:21	0.35	0.38	8.77	4.85	0.33
12092013_000794.LAB	12/9/2013	15:05:50	0.34	0.38	8.46	4.88	0.31
12092013_000795.LAB	12/9/2013	15:06:20	0.31	0.34	8.22	4.89	0.28
12092013_000796.LAB	12/9/2013	15:06:49	0.34	0.37	8.78	4.86	0.31
12092013_000797.LAB	12/9/2013	15:07:18	0.34	0.37	8.54	4.86	0.22
12092013_000798.LAB	12/9/2013	15:07:48	0.34	0.37	8.17	4.88	0.28
12092013_000799.LAB	12/9/2013	15:08:17	0.31	0.34	7.90	4.90	0.28
12092013_000800.LAB	12/9/2013	15:08:47	0.35	0.39	8.57	4.87	0.32
12092013_000801.LAB	12/9/2013	15:09:16	0.37	0.40	7.82	4.90	0.32
12092013_000802.LAB	12/9/2013	15:09:45	0.35	0.37	7.46	4.92	0.26
12092013_000803.LAB	12/9/2013	15:10:15	0.33	0.36	8.95	4.84	0.27
12092013_000804.LAB	12/9/2013	15:10:44	0.34	0.37	8.41	4.87	0.25
12092013_000805.LAB	12/9/2013	15:11:13	0.36	0.39	8.47	4.86	0.29
12092013_000806.LAB	12/9/2013	15:11:43	0.41	0.45	8.83	4.84	0.22
12092013_000807.LAB	12/9/2013	15:12:12	0.42	0.46	8.23	4.88	0.31
12092013_000808.LAB	12/9/2013	15:12:42	0.37	0.40	7.91	4.90	0.31
12092013_000809.LAB	12/9/2013	15:13:11	0.38	0.42	8.82	4.85	0.29
12092013_000810.LAB	12/9/2013	15:13:40	0.40	0.44	8.68	4.86	0.35
12092013_000811.LAB	12/9/2013	15:14:10	0.35	0.38	8.22	4.89	0.29
12092013_000812.LAB	12/9/2013	15:14:39	0.35	0.38	7.93	4.90	0.34
12092013_000813.LAB	12/9/2013	15:15:09	0.37	0.41	8.82	4.85	0.27
12092013_000814.LAB	12/9/2013	15:15:38	0.34	0.38	8.30	4.89	0.24
12092013_000815.LAB	12/9/2013	15:16:07	0.33	0.36	8.10	4.87	0.25
12092013_000816.LAB	12/9/2013	15:16:37	0.33	0.36	8.40	4.88	0.27
12092013_000817.LAB	12/9/2013	15:17:06	0.35	0.39	7.87	4.90	0.28
12092013_000818.LAB	12/9/2013	15:17:36	0.31	0.34	7.53	4.93	0.26
12092013_000819.LAB	12/9/2013	15:18:05	0.32	0.35	7.35	4.94	0.24
12092013_000820.LAB	12/9/2013	15:18:34	0.38	0.42	8.89	4.87	0.33
12092013_000821.LAB	12/9/2013	15:19:04	0.31	0.34	8.50	4.88	0.23
12092013_000822.LAB	12/9/2013	15:19:33	0.34	0.37	8.19	4.89	0.25
12092013_000823.LAB	12/9/2013	15:20:02	0.37	0.40	8.17	4.89	0.26
12092013_000824.LAB	12/9/2013	15:20:32	0.34	0.38	8.90	4.85	0.31
12092013_000825.LAB	12/9/2013	15:21:01	0.33	0.36	8.42	4.88	0.21
12092013_000826.LAB	12/9/2013	15:21:31	0.33	0.36	8.50	4.87	0.21
12092013_000827.LAB	12/9/2013	15:22:00	0.31	0.34	8.94	4.85	0.32
12092013_000828.LAB	12/9/2013	15:22:29	0.34	0.38	8.85	4.86	0.33
12092013_000829.LAB	12/9/2013	15:22:59	0.33	0.36	8.24	4.89	0.29
12092013_000830.LAB	12/9/2013	15:23:28	0.33	0.35	7.78	4.90	0.24
12092013_000831.LAB	12/9/2013	15:23:58	0.32	0.34	7.65	4.92	0.30
12092013_000832.LAB	12/9/2013	15:24:27	0.35	0.38	8.01	4.90	0.26
12092013_000833.LAB	12/9/2013	15:24:57	0.34	0.37	8.70	4.85	0.25
12092013_000834.LAB	12/9/2013	15:25:26	0.29	0.32	8.42	4.88	0.21
12092013_000835.LAB	12/9/2013	15:25:55	0.31	0.34	8.23	4.88	0.24

12092013_000836.LAB	12/9/2013	15:26:24	0.33	0.36	8.62	4.86	0.28
12092013_000837.LAB	12/9/2013	15:26:54	0.32	0.35	8.11	4.89	0.22
12092013_000838.LAB	12/9/2013	15:27:23	0.31	0.34	7.67	4.91	0.29
12092013_000839.LAB	12/9/2013	15:27:53	0.31	0.33	7.85	4.91	0.17
12092013_000840.LAB	12/9/2013	15:28:22	0.37	0.41	9.09	4.83	0.30
12092013_000841.LAB	12/9/2013	15:28:51	0.35	0.38	8.87	4.85	0.29
12092013_000842.LAB	12/9/2013	15:29:21	0.33	0.36	8.28	4.87	0.24
12092013_000843.LAB	12/9/2013	15:29:50	0.33	0.36	7.96	4.89	0.30
12092013_000844.LAB	12/9/2013	15:30:20	0.33	0.36	7.40	4.94	0.25
12092013_000845.LAB	12/9/2013	15:30:49	0.30	0.32	7.28	4.94	0.25
12092013_000846.LAB	12/9/2013	15:31:18	0.32	0.35	7.16	4.96	0.22
12092013_000847.LAB	12/9/2013	15:31:48	0.31	0.34	8.53	4.88	0.22
12092013_000848.LAB	12/9/2013	15:32:17	0.31	0.34	8.11	4.89	0.26
12092013_000849.LAB	12/9/2013	15:32:47	0.34	0.37	8.35	4.87	0.24
12092013_000850.LAB	12/9/2013	15:33:16	0.32	0.35	8.46	4.87	0.33
12092013_000851.LAB	12/9/2013	15:33:45	0.30	0.33	7.96	4.89	0.35
12092013_000852.LAB	12/9/2013	15:34:15	0.34	0.37	7.75	4.91	0.27
12092013_000853.LAB	12/9/2013	15:34:44	0.35	0.39	9.43	4.82	0.31
12092013_000854.LAB	12/9/2013	15:35:13	0.33	0.36	8.84	4.84	0.28
12092013_000855.LAB	12/9/2013	15:35:43	0.32	0.35	8.61	4.87	0.32
12092013_000856.LAB	12/9/2013	15:36:12	0.33	0.36	8.83	4.85	0.26
12092013_000857.LAB	12/9/2013	15:36:42	0.33	0.36	8.19	4.88	0.30
12092013_000858.LAB	12/9/2013	15:37:11	0.34	0.37	7.83	4.90	0.30
12092013_000859.LAB	12/9/2013	15:37:40	0.34	0.37	7.85	4.91	0.25
12092013_000860.LAB	12/9/2013	15:38:10	0.36	0.40	9.00	4.84	0.33
12092013_000861.LAB	12/9/2013	15:38:39	0.31	0.34	8.63	4.86	0.29
12092013_000862.LAB	12/9/2013	15:39:08	0.35	0.38	8.39	4.88	0.24
12092013_000863.LAB	12/9/2013	15:39:38	0.33	0.36	8.82	4.85	0.30
12092013_000864.LAB	12/9/2013	15:40:07	0.32	0.35	9.52	4.80	0.28
12092013_000865.LAB	12/9/2013	15:40:37	0.33	0.36	8.72	4.84	0.34
12092013_000866.LAB	12/9/2013	15:41:06	0.34	0.37	8.39	4.89	0.26
12092013_000867.LAB	12/9/2013	15:41:35	0.34	0.37	8.24	4.88	0.19
12092013_000868.LAB	12/9/2013	15:42:05	0.32	0.35	7.63	4.91	0.22
12092013_000869.LAB	12/9/2013	15:42:34	0.34	0.36	7.35	4.94	0.23
12092013_000870.LAB	12/9/2013	15:43:04	0.42	0.45	7.44	4.94	0.29
12092013_000871.LAB	12/9/2013	15:43:33	0.41	0.44	7.24	4.94	0.28
12092013_000872.LAB	12/9/2013	15:44:02	0.34	0.36	7.11	4.95	0.24
12092013_000873.LAB	12/9/2013	15:44:32	0.38	0.41	7.97	4.90	0.29
12092013_000874.LAB	12/9/2013	15:45:01	0.39	0.43	8.96	4.83	0.27
12092013_000875.LAB	12/9/2013	15:45:30	0.33	0.36	8.27	4.88	0.27
12092013_000876.LAB	12/9/2013	15:46:00	0.36	0.39	8.40	4.87	0.30
12092013_000877.LAB	12/9/2013	15:46:29	0.39	0.43	8.46	4.88	0.36
12092013_000878.LAB	12/9/2013	15:46:59	0.34	0.37	7.93	4.88	0.35
12092013_000879.LAB	12/9/2013	15:47:28	0.32	0.34	8.05	4.89	0.31
12092013_000880.LAB	12/9/2013	15:47:57	0.36	0.40	9.35	4.83	0.32
12092013_000881.LAB	12/9/2013	15:48:27	0.34	0.37	8.89	4.84	0.29
12092013_000882.LAB	12/9/2013	15:48:56	0.36	0.39	9.20	4.82	0.26
12092013_000883.LAB	12/9/2013	15:49:25	0.35	0.38	8.99	4.84	0.24
12092013_000884.LAB	12/9/2013	15:49:55	0.34	0.37	8.59	4.86	0.29
12092013_000885.LAB	12/9/2013	15:50:24	0.32	0.35	8.53	4.88	0.34
12092013_000886.LAB	12/9/2013	15:50:54	0.35	0.39	9.25	4.83	0.31
12092013_000887.LAB	12/9/2013	15:51:23	0.31	0.33	8.17	4.88	0.34
12092013_000888.LAB	12/9/2013	15:51:53	0.34	0.37	7.67	4.91	0.28
12092013_000889.LAB	12/9/2013	15:52:22	0.35	0.39	8.33	4.88	0.27
12092013_000890.LAB	12/9/2013	15:52:51	0.34	0.37	8.18	4.88	0.21
12092013_000891.LAB	12/9/2013	15:53:21	0.30	0.33	7.95	4.89	0.26
12092013_000892.LAB	12/9/2013	15:53:50	0.31	0.34	7.99	4.88	0.29
12092013_000893.LAB	12/9/2013	15:54:20	0.37	0.41	9.57	4.81	0.23
12092013_000894.LAB	12/9/2013	15:54:49	0.33	0.36	9.07	4.83	0.37
12092013_000895.LAB	12/9/2013	15:55:18	0.33	0.36	8.83	4.85	0.28
12092013_000896.LAB	12/9/2013	15:55:48	0.38	0.42	9.33	4.83	0.32
12092013_000897.LAB	12/9/2013	15:56:17	0.31	0.34	8.65	4.86	0.31
12092013_000898.LAB	12/9/2013	15:56:46	0.33	0.36	8.11	4.89	0.30
12092013_000899.LAB	12/9/2013	15:57:16	0.35	0.38	8.44	4.87	0.31
12092013_000900.LAB	12/9/2013	15:57:45	0.33	0.36	8.04	4.90	0.32
12092013_000901.LAB	12/9/2013	15:58:14	0.34	0.38	8.92	4.85	0.33
12092013_000902.LAB	12/9/2013	15:58:44	0.33	0.36	8.86	4.85	0.30
12092013_000903.LAB	12/9/2013	15:59:13	0.34	0.37	8.57	4.86	0.26
12092013_000904.LAB	12/9/2013	15:59:43	0.33	0.36	8.34	4.89	0.28
12092013_000905.LAB	12/9/2013	16:00:12	0.33	0.36	9.01	4.84	0.29
12092013_000906.LAB	12/9/2013	16:00:41	0.34	0.37	8.50	4.87	0.36
12092013_000907.LAB	12/9/2013	16:01:11	0.34	0.37	8.20	4.88	0.30
12092013_000908.LAB	12/9/2013	16:01:40	0.33	0.36	9.03	4.83	0.38
12092013_000909.LAB	12/9/2013	16:02:10	0.32	0.35	8.82	4.85	0.34
12092013_000910.LAB	12/9/2013	16:02:39	0.32	0.35	8.42	4.87	0.27
12092013_000911.LAB	12/9/2013	16:03:09	0.37	0.40	8.43	4.88	0.28
12092013_000912.LAB	12/9/2013	16:03:38	0.29	0.32	7.40	4.93	0.23
12092013_000913.LAB	12/9/2013	16:04:07	0.29	0.32	6.98	4.95	0.29
12092013_000914.LAB	12/9/2013	16:04:36	0.30	0.32	6.93	4.98	0.25
12092013_000915.LAB	12/9/2013	16:05:06	0.31	0.34	8.32	4.89	0.33
12092013_000916.LAB	12/9/2013	16:05:35	0.31	0.34	7.97	4.90	0.24

END R3

Ethylene on at 3 l/min

12092013_000917.LAB	12/9/2013	16:06:05	0.35	0.38	7.81	4.90	0.32
12092013_000918.LAB	12/9/2013	16:06:34	0.30	0.33	8.28	4.86	0.27
12092013_000919.LAB	12/9/2013	16:07:03	0.29	0.31	7.95	3.38	0.51
12092013_000920.LAB	12/9/2013	16:07:33	0.67	0.72	5.91	0.11	75.35
12092013_000921.LAB	12/9/2013	16:08:02	0.44	0.46	4.95	0.06	93.34
12092013_000922.LAB	12/9/2013	16:08:32	0.34	0.35	4.33	0.05	94.12
12092013_000923.LAB	12/9/2013	16:09:01	0.30	0.31	3.80	0.04	94.79
12092013_000924.LAB	12/9/2013	16:09:30	0.23	0.24	3.48	0.04	95.06
12092013_000925.LAB	12/9/2013	16:10:00	0.21	0.22	3.15	0.04	95.39
12092013_000926.LAB	12/9/2013	16:10:29	0.26	0.27	2.89	0.03	95.91
12092013_000927.LAB	12/9/2013	16:10:59	0.22	0.23	2.65	0.03	96.10
12092013_000928.LAB	12/9/2013	16:11:28	0.17	0.18	2.47	0.02	96.08
12092013_000929.LAB	12/9/2013	16:11:57	0.23	0.24	2.31	0.02	96.34
12092013_000930.LAB	12/9/2013	16:12:27	0.20	0.20	2.11	0.01	96.62
12092013_000931.LAB	12/9/2013	16:12:56	0.15	0.15	1.89	0.01	96.77
12092013_000932.LAB	12/9/2013	16:13:26	0.15	0.15	1.62	0.01	97.11
12092013_000933.LAB	12/9/2013	16:13:55	0.12	0.12	1.44	0.01	97.32
12092013_000934.LAB	12/9/2013	16:14:24	0.12	0.12	1.28	0.01	97.47

Ethylene Off

Calibration Transfer Std., Section 8.6.1
ethylene = 98.6 ppm In N2

98.6 ppm

97.47%
97.45% Is CT gas +5% of surrogate value?
97.71% YES
98.00%
98.14%
98.48%

B-4

**Unit 32B Annual Compliance Emission
Measurements 12-09-13.**

Ammonia Slip (NH₃) Field Data Sheet

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

12/9/13 Ffir NH₃ Slip unit 3-2B Middle unit

0800 leak check good @ 15" Hg

0808 added liquid N₂

0822 start N₂ readings for background

0828 N₂ background w/ pump running @ 3 l/min w/ 0.2 l/min overflow

0840 N₂ through loop @ 3 l/min

0845 N₂ off stack gas on

0901 actually put in the stack

0952 Ethylene spike @ 3 l/min

0959 Ethylene off NH₃ @ 0.7 l/min on 25 ppm

1028 NH₃ 25 ppm off N₂ @ 3 l/min on

1038 N₂ off

1155 refill liquid N₂, roughly 1/4 remaining

1212 N₂ on 3 l/min, closed loop to check background

1216 new background

1221 old background

1226 new background

1231 stop N₂ start stack gas

1235 R1 start #486 lab

1300 actual start of R1

1401 R1 end R2 start

1503 R2 end R3 start

1604 R3 end

1606 Ethylene start @ 3 l/min

1614 Ethylene off

1615 NH₃ start @ 0.7 l/min

1629 NH₃ off N₂ start @ 3.4 l/min

B-5

**Unit 32B Annual Compliance Emission
Measurements 12-09-13.**

Visible Emission Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
 SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 12:30
 SOURCE: EU-032 "B" TIME FINISH: 15:32
 DATE : December 09, 2013

RESULTS:

AVERAGE OPACITY: 0.0 %
 MAXIMUM OPACITY: 0.0 %
 HIGHEST SIX-MINUTE ROLLING AVERAGE: 0.0 %

OBSERVATIONS:

SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
1	0	0	0	0	46	0	0	0	0
2	0	0	0	0	47	0	0	0	0
3	0	0	0	0	48	0	0	0	0
4	0	0	0	0	49	0	0	0	0
5	0	0	0	0	50	0	0	0	0
6	0	0	0	0	51	0	0	0	0
7	0	0	0	0	52	0	0	0	0
8	0	0	0	0	53	0	0	0	0
9	0	0	0	0	54	0	0	0	0
10	0	0	0	0	55	0	0	0	0
11	0	0	0	0	56	0	0	0	0
12	0	0	0	0	57	0	0	0	0
13	0	0	0	0	58	0	0	0	0
14	0	0	0	0	59	0	0	0	0
15	0	0	0	0	60	0	0	0	0
16	0	0	0	0	61	0	0	0	0
17	0	0	0	0	62	0	0	0	0
18	0	0	0	0	63	0	0	0	0
19	0	0	0	0	64	0	0	0	0
20	0	0	0	0	65	0	0	0	0
21	0	0	0	0	66	0	0	0	0
22	0	0	0	0	67	0	0	0	0
23	0	0	0	0	68	0	0	0	0
24	0	0	0	0	69	0	0	0	0
25	0	0	0	0	70	0	0	0	0
26	0	0	0	0	71	0	0	0	0
27	0	0	0	0	72	0	0	0	0
28	0	0	0	0	73	0	0	0	0
29	0	0	0	0	74	0	0	0	0
30	0	0	0	0	75	0	0	0	0
31	0	0	0	0	76	0	0	0	0
32	0	0	0	0	77	0	0	0	0
33	0	0	0	0	78	0	0	0	0
34	0	0	0	0	79	0	0	0	0
35	0	0	0	0	80	0	0	0	0
36	0	0	0	0	81	0	0	0	0
37	0	0	0	0	82	0	0	0	0
38	0	0	0	0	83	0	0	0	0
39	0	0	0	0	84	0	0	0	0
40	0	0	0	0	85	0	0	0	0
41	0	0	0	0	86	0	0	0	0
42	0	0	0	0	87	0	0	0	0
43	0	0	0	0	88	0	0	0	0
44	0	0	0	0	89	0	0	0	0
45	0	0	0	0	90	0	0	0	0

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
 SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 12:30
 SOURCE: EU-032 "B" TIME FINISH: 15:32
 DATE : December 09, 2013

OBSERVATIONS:

SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
91	0	0	0	0	136	0	0	0	0
92	0	0	0	0	137	0	0	0	0
93	0	0	0	0	138	0	0	0	0
94	0	0	0	0	139	0	0	0	0
95	0	0	0	0	140	0	0	0	0
96	0	0	0	0	141	0	0	0	0
97	0	0	0	0	142	0	0	0	0
98	0	0	0	0	143	0	0	0	0
99	0	0	0	0	144	0	0	0	0
100	0	0	0	0	145	0	0	0	0
101	0	0	0	0	146	0	0	0	0
102	0	0	0	0	147	0	0	0	0
103	0	0	0	0	148	0	0	0	0
104	0	0	0	0	149	0	0	0	0
105	0	0	0	0	150	0	0	0	0
106	0	0	0	0	151	0	0	0	0
107	0	0	0	0	152	0	0	0	0
108	0	0	0	0	153	0	0	0	0
109	0	0	0	0	154	0	0	0	0
110	0	0	0	0	155	0	0	0	0
111	0	0	0	0	156	0	0	0	0
112	0	0	0	0	157	0	0	0	0
113	0	0	0	0	158	0	0	0	0
114	0	0	0	0	159	0	0	0	0
115	0	0	0	0	160	0	0	0	0
116	0	0	0	0	161	0	0	0	0
117	0	0	0	0	162	0	0	0	0
118	0	0	0	0	163	0	0	0	0
119	0	0	0	0	164	0	0	0	0
120	0	0	0	0	165	0	0	0	0
121	0	0	0	0	166	0	0	0	0
122	0	0	0	0	167	0	0	0	0
123	0	0	0	0	168	0	0	0	0
124	0	0	0	0	169	0	0	0	0
125	0	0	0	0	170	0	0	0	0
126	0	0	0	0	171	0	0	0	0
127	0	0	0	0	172	0	0	0	0
128	0	0	0	0	173	0	0	0	0
129	0	0	0	0	174	0	0	0	0
130	0	0	0	0	175	0	0	0	0
131	0	0	0	0	176	0	0	0	0
132	0	0	0	0	177	0	0	0	0
133	0	0	0	0	178	0	0	0	0
134	0	0	0	0	179	0	0	0	0
135	0	0	0	0	180	0	0	0	0

KOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
 SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FJ TIME START: 12:30
 SOURCE: EU-032 "B" TIME FINISH: 15:32
 DATE : December 09, 2013

CALCULATIONS:

SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS

1	-	-	-	-	46	0.0	0.0	0.0	0.0
2	-	-	-	-	47	0.0	0.0	0.0	0.0
3	-	-	-	-	48	0.0	0.0	0.0	0.0
4	-	-	-	-	49	0.0	0.0	0.0	0.0
5	-	-	-	-	50	0.0	0.0	0.0	0.0
6	-	-	-	0.0	51	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	58	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	65	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	72	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	78	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	79	0.0	0.0	0.0	0.0
35	0.0	0.0	0.0	0.0	80	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	81	0.0	0.0	0.0	0.0
37	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0
38	0.0	0.0	0.0	0.0	83	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	84	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	85	0.0	0.0	0.0	0.0
41	0.0	0.0	0.0	0.0	86	0.0	0.0	0.0	0.0
42	0.0	0.0	0.0	0.0	87	0.0	0.0	0.0	0.0
43	0.0	0.0	0.0	0.0	88	0.0	0.0	0.0	0.0
44	0.0	0.0	0.0	0.0	89	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	90	0.0	0.0	0.0	0.0

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
 SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 12:30
 SOURCE: EU-032 "B" TIME FINISH: 15:32
 DATE : December 09, 2013

CALCULATIONS:

SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS

91	0.0	0.0	0.0	0.0	136	0.0	0.0	0.0	0.0
92	0.0	0.0	0.0	0.0	137	0.0	0.0	0.0	0.0
93	0.0	0.0	0.0	0.0	138	0.0	0.0	0.0	0.0
94	0.0	0.0	0.0	0.0	139	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	140	0.0	0.0	0.0	0.0
96	0.0	0.0	0.0	0.0	141	0.0	0.0	0.0	0.0
97	0.0	0.0	0.0	0.0	142	0.0	0.0	0.0	0.0
98	0.0	0.0	0.0	0.0	143	0.0	0.0	0.0	0.0
99	0.0	0.0	0.0	0.0	144	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	145	0.0	0.0	0.0	0.0
101	0.0	0.0	0.0	0.0	146	0.0	0.0	0.0	0.0
102	0.0	0.0	0.0	0.0	147	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	148	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	149	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	150	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	151	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	152	0.0	0.0	0.0	0.0
108	0.0	0.0	0.0	0.0	153	0.0	0.0	0.0	0.0
109	0.0	0.0	0.0	0.0	154	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	155	0.0	0.0	0.0	0.0
111	0.0	0.0	0.0	0.0	156	0.0	0.0	0.0	0.0
112	0.0	0.0	0.0	0.0	157	0.0	0.0	0.0	0.0
113	0.0	0.0	0.0	0.0	158	0.0	0.0	0.0	0.0
114	0.0	0.0	0.0	0.0	159	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	160	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	161	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	162	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	163	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	164	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	165	0.0	0.0	0.0	0.0
121	0.0	0.0	0.0	0.0	166	0.0	0.0	0.0	0.0
122	0.0	0.0	0.0	0.0	167	0.0	0.0	0.0	0.0
123	0.0	0.0	0.0	0.0	168	0.0	0.0	0.0	0.0
124	0.0	0.0	0.0	0.0	169	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	170	0.0	0.0	0.0	0.0
126	0.0	0.0	0.0	0.0	171	0.0	0.0	0.0	0.0
127	0.0	0.0	0.0	0.0	172	0.0	0.0	0.0	0.0
128	0.0	0.0	0.0	0.0	173	0.0	0.0	0.0	0.0
129	0.0	0.0	0.0	0.0	174	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	175	0.0	0.0	0.0	0.0
131	0.0	0.0	0.0	0.0	176	0.0	0.0	0.0	0.0
132	0.0	0.0	0.0	0.0	177	0.0	0.0	0.0	0.0
133	0.0	0.0	0.0	0.0	178	0.0	0.0	0.0	0.0
134	0.0	0.0	0.0	0.0	179	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	180	0.0	0.0	0.0	0.0

B-6

Unit 32B Annual Compliance Emission
Measurements 12-09-13.

Visible Emission Field Data Sheet

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

SOURCE NAME
Florida Power & Light

ADDRESS
6000 North U.S. Highway 1

CITY **Cocoa** STATE **FL** ZIP **32927**
Cape Canaveral

PHONE SOURCE ID NUMBER
6-032 "B"

PROCESS EQUIPMENT OPERATING MODE
Used Fuel Oil Combustion **BASE Load**

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START **Large circular stack** STOP **in the middle of the plant**

HEIGHT ABOVE GROUND LEVEL HEIGHT RELATIVE TO OBSERVER
START **~150'** STOP **~150'** START **~145'** STOP **~145'**

DISTANCE FROM OBSERVER DIRECTION FROM OBSERVER
START **~600'** STOP **~600'** START **~65°** STOP **~65°**

DESCRIBE EMISSIONS
START **None** STOP **None**

EMISSION COLOR PLUME TYPE: CONTINUOUS
START **None** STOP **None** FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: IF WATER DROPLET PLUME:
NO YES ATTACHED DETACHED

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START **10 feet above stack** STOP **Exit**

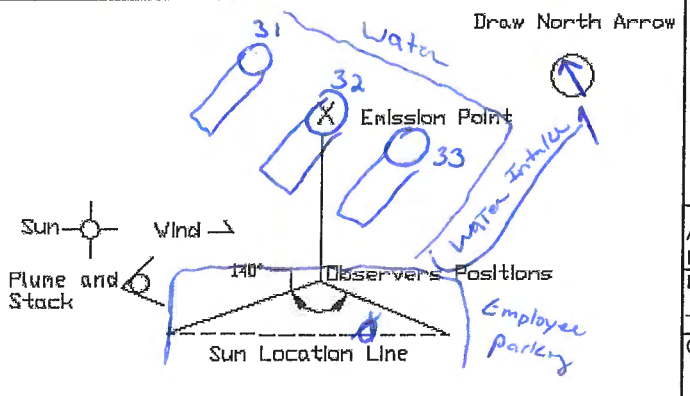
DESCRIBE BACKGROUND
START **Sky** STOP **Sky**

BACKGROUND COLOR SKY CONDITIONS
START **Blue** STOP **Blue** START **SSE** STOP **Clear**

WIND SPEED WIND DIRECTION
START **0-10** STOP **0-10** START **SSE** STOP **SSE**

AMBIENT TEMP: WET BULB TEMP RH, percent
START **79** STOP **82** **70%**

OBSERVATION DATE	START TIME				STOP TIME							
	SEC	MIN	0	15	30	45	SEC	MIN	0	15	30	45
12-09-13												
12:30												
13:30												
1	0	0	0	0	0	31	0	0	0	0	0	0
2	0	0	0	0	0	32	0	0	0	0	0	0
3	0	0	0	0	0	33	0	0	0	0	0	0
4	0	0	0	0	0	34	0	0	0	0	0	0
5	0	0	0	0	0	35	0	0	0	0	0	0
6	0	0	0	0	0	36	0	0	0	0	0	0
7	0	0	0	0	0	37	0	0	0	0	0	0
8	0	0	0	0	0	38	0	0	0	0	0	0
9	0	0	0	0	0	39	0	0	0	0	0	0
10	0	0	0	0	0	40	0	0	0	0	0	0
11	0	0	0	0	0	41	0	0	0	0	0	0
12	0	0	0	0	0	42	0	0	0	0	0	0
13	0	0	0	0	0	43	0	0	0	0	0	0
14	0	0	0	0	0	44	0	0	0	0	0	0
15	0	0	0	0	0	45	0	0	0	0	0	0
16	0	0	0	0	0	46	0	0	0	0	0	0
17	0	0	0	0	0	47	0	0	0	0	0	0
18	0	0	0	0	0	48	0	0	0	0	0	0
19	0	0	0	0	0	49	0	0	0	0	0	0
20	0	0	0	0	0	50	0	0	0	0	0	0
21	0	0	0	0	0	51	0	0	0	0	0	0
22	0	0	0	0	0	52	0	0	0	0	0	0
23	0	0	0	0	0	53	0	0	0	0	0	0
24	0	0	0	0	0	54	0	0	0	0	0	0
25	0	0	0	0	0	55	0	0	0	0	0	0
26	0	0	0	0	0	56	0	0	0	0	0	0
27	0	0	0	0	0	57	0	0	0	0	0	0
28	0	0	0	0	0	58	0	0	0	0	0	0
29	0	0	0	0	0	59	0	0	0	0	0	0
30	0	0	0	0	0	60	0	0	0	0	0	0



AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE % WERE _____

RANGE OF OPACITY READINGS MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Enwell

OBSERVER'S SIGNATURE _____ DATE **12-09-13**

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____

CERTIFIED BY **Whitlow** DATE **July 2013**

TITLE _____ DATE _____

VERIFIED BY _____ DATE _____



SOURCE NAME
Florida Power & Light - Cape Canaveral

ADDRESS
6000 North U.S. Highway 1

CITY *Cocoa* STATE *FL* ZIP *32927*

PHONE SOURCE ID NUMBER
EV-032 "B"

PROCESS EQUIPMENT *ULSD Fuel Oil combustion* OPERATING MODE *Base Load*

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START *Large circular stack in the middle of plant* STOP

HEIGHT ABOVE GROUND LEVEL START *~150'* STOP *~150'* HEIGHT RELATIVE TO OBSERVER START *~145'* STOP *~145'*

DISTANCE FROM OBSERVER START *~600'* STOP *~600'* DIRECTION FROM OBSERVER START *~65°* STOP *~65°*

DESCRIBE EMISSIONS
START *none* STOP *none*

EMISSION COLOR START *none* STOP *none* PLUME TYPE: CONTINUOUS FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: NO YES IF WATER DROPLET PLUME: ATTACHED DETACHED

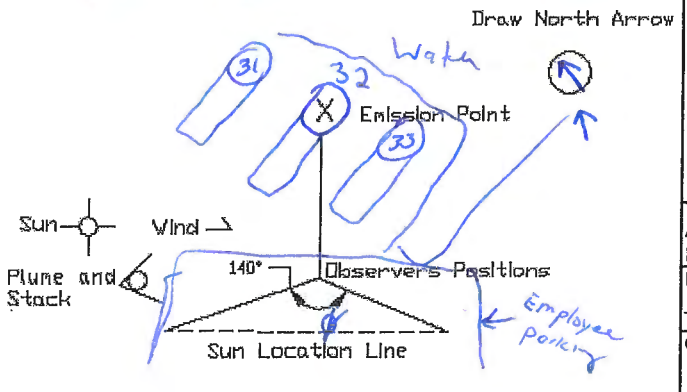
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START *10 feet above stack exit* STOP

DESCRIBE BACKGROUND
START *Sky* STOP *Sky*

BACKGROUND COLOR START *Blue* STOP *Blue* SKY CONDITIONS START *clear* STOP *clear*

WIND SPEED START *0-10* STOP *0-10* WIND DIRECTION START *SSE* STOP *SSE*

AMBIENT TEMP: START *82* STOP *81* WET BULB TEMP *62* RH.percent



OBSERVATION DATE	START TIME				STOP TIME			
	0	15	30	45	0	15	30	45
12-09-13	0	15	30	45	0	15	30	45
	1	0	0	0	31	0	0	0
	2	0	0	0	32	0	0	0
	3	0	0	0	33	0	0	0
	4	0	0	0	34	0	0	0
	5	0	0	0	35	0	0	0
	6	0	0	0	36	0	0	0
	7	0	0	0	37	0	0	0
	8	0	0	0	38	0	0	0
	9	0	0	0	39	0	0	0
	10	0	0	0	40	0	0	0
	11	0	0	0	41	0	0	0
	12	0	0	0	42	0	0	0
	13	0	0	0	43	0	0	0
	14	0	0	0	44	0	0	0
	15	0	0	0	45	0	0	0
	16	0	0	0	46	0	0	0
	17	0	0	0	47	0	0	0
	18	0	0	0	48	0	0	0
	19	0	0	0	49	0	0	0
	20	0	0	0	50	0	0	0
	21	0	0	0	51	0	0	0
	22	0	0	0	52	0	0	0
	23	0	0	0	53	0	0	0
	24	0	0	0	54	0	0	0
	25	0	0	0	55	0	0	0
	26	0	0	0	56	0	0	0
	27	0	0	0	57	0	0	0
	28	0	0	0	58	0	0	0
	29	0	0	0	59	0	0	0
	30	0	0	0	60	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE _____ % WERE _____

RANGE OF OPACITY READINGS
MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Enwall

OBSERVER'S SIGNATURE *[Signature]* DATE *12-09-13*

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____ CERTIFIED BY *Whitlow* DATE *July 2013*

TITLE _____ DATE _____ VERIFIED BY _____ DATE _____



SOURCE NAME
Florida Power & Light - Cape Canaveral

ADDRESS
6000 North U.S. Highway 1

CITY *Cocoa* STATE *FL* ZIP *32927*

PHONE SOURCE ID NUMBER
6U-032 "B"

PROCESS EQUIPMENT *ULSO Fuel oil combustion* OPERATING MODE *BASE LOAD*

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START *Large circular stack located in middle of plant* STOP

HEIGHT ABOVE GROUND LEVEL START *~150'* STOP *~150'* HEIGHT RELATIVE TO OBSERVER START *~145'* STOP *~145'*

DISTANCE FROM OBSERVER START *~600'* STOP *~600'* DIRECTION FROM OBSERVER START *~65°* STOP *~65°*

DESCRIBE EMISSIONS
START *None* STOP *None*

EMISSION COLOR START *None* STOP *None* PLUME TYPE: CONTINUOUS FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: NO YES IF WATER DROPLET PLUME: ATTACHED DETACHED

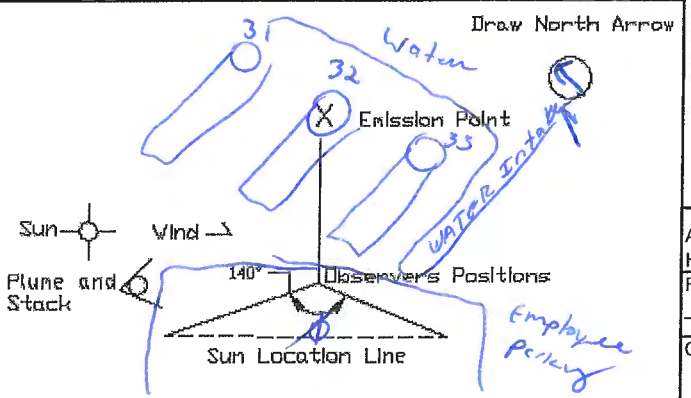
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START *10 feet above* STOP *stack exit*

DESCRIBE BACKGROUND
START *Sky* STOP *Sky*

BACKGROUND COLOR START *Blue* STOP *Blue* SKY CONDITIONS START *clear* STOP *clear*

WIND SPEED START *0-10* STOP *2-15* WIND DIRECTION START *SSE* STOP *S*

AMBIENT TEMP: START *81* STOP *81* WET BULB TEMP _____ RH.percent *70%*



OBSERVATION DATE	START TIME				STOP TIME			
	0	15	30	45	0	15	30	45
12-09-13	0	15	30	45	0	15	30	45
1	0	0	0	0	31	0	0	0
2	0	0	0	0	32	0	0	0
3	0	0	0	0	33	0	0	0
4	0	0	0	0	34	0	0	0
5	0	0	0	0	35	0	0	0
6	0	0	0	0	36	0	0	0
7	0	0	0	0	37	0	0	0
8	0	0	0	0	38	0	0	0
9	0	0	0	0	39	0	0	0
10	0	0	0	0	40	0	0	0
11	0	0	0	0	41	0	0	0
12	0	0	0	0	42	0	0	0
13	0	0	0	0	43	0	0	0
14	0	0	0	0	44	0	0	0
15	0	0	0	0	45	0	0	0
16	0	0	0	0	46	0	0	0
17	0	0	0	0	47	0	0	0
18	0	0	0	0	48	0	0	0
19	0	0	0	0	49	0	0	0
20	0	0	0	0	50	0	0	0
21	0	0	0	0	51	0	0	0
22	0	0	0	0	52	0	0	0
23	0	0	0	0	53	0	0	0
24	0	0	0	0	54	0	0	0
25	0	0	0	0	55	0	0	0
26	0	0	0	0	56	0	0	0
27	0	0	0	0	57	0	0	0
28	0	0	0	0	58	0	0	0
29	0	0	0	0	59	0	0	0
30	0	0	0	0	60	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE % WERE _____

RANGE OF OPACITY READINGS MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Enwa II

OBSERVER'S SIGNATURE *[Signature]* DATE *12-09-13*

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____ DATE _____

TITLE _____ DATE _____

CERTIFIED BY *Whitlow* DATE *July 2013*

VERIFIED BY _____ DATE _____



B-7

Unit 32B Annual Compliance Emission
Measurements 12-09-13.

Plant Operating Data

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Date / Time	GT LOAD		TOTAL FUEL OIL FLOW KPPH	TOTAL WATER INJECTION FLOW PPH	EPA Method 19	
	MW	%			scf/hr	mmbtu/hr
2013/12/09 08:00:00.000	153.800	69.6%	82.8809	28288.1	52,431,912	1,646
2013/12/09 08:01:00.000	154.157	69.8%	82.8809	28111.3	52,431,912	
2013/12/09 08:02:00.000	154.459	69.9%	82.8809	28252.9	52,431,912	
2013/12/09 08:03:00.000	154.129	69.7%	82.8809	28342.3	52,431,912	
2013/12/09 08:04:00.000	154.020	69.7%	82.8586	28212	52,417,805	
2013/12/09 08:05:00.000	154.020	69.7%	82.8994	28154	52,443,615	
2013/12/09 08:06:00.000	154.020	69.7%	82.8571	28154	52,416,856	
2013/12/09 08:07:00.000	154.020	69.7%	82.8571	28177.3	52,416,856	
2013/12/09 08:08:00.000	154.020	69.7%	82.8571	28325.1	52,416,856	
2013/12/09 08:09:00.000	154.020	69.7%	82.7695	27986.2	52,361,438	
2013/12/09 08:10:00.000	154.294	69.8%	82.8267	28252.7	52,397,624	
2013/12/09 08:11:00.000	153.663	69.5%	82.8267	28057.6	52,397,624	
2013/12/09 08:12:00.000	153.635	69.5%	82.8007	28055.7	52,381,176	
2013/12/09 08:13:00.000	154.020	69.7%	82.8007	28042.4	52,381,176	
2013/12/09 08:14:00.000	154.020	69.7%	82.8007	28016.7	52,381,176	
2013/12/09 08:15:00.000	154.020	69.7%	82.8007	28016.7	52,381,176	
2013/12/09 08:16:00.000	154.020	69.7%	82.7553	27915.9	52,352,455	
2013/12/09 08:17:00.000	154.212	69.8%	82.7984	27962.4	52,379,721	
2013/12/09 08:18:00.000	153.937	69.7%	82.7984	27977.9	52,379,721	
2013/12/09 08:19:00.000	154.404	69.9%	82.7984	27977.9	52,379,721	
2013/12/09 08:20:00.000	153.992	69.7%	82.7563	27889.9	52,353,088	
2013/12/09 08:21:00.000	153.992	69.7%	82.8192	28029.8	52,392,879	
2013/12/09 08:22:00.000	153.992	69.7%	82.7707	27873	52,362,197	
2013/12/09 08:23:00.000	153.992	69.7%	82.8145	27913.2	52,389,906	
2013/12/09 08:24:00.000	153.992	69.7%	82.8145	27967.9	52,389,906	
2013/12/09 08:25:00.000	153.992	69.7%	82.7604	27908	52,355,682	
2013/12/09 08:26:00.000	153.992	69.7%	82.7604	27812.4	52,355,682	
2013/12/09 08:27:00.000	153.992	69.7%	82.8148	27948.8	52,390,096	
2013/12/09 08:28:00.000	153.992	69.7%	82.7914	27948.8	52,375,293	
2013/12/09 08:29:00.000	153.992	69.7%	82.7914	27719.1	52,375,293	
2013/12/09 08:30:00.000	153.992	69.7%	82.7233	27882.9	52,332,211	
2013/12/09 08:31:00.000	153.663	69.5%	82.7233	27882.9	52,332,211	
2013/12/09 08:32:00.000	153.855	69.6%	82.7207	27751.2	52,330,567	
2013/12/09 08:33:00.000	154.377	69.9%	82.7395	27856.4	52,342,460	
2013/12/09 08:34:00.000	154.486	69.9%	82.7395	27789.2	52,342,460	
2013/12/09 08:35:00.000	153.965	69.7%	82.8067	27914.4	52,384,972	
2013/12/09 08:36:00.000	153.965	69.7%	82.7136	27701.3	52,326,075	
2013/12/09 08:37:00.000	154.624	70.0%	82.7964	27854.5	52,378,456	
2013/12/09 08:38:00.000	153.937	69.7%	82.7553	27709.6	52,352,455	
2013/12/09 08:39:00.000	153.937	69.7%	82.7553	27709.6	52,352,455	
2013/12/09 08:40:00.000	153.910	69.6%	82.7099	27709.6	52,323,165	
2013/12/09 08:41:00.000	153.745	69.6%	82.724	27748.8	52,332,654	
2013/12/09 08:42:00.000	154.651	70.0%	82.724	27786.7	52,332,654	
2013/12/09 08:43:00.000	154.047	69.7%	82.676	27626.6	52,302,289	
2013/12/09 08:44:00.000	153.992	69.7%	82.676	27543.7	52,302,289	
2013/12/09 08:45:00.000	153.992	69.7%	82.7275	27618.9	52,334,868	
2013/12/09 08:46:00.000	153.992	69.7%	82.6506	27502.9	52,286,220	
2013/12/09 08:47:00.000	153.992	69.7%	82.6465	27574.8	52,283,626	
2013/12/09 08:48:00.000	153.992	69.7%	82.6465	27438.6	52,283,626	
2013/12/09 08:49:00.000	153.992	69.7%	82.6465	27438.6	52,283,626	
2013/12/09 08:50:00.000	153.992	69.7%	82.6465	27438.6	52,283,626	
2013/12/09 08:51:00.000	153.992	69.7%	82.6465	27539.3	52,283,626	
2013/12/09 08:52:00.000	153.992	69.7%	82.6465	27367.3	52,283,626	
2013/12/09 08:53:00.000	153.937	69.7%	82.618	27389.2	52,265,597	
2013/12/09 08:54:00.000	154.239	69.8%	82.618	27389.2	52,265,597	
2013/12/09 08:55:00.000	153.997	69.6%	83.4037	28331.9	52,725,644	
2013/12/09 08:56:00.000	153.997	69.6%	83.4448	28225.7	52,725,383	
2013/12/09 08:57:00.000	153.997	69.6%	83.4225	28322.4	52,774,538	
2013/12/09 08:58:00.000	153.997	69.6%	83.3577	28251.4	52,733,544	
2013/12/09 08:59:00.000	153.997	69.6%	83.3577	28355.6	52,733,544	
2013/12/09 09:00:00.000	153.997	69.6%	83.3577	28216.7	52,733,544	
2013/12/09 09:01:00.000	153.997	69.6%	83.37	28268.3	52,741,325	
2013/12/09 09:02:00.000	153.997	69.6%	83.37	28329.7	52,741,325	
2013/12/09 09:03:00.000	153.997	69.6%	83.3334	28133.5	52,718,171	
2013/12/09 09:04:00.000	153.997	69.6%	83.3334	28051.3	52,718,171	
2013/12/09 09:05:00.000	153.997	69.6%	83.3334	28170.3	52,718,171	
2013/12/09 09:06:00.000	153.997	69.6%	83.3334	27989.1	52,718,171	
2013/12/09 09:07:00.000	153.997	69.6%	83.3334	28063.9	52,718,171	
2013/12/09 09:08:00.000	153.997	69.6%	83.3334	28025.5	52,718,171	
2013/12/09 09:09:00.000	156.766	70.9%	83.53	28025.5	52,842,544	
2013/12/09 09:10:00.000	157.837	71.4%	84.021	29068.2	53,153,159	
2013/12/09 09:11:00.000	156.748	70.6%	84.021	29021.8	53,153,159	
2013/12/09 09:12:00.000	157.562	71.3%	84.1003	29215.8	53,203,326	
2013/12/09 09:13:00.000	157.946	71.5%	84.0468	29123.2	53,169,481	
2013/12/09 09:14:00.000	157.837	71.4%	84.0468	29020.9	53,169,481	
2013/12/09 09:15:00.000	158.303	71.6%	84.0468	29020.9	53,169,481	
2013/12/09 09:16:00.000	157.864	71.4%	84.0468	28915.9	53,169,481	
2013/12/09 09:17:00.000	158.221	71.6%	84.0468	28992.6	53,169,481	
2013/12/09 09:18:00.000	158.776	71.6%	84.0468	28854.4	53,169,481	
2013/12/09 09:19:00.000	157.837	71.4%	84.0468	28913.1	53,169,481	
2013/12/09 09:20:00.000	157.864	71.4%	84.0468	29043.6	53,169,481	
2013/12/09 09:21:00.000	157.837	71.4%	84.0468	28870.8	53,169,481	
2013/12/09 09:22:00.000	157.269	71.2%	84.0468	28721.7	53,169,481	
2013/12/09 09:23:00.000	157.699	71.4%	84.0468	28779.2	53,169,481	
2013/12/09 09:24:00.000	157.589	71.3%	84.0176	28725.6	53,147,845	
2013/12/09 09:25:00.000	157.946	71.5%	84.0284	28728.5	53,157,841	
2013/12/09 09:26:00.000	158.456	71.7%	84.0284	28450.7	53,157,841	
2013/12/09 09:27:00.000	157.974	71.5%	84.0284	28695.6	53,157,841	
2013/12/09 09:28:00.000	157.974	71.5%	84.0284	28785.8	53,157,841	
2013/12/09 09:29:00.000	157.974	71.5%	84.0284	28450.6	53,157,841	
2013/12/09 09:30:00.000	158.056	71.5%	84.0284	28613.1	53,157,841	
2013/12/09 09:31:00.000	158.056	71.5%	84.0284	28507.2	53,157,841	
2013/12/09 09:32:00.000	157.946	71.5%	84.0284	28452.3	53,157,841	
2013/12/09 09:33:00.000	158.782	71.4%	84.0284	28487.8	53,157,841	
2013/12/09 09:34:00.000	157.809	71.4%	84.0284	28662.1	53,157,841	
2013/12/09 09:35:00.000	158.853	71.9%	84.0284	28450.8	53,157,841	
2013/12/09 09:36:00.000	157.974	71.5%	84.0854	28756.2	53,193,900	
2013/12/09 09:37:00.000	157.974	71.5%	84.0854	28864.5	53,193,900	
2013/12/09 09:38:00.000	157.974	71.5%	84.0854	29071	53,193,900	
2013/12/09 09:39:00.000	158.248	71.6%	84.0854	29011	53,193,900	
2013/12/09 09:40:00.000	158.221	71.6%	84.0854	28918.4	53,193,900	
2013/12/09 09:41:00.000	158.331	71.6%	84.0497	29117.9	53,171,315	
2013/12/09 09:42:00.000	158.550	71.7%	84.0497	29112.7	53,171,315	
2013/12/09 09:43:00.000	158.139	71.6%	84.0497	28973.7	53,171,315	
2013/12/09 09:44:00.000	158.111	71.5%	84.0497	28713.3	53,171,315	
2013/12/09 09:45:00.000	158.193	71.6%	84.0497	28984.5	53,171,315	
2013/12/09 09:46:00.000	158.853	71.9%	84.0135	28816.9	53,148,415	
2013/12/09 09:47:00.000	157.919	71.5%	84.062	28985.5	53,193,900	
2013/12/09 09:48:00.000	157.919	71.5%	84.0516	28843.5	53,172,517	
2013/12/09 09:49:00.000	157.919	71.5%	84.0516	29069.8	53,172,517	
2013/12/09 09:50:00.000	157.894	71.4%	84.0516	29011.6	53,172,517	
2013/12/09 09:51:00.000	158.056	71.5%	84.0156	29112.2	53,149,743	
2013/12/09 09:52:00.000	158.056	71.5%	84.0156	28900.5	53,149,743	
2013/12/09 09:53:00.000	158.139	71.6%	84.0156	28977.1	53,149,743	
2013/12/09 09:54:00.000						

2013/12/09 10:21:00:000	158.001	71.5%	83.9166	29339.4	53,087,114
2013/12/09 10:22:00:000	158.001	71.5%	83.9166	29308.3	53,087,114
2013/12/09 10:23:00:000	158.001	71.5%	83.9166	29179.8	53,087,114
2013/12/09 10:24:00:000	158.001	71.5%	83.9166	29130.6	53,087,114
2013/12/09 10:25:00:000	158.001	71.5%	83.9166	29061.2	53,087,114
2013/12/09 10:26:00:000	158.001	71.5%	83.9563	29523.7	53,112,229
2013/12/09 10:27:00:000	158.001	71.5%	83.888	29377.5	53,069,021
2013/12/09 10:28:00:000	158.001	71.5%	83.9549	29428.1	53,111,343
2013/12/09 10:29:00:000	158.001	71.5%	83.9006	29534.3	53,076,992
2013/12/09 10:30:00:000	158.001	71.5%	83.9006	29962.6	53,076,992
2013/12/09 10:31:00:000	158.001	71.5%	83.965	30123.2	53,117,733
2013/12/09 10:32:00:000	158.001	71.5%	83.965	30158.4	53,117,733
2013/12/09 10:33:00:000	158.001	71.5%	83.965	30298	53,117,733
2013/12/09 10:34:00:000	158.001	71.5%	83.9249	29139.6	53,092,365
2013/12/09 10:35:00:000	158.001	71.5%	83.9249	29745	53,092,365
2013/12/09 10:36:00:000	158.001	71.5%	83.9249	29298.4	53,092,365
2013/12/09 10:37:00:000	158.001	71.5%	83.9249	29475.6	53,092,365
2013/12/09 10:38:00:000	158.001	71.5%	83.9401	29980.2	53,101,980
2013/12/09 10:39:00:000	158.001	71.5%	83.9401	29587	53,101,980
2013/12/09 10:40:00:000	158.001	71.5%	83.9401	29704.5	53,101,980
2013/12/09 10:41:00:000	158.001	71.5%	83.9401	29679.7	53,101,980
2013/12/09 10:42:00:000	158.001	71.5%	83.9401	29963.9	53,101,980
2013/12/09 10:43:00:000	158.001	71.5%	83.9938	30234.4	53,125,352
2013/12/09 10:44:00:000	158.001	71.5%	83.9242	30387.3	53,091,922
2013/12/09 10:45:00:000	158.001	71.5%	83.9828	30241.2	53,128,993
2013/12/09 10:46:00:000	158.001	71.5%	83.9828	30241.2	53,128,993
2013/12/09 10:47:00:000	158.001	71.5%	83.9828	30238.6	53,128,993
2013/12/09 10:48:00:000	158.001	71.5%	83.9828	30291.2	53,128,993
2013/12/09 10:49:00:000	158.001	71.5%	83.9828	30097.2	53,128,993
2013/12/09 10:50:00:000	158.001	71.5%	83.9828	30994.1	53,128,993
2013/12/09 10:51:00:000	158.001	71.5%	83.9828	30319.7	53,128,993
2013/12/09 10:52:00:000	158.001	71.5%	83.941	30411.8	53,102,550
2013/12/09 10:53:00:000	158.001	71.5%	83.9534	30629	53,110,394
2013/12/09 10:54:00:000	158.001	71.5%	83.9892	30381.2	53,110,394
2013/12/09 10:55:00:000	158.001	71.5%	83.9892	30400.5	53,133,042
2013/12/09 10:56:00:000	158.001	71.5%	83.9892	30400.5	53,133,042
2013/12/09 10:57:00:000	158.001	71.5%	83.9892	30596.6	53,133,042
2013/12/09 10:58:00:000	158.001	71.5%	83.9892	30464	53,133,042
2013/12/09 10:59:00:000	158.001	71.5%	83.9892	30603.1	53,133,042
2013/12/09 11:00:00:000	158.001	71.5%	83.9892	30567	53,133,042
2013/12/09 11:01:00:000	158.001	71.5%	83.9892	31038.7	53,133,042
2013/12/09 11:02:00:000	158.001	71.5%	83.9892	30944.1	53,133,042
2013/12/09 11:03:00:000	158.001	71.5%	84.0188	30905.9	53,151,767
2013/12/09 11:04:00:000	158.001	71.5%	84.0188	30905.9	53,151,767
2013/12/09 11:05:00:000	158.001	71.5%	84.0188	30905.9	53,151,767
2013/12/09 11:06:00:000	158.001	71.5%	84.0188	30684.6	53,151,767
2013/12/09 11:07:00:000	158.001	71.5%	84.0188	30884.3	53,151,767
2013/12/09 11:08:00:000	158.001	71.5%	83.9951	30781.4	53,151,767
2013/12/09 11:09:00:000	158.001	71.5%	84.031	30951.6	53,159,485
2013/12/09 11:10:00:000	158.001	71.5%	84.031	30870.6	53,159,485
2013/12/09 11:11:00:000	158.001	71.5%	83.9511	31022.6	53,108,939
2013/12/09 11:12:00:000	157.974	71.5%	84.0134	30999.3	53,148,351
2013/12/09 11:13:00:000	157.974	71.5%	84.0134	31107.9	53,148,351
2013/12/09 11:14:00:000	157.974	71.5%	84.0515	31157.5	53,172,454
2013/12/09 11:15:00:000	157.974	71.5%	84.0101	30863.1	53,146,264
2013/12/09 11:16:00:000	158.029	71.5%	83.9883	31005.5	53,146,264
2013/12/09 11:17:00:000	158.029	71.5%	83.9883	30692.4	53,132,473
2013/12/09 11:18:00:000	158.029	71.5%	83.9883	30468.3	53,132,473
2013/12/09 11:19:00:000	157.864	71.5%	83.9883	30332.3	53,132,473
2013/12/09 11:20:00:000	157.864	71.5%	83.9883	30332.3	53,132,473
2013/12/09 11:21:00:000	158.056	71.5%	84.0263	30526.5	53,156,512
2013/12/09 11:22:00:000	158.056	71.5%	84.0111	30622.2	53,146,896
2013/12/09 11:23:00:000	158.001	71.5%	84.0188	31037	53,146,896
2013/12/09 11:24:00:000	158.111	71.5%	84.0111	30914.6	53,146,896
2013/12/09 11:25:00:000	158.001	71.5%	83.9671	30959.8	53,119,061
2013/12/09 11:26:00:000	158.001	71.5%	84.0324	30801.5	53,137,163
2013/12/09 11:27:00:000	158.001	71.5%	83.9641	31003	53,117,163
2013/12/09 11:28:00:000	158.001	71.5%	84.0459	30999.8	53,168,911
2013/12/09 11:29:00:000	158.001	71.5%	84.0195	30999.8	53,152,210
2013/12/09 11:30:00:000	158.001	71.5%	84.0195	31260.9	53,152,210
2013/12/09 11:31:00:000	158.001	71.5%	84.0195	31219.4	53,152,210
2013/12/09 11:32:00:000	158.001	71.5%	84.0195	31219.4	53,152,210
2013/12/09 11:33:00:000	158.001	71.5%	84.0195	31261.2	53,152,210
2013/12/09 11:34:00:000	158.001	71.5%	84.0195	31415.1	53,152,210
2013/12/09 11:35:00:000	158.001	71.5%	84.0195	31540.7	53,152,210
2013/12/09 11:36:00:000	158.001	71.5%	84.0195	31299.4	53,152,210
2013/12/09 11:37:00:000	158.001	71.5%	84.0195	31451.6	53,152,210
2013/12/09 11:38:00:000	158.001	71.5%	84.0195	31451.6	53,152,210
2013/12/09 11:39:00:000	158.001	71.5%	84.0195	31451.6	53,152,210
2013/12/09 11:40:00:000	158.001	71.5%	84.0195	31451.6	53,152,210
2013/12/09 11:41:00:000	158.001	71.5%	84.0405	31002.6	53,138,356
2013/12/09 11:42:00:000	158.001	71.5%	83.9976	31475.1	53,138,356
2013/12/09 11:43:00:000	158.001	71.5%	83.9976	31459.9	53,138,356
2013/12/09 11:44:00:000	158.001	71.5%	83.9976	31531.7	53,138,356
2013/12/09 11:45:00:000	158.001	71.5%	84.064	31420.7	53,180,362
2013/12/09 11:46:00:000	158.001	71.5%	84.0305	31599.7	53,159,169
2013/12/09 11:47:00:000	158.001	71.5%	84.0305	31681.7	53,159,169
2013/12/09 11:48:00:000	158.001	71.5%	84.0038	31726.5	53,142,278
2013/12/09 11:49:00:000	158.001	71.5%	84.0038	31759.9	53,142,278
2013/12/09 11:50:00:000	158.001	71.5%	84.058	31980.9	53,176,586
2013/12/09 11:51:00:000	158.001	71.5%	84.0053	31513.8	53,143,227
2013/12/09 11:52:00:000	158.001	71.5%	84.0053	31584.9	53,143,227
2013/12/09 11:53:00:000	158.001	71.5%	84.0053	31679.7	53,143,227
2013/12/09 11:54:00:000	158.001	71.5%	84.0053	31688.4	53,143,227
2013/12/09 11:55:00:000	158.001	71.5%	84.0053	31653.9	53,143,227
2013/12/09 11:56:00:000	158.001	71.5%	84.0053	31477.2	53,143,227
2013/12/09 11:57:00:000	158.001	71.5%	84.0623	31531.9	53,179,286
2013/12/09 11:58:00:000	158.001	71.5%	84.0122	32044.9	53,147,592
2013/12/09 11:59:00:000	158.001	71.5%	84.0122	31661.5	53,147,592
2013/12/09 12:00:00:000	158.001	71.5%	84.0122	31476.8	53,147,592
2013/12/09 12:01:00:000	158.001	71.5%	84.0552	31644.3	53,172,770
2013/12/09 12:02:00:000	158.001	71.5%	83.9985	31679.7	53,133,864
2013/12/09 12:03:00:000	158.001	71.5%	83.9985	31841.8	53,138,864
2013/12/09 12:04:00:000	158.001	71.5%	84.0589	31822.8	53,177,135
2013/12/09 12:05:00:000	158.001	71.5%	83.9703	31714.4	53,121,085
2013/12/09 12:06:00:000	158.001	71.5%	84.0305	31791.8	53,159,169
2013/12/09 12:07:00:000	158.001	71.5%	84.0305	31830.4	53,159,169
2013/12/09 12:08:00:000	161.214	72.9%	85.1395	30149.7	53,860,742
2013/12/09 12:09:00:000	164.344	74.4%	86.1848	31863.3	54,722,017
2013/12/09 12:10:00:000	168.381	76.2%	87.1943	32949	56,160,644
2013/12/09 12:11:00:000	169.891	76.9%	88.3892	34781.2	55,916,559
2013/12/09 12:12:00:000	176.179	79.7%	90.3675	34059.2	57,168,066
2013/12/09 12:13:00:000	179.548	81.6%	91.2975	34793.3	59,525,017
2013/12/09 12:14:00:000	197.288	89.3%	97.6963	42996.5	61,804,394
2013/12/09 12:15:00:000	207.373	93.8%	101.703	46547	64,339,103
2013/12/09 12:16:00:000	217.975	96.4%	104.036	50966.3	65,814,999
2013/12/09 12:17:00:000	218.247	96.8%	106.66	55538.6	67,478,151
2013/12/09 12:18:00:000	220.911	100.0%	108.004	57936.6	68,325,226
2013/12/09 12:19:00:000	220.472	99.8%	107.805	57599	68,199,335
2013/12/09 12:20:00:000	219.758	99.4%	107.699	57051.1	68,132,278
2013/12/09 12:21:00:000	219.977	99.5%	107.536	57363.2	68,029,161
2013/12/09 12:22:00:000	219.977	99.5%	107.536	57878.5	68,029,161
2013/12/09 12:23:00:000	219.703	99.4%	107.536	57745.3	68,029,161
2013/12/09 12:24:00:000	219.758	99.4%	107.438	57661.5	67,967,164
2013/12/09 12:25:00:000	219.181	99.2%	107.26	57658.2	67,854,558
2013/12/09 12:26:00:000	219.181	99.2%	107.318	57489.3	67,891,250
2013/12/09 12:27:00:000	218.714	99.0%	107.329	58068.8	67,898,209
2013/12/09 12:28:00:000	219.824	99.0%	107.824	57970	67,801,419
2013/12/09 12:29:00:000	218.824	99.0%	107.176	57772.9	67,801,419
2013/12/09 12:30:00:000	218.852	99.0%	107.071	58206.6	67,734,994
2013/12/09 12:31:00:000	219.604	99.2%	107.604	57936.2	67,734,994
2013/12/09 12:32:00:000	219.318	99.2%	107.107	57546	67,757,768
2013/12/09 12:33:00:000	218.110	98.7%	107.107	57840.7	67,757,768
2013/12/0					

2013/12/09 12:50:00:000	218.495	98.9%	106.946	57868.8	67,655,917	67,655,917
2013/12/09 01:00:00:000	218.247	98.8%	106.946	58098.6	67,655,917	67,655,917
2013/12/09 01:01:00:000	218.247	98.8%	106.901	58029.1	67,627,449	67,627,449
2013/12/09 01:02:00:000	217.753	98.5%	106.818	58196.4	67,574,941	67,574,941
2013/12/09 01:03:00:000	217.302	98.3%	106.881	57962	67,574,941	67,574,941
2013/12/09 01:04:00:000	217.835	98.6%	106.712	58017.9	67,507,884	67,507,884
2013/12/09 01:05:00:000	217.890	98.6%	106.881	58066.4	67,614,796	67,614,796
2013/12/09 01:06:00:000	218.302	98.8%	106.881	57962	67,614,796	67,614,796
2013/12/09 01:07:00:000	218.742	98.9%	106.809	58012.3	67,614,796	67,614,796
2013/12/09 01:08:00:000	218.110	98.7%	106.809	58239.2	67,569,248	67,569,248
2013/12/09 01:09:00:000	218.687	99.0%	106.93	58117.7	67,645,795	67,645,795
2013/12/09 01:10:00:000	218.659	98.9%	106.869	58117.7	67,607,205	67,607,205
2013/12/09 01:11:00:000	218.302	98.8%	106.869	58257.3	67,607,205	67,607,205
2013/12/09 01:12:00:000	218.495	98.9%	106.774	58126.4	67,547,106	67,547,106
2013/12/09 01:13:00:000	218.028	98.7%	106.774	58069.2	67,547,106	67,547,106
2013/12/09 01:14:00:000	218.028	98.9%	106.739	58266.5	67,524,965	67,524,965
2013/12/09 01:15:00:000	218.083	98.7%	106.739	57890.6	67,524,965	67,524,965
2013/12/09 01:16:00:000	218.083	98.7%	106.739	57894.9	67,524,965	67,524,965
2013/12/09 01:17:00:000	218.083	98.7%	106.739	57812.6	67,524,965	67,524,965
2013/12/09 01:18:00:000	218.742	99.0%	106.815	57586.7	67,573,044	67,573,044
2013/12/09 01:19:00:000	218.714	99.0%	106.964	57360.5	67,667,304	67,667,304
2013/12/09 01:20:00:000	218.495	98.9%	106.905	57668.2	67,629,979	67,629,979
2013/12/09 01:21:00:000	218.495	98.9%	106.905	57668.2	67,629,979	67,629,979
2013/12/09 01:22:00:000	218.495	98.9%	106.873	57543	67,609,735	67,609,735
2013/12/09 01:23:00:000	218.495	98.9%	106.873	57470.3	67,609,735	67,609,735
2013/12/09 01:24:00:000	218.495	98.9%	106.873	57257.7	67,578,737	67,578,737
2013/12/09 01:25:00:000	218.110	98.7%	106.824	57436.8	67,578,737	67,578,737
2013/12/09 01:26:00:000	218.330	98.8%	106.849	57481.7	67,594,553	67,594,553
2013/12/09 01:27:00:000	218.330	98.8%	106.783	57373.3	67,551,535	67,551,535
2013/12/09 01:28:00:000	218.577	98.9%	106.878	57203.4	67,612,899	67,612,899
2013/12/09 01:29:00:000	218.577	98.9%	106.878	57321.1	67,612,899	67,612,899
2013/12/09 01:30:00:000	218.577	98.9%	106.957	57363	67,662,875	67,662,875
2013/12/09 01:31:00:000	218.275	98.8%	106.807	57368	67,605,246	67,605,246
2013/12/09 01:32:00:000	218.687	99.0%	106.858	57272.1	67,600,246	67,600,246
2013/12/09 01:33:00:000	219.044	99.1%	106.801	57408.6	67,564,187	67,564,187
2013/12/09 01:34:00:000	218.467	98.9%	106.917	57204.9	67,637,571	67,637,571
2013/12/09 01:35:00:000	218.687	99.0%	106.908	57437.6	67,638,738	67,638,738
2013/12/09 01:36:00:000	218.687	99.0%	106.908	57249.3	67,631,877	67,631,877
2013/12/09 01:37:00:000	218.687	99.0%	106.838	57249.3	67,587,594	67,587,594
2013/12/09 01:38:00:000	218.604	98.9%	106.822	57331	67,597,716	67,597,716
2013/12/09 01:39:00:000	218.577	98.9%	106.854	57331	67,597,716	67,597,716
2013/12/09 01:40:00:000	218.687	99.0%	106.934	57285.1	67,648,325	67,648,325
2013/12/09 01:41:00:000	218.687	99.0%	106.934	57401.1	67,648,325	67,648,325
2013/12/09 01:42:00:000	218.687	99.0%	106.934	57381.4	67,605,940	67,605,940
2013/12/09 01:43:00:000	218.099	98.9%	106.807	57391.4	67,638,836	67,638,836
2013/12/09 01:44:00:000	218.714	99.0%	106.919	57126.5	67,657,814	67,657,814
2013/12/09 01:45:00:000	218.961	99.1%	106.949	57385.5	67,657,814	67,657,814
2013/12/09 01:46:00:000	218.961	99.1%	106.949	57411.8	67,673,630	67,673,630
2013/12/09 01:47:00:000	218.687	99.0%	106.906	57270.5	67,630,612	67,630,612
2013/12/09 01:48:00:000	218.687	99.0%	106.883	56974.7	67,616,062	67,616,062
2013/12/09 01:49:00:000	218.687	99.0%	106.883	57329.8	67,616,062	67,616,062
2013/12/09 01:50:00:000	218.687	99.0%	106.883	57329.8	67,646,427	67,646,427
2013/12/09 01:51:00:000	218.659	98.9%	106.992	57667.4	67,685,017	67,685,017
2013/12/09 01:52:00:000	218.659	98.9%	106.882	57667.4	67,615,429	67,615,429
2013/12/09 01:53:00:000	219.181	99.2%	106.9	57543	67,626,816	67,626,816
2013/12/09 01:54:00:000	218.687	99.0%	106.9	57537.7	67,626,816	67,626,816
2013/12/09 01:55:00:000	218.687	99.0%	106.902	57726.3	67,628,081	67,628,081
2013/12/09 01:56:00:000	219.016	99.1%	106.902	57936.1	67,628,081	67,628,081
2013/12/09 01:57:00:000	218.769	98.9%	106.902	57936.1	67,600,635	67,600,635
2013/12/09 01:58:00:000	218.769	99.0%	106.9	57998	67,626,816	67,626,816
2013/12/09 01:59:00:000	218.714	99.0%	106.88	57847.5	67,614,164	67,614,164
2013/12/09 02:00:00:000	218.440	98.8%	106.804	57727.8	67,566,085	67,566,085
2013/12/09 02:01:00:000	218.440	98.8%	106.804	57789.7	67,650,042	67,650,042
2013/12/09 02:02:00:000	218.165	98.7%	106.899	57638.8	67,626,183	67,626,183
2013/12/09 02:03:00:000	218.165	98.7%	106.818	57461.1	67,574,941	67,574,941
2013/12/09 02:04:00:000	218.632	98.9%	106.831	57631	67,633,142	67,633,142
2013/12/09 02:05:00:000	218.632	98.9%	106.91	57496.6	67,633,142	67,633,142
2013/12/09 02:06:00:000	218.824	99.0%	106.873	57512.2	67,609,735	67,609,735
2013/12/09 02:07:00:000	218.604	98.9%	106.873	57392.6	67,609,735	67,609,735
2013/12/09 02:08:00:000	218.302	98.8%	106.804	57366.4	67,600,042	67,600,042
2013/12/09 02:09:00:000	218.302	98.8%	106.876	57528	67,611,633	67,611,633
2013/12/09 02:10:00:000	218.742	99.0%	106.964	57528	67,667,304	67,667,304
2013/12/09 02:11:00:000	218.305	98.8%	106.896	57572.5	67,624,286	67,624,286
2013/12/09 02:12:00:000	218.797	99.0%	106.822	57485.9	67,554,065	67,554,065
2013/12/09 02:13:00:000	218.797	99.0%	106.785	57687.4	67,554,065	67,554,065
2013/12/09 02:14:00:000	218.527	98.9%	106.852	57781.7	67,596,450	67,596,450
2013/12/09 02:15:00:000	218.527	98.9%	106.852	57781.7	67,596,450	67,596,450
2013/12/09 02:16:00:000	218.527	98.9%	106.842	57751.2	67,590,124	67,590,124
2013/12/09 02:17:00:000	218.527	98.9%	106.859	57560.2	67,600,879	67,600,879
2013/12/09 02:18:00:000	218.412	98.8%	106.859	57710.3	67,600,879	67,600,879
2013/12/09 02:19:00:000	218.330	98.8%	106.830	57815.7	67,600,879	67,600,879
2013/12/09 02:20:00:000	218.440	98.8%	106.859	57615.7	67,600,879	67,600,879
2013/12/09 02:21:00:000	218.440	98.8%	106.859	57693.5	67,600,879	67,600,879
2013/12/09 02:22:00:000	218.440	98.8%	106.859	57693.5	67,600,879	67,600,879
2013/12/09 02:23:00:000	218.906	99.1%	106.859	57647.2	67,600,879	67,600,879
2013/12/09 02:24:00:000	218.549	98.9%	106.859	57582.1	67,600,879	67,600,879
2013/12/09 02:25:00:000	218.549	98.9%	106.859	57604.7	67,600,879	67,600,879
2013/12/09 02:26:00:000	218.247	98.8%	106.849	57270.7	67,591,390	67,591,390
2013/12/09 02:27:00:000	218.412	98.8%	106.85	57503.5	67,595,185	67,595,185
2013/12/09 02:28:00:000	218.742	99.0%	106.8	57438.8	67,563,554	67,563,554
2013/12/09 02:29:00:000	218.467	98.9%	106.8	57438.8	67,563,554	67,563,554
2013/12/09 02:30:00:000	218.632	98.9%	106.8	57493.1	67,563,554	67,563,554
2013/12/09 02:31:00:000	218.577	98.9%	106.8	57626.2	67,563,554	67,563,554
2013/12/09 02:32:00:000	218.632	98.9%	106.8	58094.8	67,563,554	67,563,554
2013/12/09 02:33:00:000	218.632	98.9%	106.901	58023.2	67,627,449	67,627,449
2013/12/09 02:34:00:000	218.632	98.9%	106.901	57800	67,627,449	67,627,449
2013/12/09 02:35:00:000	218.604	98.9%	106.795	57720.2	67,560,391	67,560,391
2013/12/09 02:36:00:000	217.996	98.4%	106.732	57720.2	67,520,536	67,520,536
2013/12/09 02:37:00:000	218.659	98.9%	106.896	57639.2	67,576,207	67,576,207
2013/12/09 02:38:00:000	218.742	99.0%	106.728	57680.7	67,518,006	67,518,006
2013/12/09 02:39:00:000	218.357	98.8%	106.739	57678.8	67,524,965	67,524,965
2013/12/09 02:40:00:000	218.275	98.8%	106.906	57710.5	67,600,246	67,600,246
2013/12/09 02:41:00:000	218.275	98.8%	106.785	57718.1	67,554,065	67,554,065
2013/12/09 02:42:00:000	217.479	98.4%	106.785	57707	67,554,065	67,554,065
2013/12/09 02:43:00:000	218.495	98.9%	106.785	57889.4	67,554,065	67,554,065
2013/12/09 02:44:00:000	219.071	99.1%	106.822	57889.4	67,554,065	67,554,065
2013/12/09 02:45:00:000	218.797	99.0%	106.938	58103.6	67,650,856	67,650,856
2013/12/09 02:46:00:000	218.000	98.6%	106.882	58009.9	67,615,429	67,615,429
2013/12/09 02:47:00:000	218.604	98.9%	106.862	57966.1	67,602,777	67,602,777
2013/12/09 02:48:00:000	218.604	98.9%	106.862	57966.1	67,602,777	67,602,777
2013/12/09 02:49:00:000	218.357	98.8%	106.772	57851.8	67,545,841	67,545,841
2013/12/09 02:50:00:000	218.527	98.9%	106.839	57820.6	67,588,226	67,588,226
2013/12/09 02:51:00:000	219.071	99.1%	106.839	57669.7	67,588,226	67,588,226
2013/12/09 02:52:00:000	219.758	99.4%	106.758	57586.2	67,536,984	67,536,984
2013/12/09 02:53:00:000	218.549	98.9%	106.758	57471.9	67,53	

2013/12/09 03:37:00:000	218.742	99.0%	106.839	57382.6	67,588,226	67,588,226
2013/12/09 03:38:00:000	218.742	99.0%	106.895	57244.1	67,565,452	67,565,452
2013/12/09 03:39:00:000	218.742	99.0%	106.895	57293.9	67,623,653	67,623,653
2013/12/09 03:40:00:000	218.577	98.9%	106.895	57350.3	67,623,653	67,623,653
2013/12/09 03:41:00:000	218.879	99.0%	106.789	57277.8	67,556,596	67,556,596
2013/12/09 03:42:00:000	219.373	99.3%	106.848	57284.6	67,593,920	67,593,920
2013/12/09 03:43:00:000	219.154	99.2%	106.969	57503.4	67,670,467	67,670,467
2013/12/09 03:44:00:000	218.220	98.7%	106.877	57094.2	67,612,266	67,612,266
2013/12/09 03:45:00:000	218.961	99.1%	106.934	57582.5	67,648,325	67,648,325
2013/12/09 03:46:00:000	218.961	99.1%	106.934	57479.3	67,648,325	67,648,325
2013/12/09 03:47:00:000	218.961	99.1%	106.865	57147.9	67,604,675	67,604,675
2013/12/09 03:48:00:000	218.961	99.1%	106.865	57263.3	67,604,675	67,604,675
2013/12/09 03:49:00:000	218.742	99.0%	106.865	57401.1	67,604,675	67,604,675
2013/12/09 03:50:00:000	218.687	99.0%	106.929	56986.9	67,645,162	67,645,162
2013/12/09 03:51:00:000	218.824	99.0%	106.888	57638.2	67,619,225	67,619,225
2013/12/09 03:52:00:000	218.961	99.1%	106.938	57411.9	67,644,529	67,644,529
2013/12/09 03:53:00:000	218.961	99.1%	106.934	57227.8	67,511,373	67,511,373
2013/12/09 03:54:00:000	218.961	99.1%	106.834	57379.8	67,585,063	67,585,063
2013/12/09 03:55:00:000	218.604	98.9%	106.75	57285.9	67,531,923	67,531,923
2013/12/09 03:56:00:000	218.604	98.9%	106.75	57256.8	67,531,923	67,531,923
2013/12/09 03:57:00:000	219.263	99.2%	106.854	57436	67,597,716	67,597,716
2013/12/09 03:58:00:000	218.467	98.9%	106.854	57011.5	67,597,716	67,597,716
2013/12/09 03:59:00:000	218.594	99.1%	106.954	57204	67,660,977	67,660,977
2013/12/09 04:00:00:000	219.126	99.2%	106.954	57146.5	67,660,977	67,660,977
2013/12/09 04:01:00:000	219.511	99.3%	107.005	57348.6	67,693,241	67,693,241
2013/12/09 04:02:00:000	219.016	99.1%	107.005	57126.6	67,693,241	67,693,241
2013/12/09 04:03:00:000	219.016	99.1%	107.005	57664.3	67,723,607	67,723,607
2013/12/09 04:04:00:000	219.373	99.3%	106.982	57333.6	67,678,691	67,678,691
2013/12/09 04:05:00:000	218.934	99.1%	106.809	57216.7	67,569,248	67,569,248
2013/12/09 04:06:00:000	219.318	99.2%	106.904	57135.4	67,629,347	67,629,347
2013/12/09 04:07:00:000	218.989	99.1%	106.904	57091.8	67,629,347	67,629,347
2013/12/09 04:08:00:000	219.016	99.1%	107.027	57178.5	67,707,159	67,707,159
2013/12/09 04:09:00:000	218.769	99.0%	106.929	56976.1	67,645,162	67,645,162
2013/12/09 04:10:00:000	218.632	98.9%	106.929	56976.1	67,645,162	67,645,162
2013/12/09 04:11:00:000	219.181	99.2%	106.964	56963.3	67,667,304	67,667,304
2013/12/09 04:12:00:000	219.181	99.2%	106.964	57028.9	67,667,304	67,667,304
2013/12/09 04:13:00:000	219.181	99.2%	106.967	57359.1	67,669,201	67,669,201
2013/12/09 04:14:00:000	219.181	99.2%	106.967	56855.4	67,669,201	67,669,201
2013/12/09 04:15:00:000	218.906	99.1%	107.022	57266.7	67,703,995	67,703,995
2013/12/09 04:16:00:000	219.565	99.4%	107.022	57098.7	67,703,995	67,703,995
2013/12/09 04:17:00:000	219.428	99.3%	107.022	57284.3	67,703,995	67,703,995
2013/12/09 04:18:00:000	219.428	99.3%	107.022	56988.7	67,703,995	67,703,995
2013/12/09 04:19:00:000	219.428	99.3%	107.022	56955.6	67,703,995	67,703,995
2013/12/09 04:20:00:000	219.181	99.2%	106.918	56860.8	67,638,203	67,638,203
2013/12/09 04:21:00:000	219.181	99.2%	106.918	56857.7	67,638,203	67,638,203
2013/12/09 04:22:00:000	219.181	99.2%	106.986	56857.7	67,681,221	67,681,221
2013/12/09 04:23:00:000	219.044	99.1%	106.986	56976.9	67,681,221	67,681,221
2013/12/09 04:24:00:000	219.154	99.2%	106.986	56938.8	67,681,221	67,681,221
2013/12/09 04:25:00:000	219.538	99.3%	107.035	56833.8	67,712,219	67,712,219
2013/12/09 04:26:00:000	219.208	99.2%	107.022	56798.9	67,703,995	67,703,995
2013/12/09 04:27:00:000	219.483	99.3%	107.022	56873.7	67,703,995	67,703,995
2013/12/09 04:28:00:000	219.483	99.3%	107.022	56950.3	67,703,995	67,703,995
2013/12/09 04:29:00:000	218.879	99.0%	107.092	56794.9	67,748,279	67,748,279
2013/12/09 04:30:00:000	219.593	99.4%	107.092	56953.6	67,748,279	67,748,279
2013/12/09 04:31:00:000	219.593	99.4%	107.058	56855.2	67,726,770	67,726,770
2013/12/09 04:32:00:000	220.032	99.6%	107.058	56855.2	67,726,770	67,726,770
2013/12/09 04:33:00:000	219.401	99.3%	107.035	57012.7	67,712,219	67,712,219
2013/12/09 04:34:00:000	219.565	99.4%	107.035	57040.4	67,712,219	67,712,219
2013/12/09 04:35:00:000	218.604	98.9%	107.035	56922.4	67,712,219	67,712,219
2013/12/09 04:36:00:000	218.714	99.0%	106.965	56922.4	67,667,956	67,667,956
2013/12/09 04:37:00:000	218.769	99.0%	107.004	56921.1	67,692,608	67,692,608
2013/12/09 04:38:00:000	219.511	99.3%	107.004	56847.2	67,692,608	67,692,608
2013/12/09 04:39:00:000	219.511	99.3%	107.004	57038.6	67,692,608	67,692,608
2013/12/09 04:40:00:000	219.511	99.3%	106.967	56826.7	67,669,201	67,669,201
2013/12/09 04:41:00:000	219.511	99.3%	107.061	56939.5	67,728,668	67,728,668
2013/12/09 04:42:00:000	219.868	99.5%	107.1	56929.5	67,753,340	67,753,340
2013/12/09 04:43:00:000	218.549	98.9%	107.166	56848.4	67,795,992	67,795,992
2013/12/09 04:44:00:000	219.620	99.4%	107.051	56772.2	67,722,341	67,722,341
2013/12/09 04:45:00:000	219.620	99.4%	107.051	56912.5	67,722,341	67,722,341
2013/12/09 04:46:00:000	219.620	99.4%	107.16	56828.4	67,791,297	67,791,297
2013/12/09 04:47:00:000	219.785	99.5%	107.077	56637.1	67,738,789	67,738,789
2013/12/09 04:48:00:000	219.675	99.4%	107.028	56859.4	67,707,791	67,707,791
2013/12/09 04:49:00:000	219.593	99.4%	107.09	56859.4	67,747,013	67,747,013
2013/12/09 04:50:00:000	219.868	99.5%	107.173	57111.4	67,799,521	67,799,521
2013/12/09 04:51:00:000	219.456	99.3%	107.173	56870.8	67,799,521	67,799,521
2013/12/09 04:52:00:000	219.977	99.5%	107.131	56724.6	67,772,951	67,772,951
2013/12/09 04:53:00:000	219.648	99.4%	107.054	56882.3	67,728,239	67,728,239
2013/12/09 04:54:00:000	219.648	99.4%	107.082	56685	67,741,953	67,741,953
2013/12/09 04:55:00:000	219.977	99.5%	107.103	56821.2	67,755,237	67,755,237
2013/12/09 04:56:00:000	219.977	99.5%	107.254	56531.9	67,850,763	67,850,763
2013/12/09 04:57:00:000	219.950	99.5%	107.214	56756.6	67,825,458	67,825,458
2013/12/09 04:58:00:000	219.703	99.4%	107.214	56789.4	67,825,458	67,825,458
2013/12/09 04:59:00:000	219.813	99.5%	107.214	57339.1	67,825,458	67,825,458
2013/12/09 05:00:00:000	219.758	99.4%	107.322	56950.5	67,893,781	67,893,781

[A] Based on an approximate maximum load level for the ambient conditions of 221 MW

C-1

**Unit 31A Annual Compliance Emission
Measurements 12-12-13.**

Gases Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Unit 31A, Pollutant:		CO	NOx	THC	CO2	O2	
Method:		10	7E	25A	3A	3A	
Info	Instrument Span	60	50	100	25	25	
	Zero Gas Cylinder ID	DBY267	DBY267	DBY267	DBY267	DBY267	
	Low Gas Cylinder ID	NA	NA	CC-184994	NA	NA	
	Mid Gas Cylinder ID	EB0021641	EB0015940	EB0021641	EB-0050207	EB-0050207	
	Span Gas Cylinder ID	CC166547	EB0000520	CC166547	CC-107906	CC-107906	
	Zero Gas Concentration ($C_{v,zero}$)	0	0	0	0	0	
	Low Gas Concentration ($C_{v,low}$)	NA	NA	10.1	NA	NA	
	Mid Gas Concentration ($C_{v,mid}$)	10.5	24.7	52	9.74	9.8	
	Span Gas Concentration (CS)	51.3	48.7	100.7	19.6	20	
	Calibration Gas Concentration ($C_{v,cal}$)	10.5	24.7	10.1	9.74	9.82	
Pre-Sampling Calibrations	Direct Loop (System Loop for HCs)	Zero Gas Start	07:13 (0.000)	07:13 (0.025)	07:34 (0.075)	07:13 (0.000)	07:13 (0.006)
		Zero Gas Stop	07:14 (0.000)	07:14 (0.025)	07:35 (0.050)	07:14 (0.000)	07:14 (0.005)
		Zero Gas Response ($C_{dir,zero}$)	0.000	0.025	0.063	0.000	0.006
		Zero Gas Accuracy ¹ (ACE_{zero})	0.000% < 2%	0.051% < 2%	NA	0.000% < 2%	0.031% < 2%
		Low Gas Start	NA	NA	07:31 (10.375)	NA	NA
		Low Gas Stop	NA	NA	07:32 (10.325)	NA	NA
		Low Gas Response ($C_{dir,low}$)	NA	NA	10.350	NA	NA
		Low Gas Accuracy ^{1,3} (ACE_{low})	NA	NA	1.645% < 5%	NA	NA
	Mid Gas Start	07:10 (11.000)	06:56 (25.475)	07:28 (52.100)	07:03 (9.869)	07:03 (9.969)	
	Mid Gas Stop	07:11 (11.000)	06:57 (25.500)	07:29 (51.950)	07:04 (9.862)	07:04 (9.969)	
	Mid Gas Response ($C_{dir,mid}$)	11.000	25.488	52.025	9.866	9.969	
	Mid Gas Accuracy ^{1,3} (ACE_{mid})	0.975% < 2%	1.617% < 2%	0.283% < 5%	0.641% < 2%	0.744% < 2%	
	Span Gas Start	07:06 (51.188)	06:53 (48.900)	07:25 (101.000)	07:00 (19.600)	07:00 (20.000)	
	Span Gas Stop	07:07 (51.219)	06:54 (49.000)	07:26 (100.950)	07:01 (19.600)	07:01 (20.000)	
	Span Gas Response ($C_{dir,span}$)	51.203	48.950	100.975	19.600	20.000	
	Span Gas Accuracy ¹ (ACE_{span})	0.189% < 2%	0.513% < 2%	NA	0.000% < 2%	0.000% < 2%	
System Loop	Zero Gas Start	11:34 (0.219)	11:34 (0.800)	11:34 (0.000)	11:34 (0.000)	11:34 (0.044)	
	Zero Gas Stop	11:35 (0.125)	11:35 (0.575)	11:35 (0.025)	11:35 (0.000)	11:35 (0.031)	
	Zero Gas Response ($C_{sys,zero}$)	0.172	0.688	0.013	0.000	0.038	
	Zero Gas Accuracy ² (SB_{zero})	0.335% < 5%	1.360% < 5%	NA	0.000% < 5%	0.156% < 5%	
	Calibration Gas Start	11:44 (11.156)	11:49 (24.925)	11:44 (10.300)	11:41 (9.794)	11:41 (9.975)	
	Calibration Gas Stop	11:45 (11.188)	11:50 (24.975)	11:45 (10.350)	11:42 (9.819)	11:42 (9.981)	
	Calibration Gas Response ($C_{sys,cal}$)	11.172	24.950	10.325	9.806	9.978	
	Calibration Gas Accuracy ² (SB_{cal})	0.335% < 5%	0.000% < 5%	NA	0.303% < 5%	0.047% < 5%	
References and Formulas		1. Section 12.2, Equation 7E-1 (2% of span plus analyzer calibration error) 2. Section 12.3, Equation 7E-2 (5% of span) 3. Method 25A, Section 8.4 (5% of predicted values from 2-point calibration curve zero-span)					

Unit 31A, Pollutant:		CO	NO _x	THC	CO ₂	O ₂	
Method:		10	7E	25A	3A	3A	
Stack Gas Analysis 1	Compliance 1	Start	12:20 (3.375)	12:20 (7.275)	12:20 (0.100)	12:20 (4.906)	12:20 (14.150)
		Stop	13:20 (3.375)	13:20 (8.025)	13:20 (0.350)	13:20 (4.900)	13:20 (14.138)
		Stack Gas Response (C _{avg})	3.488	8.012	0.104	4.900	14.154
		Corrected Stack Gas Response ^{1,2} (C _{gas})	3.162	7.701	0.104	4.868	13.958
	System Loop	Zero Gas Start	13:22 (0.219)	13:22 (0.150)	13:22 (0.000)	13:22 (0.006)	13:22 (0.038)
		Zero Gas Stop	13:23 (0.188)	13:23 (0.100)	13:23 (0.000)	13:23 (0.006)	13:23 (0.031)
		Zero Gas Response (C _{sys, zero})	0.203	0.125	0.000	0.006	0.034
		Average Zero Gas Response (C _{sys, avg})	0.188	0.406	0.006	0.003	0.036
		Zero Gas Accuracy ³ (SB _{zero})	0.396% < 5%	0.205% < 5%	NA	0.032% < 5%	0.141% < 5%
		Zero Gas Drift ^{4,5} (D _{zero})	0.061% < 3%	1.155% < 3%	0.012% < 3%	0.032% < 3%	0.016% < 3%
		Calibration Gas Start	13:32 (11.125)	13:26 (24.650)	13:32 (10.125)	13:29 (9.781)	13:29 (9.950)
		Calibration Gas Stop	13:33 (11.175)	13:27 (24.650)	13:33 (9.525)	13:30 (9.806)	13:30 (9.969)
		Calibration Gas Response (C _{sys, cal})	11.125	24.650	9.825	9.794	9.959
		Average Calibration Gas Response (C _{sys, avg})	11.148	24.800	10.075	9.800	9.969
Calibration Gas Accuracy ³ (SB _{cal})	0.244% < 5%	1.720% < 5%	NA	0.367% < 5%	0.047% < 5%		
Calibration Gas Drift ^{4,5} (D _{cal})	0.091% < 3%	0.616% < 3%	0.497% < 3%	0.064% < 3%	0.094% < 3%		
References and Formulas		<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 					

Unit 31A, Pollutant:		CO	NOx	THC	CO2	O2	
Method:		10	7E	25A	3A	3A	
Stack Gas Analysis 2	Compliance 2	Start	13:35 (3.188)	13:35 (8.100)	13:35 (0.150)	13:35 (4.875)	13:35 (14.056)
		Stop	14:35 (3.125)	14:35 (7.925)	14:35 (0.100)	14:35 (4.875)	14:35 (14.144)
		Stack Gas Response (C_{avg})	3.263	8.100	0.109	4.889	14.139
		Corrected Stack Gas Response ^{1,2} (C_{gas})	2.947	7.969	0.109	4.865	13.959
	System Loop	Zero Gas Start	14:37 (0.219)	14:37 (0.125)	14:37 (0.000)	14:37 (0.000)	14:37 (0.044)
		Zero Gas Stop	14:38 (0.156)	14:38 (0.100)	14:38 (0.000)	14:38 (0.000)	14:38 (0.031)
		Zero Gas Response ($C_{sys, zero}$)	0.188	0.112	0.000	0.000	0.038
		Average Zero Gas Response ($C_{sys, avg}$)	0.195	0.119	0.000	0.003	0.036
		Zero Gas Accuracy ³ (SB_{zero})	0.365% < 5%	0.180% < 5%	NA	0.000% < 5%	0.156% < 5%
		Zero Gas Drift ^{4,5} (D_{zero})	0.030% < 3%	0.026% < 3%	0.000% < 3%	0.032% < 3%	0.016% < 3%
		Calibration Gas Start	14:46 (11.094)	14:40 (25.025)	14:45 (10.275)	14:43 (9.763)	14:43 (9.950)
		Calibration Gas Stop	14:47 (11.156)	14:41 (25.100)	14:46 (10.250)	14:44 (9.787)	14:44 (9.963)
		Calibration Gas Response ($C_{sys, cal}$)	11.125	25.063	10.263	9.775	9.956
		Average Calibration Gas Response ($C_{sys, avg}$)	11.125	24.856	10.044	9.784	9.958
		Calibration Gas Accuracy ³ (SB_{cal})	0.244% < 5%	0.873% < 5%	NA	0.462% < 5%	0.062% < 5%
		Calibration Gas Drift ^{4,5} (D_{cal})	0.000% < 3%	0.847% < 3%	0.434% < 3%	0.096% < 3%	0.016% < 3%
		References and Formulas	<ol style="list-style-type: none"> Method 7E, Section 12.6, Equation 7E-5b. Method 25A, Section 12.1, Equation 25A-1. (as propane) Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) Method 25A, Section 13.1.2, (<3% of span) Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run) 				

Unit 31A, Pollutant:		CO	NOx	THC	CO2	O2	
Method:		10	7E	25A	3A	3A	
Stack Gas Analysis 3	Compliance 3	Start	14:50 (3.125)	14:50 (7.975)	14:50 (0.125)	14:50 (4.850)	14:50 (14.088)
		Stop	15:50 (2.938)	15:50 (8.125)	15:50 (0.100)	15:50 (4.881)	15:50 (14.144)
		Stack Gas Response (C_{avg})	3.139	8.095	0.107	4.874	14.144
		Corrected Stack Gas Response ^{1,2} (C_{gas})	2.752	7.912	0.107	4.858	13.964
	System Loop	Zero Gas Start	15:52 (0.625)	15:52 (0.200)	15:52 (0.000)	15:52 (0.006)	15:52 (0.063)
		Zero Gas Stop	15:53 (0.188)	15:53 (0.100)	15:53 (0.000)	15:53 (0.000)	15:53 (0.038)
		Zero Gas Response ($C_{sys, zero}$)	0.406	0.150	0.000	0.003	0.050
		Average Zero Gas Response ($C_{sys, avg}$)	0.297	0.131	0.000	0.002	0.044
		Zero Gas Accuracy ³ (SB_{zero})	0.792% < 5%	0.257% < 5%	0.062% < 5%	0.016% < 5%	0.219% < 5%
		Zero Gas Drift ^{4,5} (D_{zero})	0.426% < 3%	0.077% < 3%	0.000% < 3%	0.016% < 3%	0.063% < 3%
		Calibration Gas Start	16:01 (11.156)	15:55 (24.900)	16:00 (10.125)	15:58 (9.756)	15:58 (9.956)
		Calibration Gas Stop	16:01 (11.156)	15:56 (24.950)	16:01 (10.175)	15:59 (9.781)	15:59 (9.969)
		Calibration Gas Response ($C_{sys, cal}$)	11.156	24.925	10.150	9.769	9.962
		Average Calibration Gas Response ($C_{sys, avg}$)	11.141	24.994	10.206	9.772	9.959
		Calibration Gas Accuracy ³ (SB_{cal})	0.305% < 5%	1.155% < 5%	NA	0.494% < 5%	0.031% < 5%
		Calibration Gas Drift ^{4,5} (D_{cal})	0.061% < 3%	0.282% < 3%	0.112% < 3%	0.032% < 3%	0.031% < 3%
References and Formulas		1. Method 7E, Section 12.6, Equation 7E-5b. 2. Method 25A, Section 12.1, Equation 25A-1. (as propane) 3. Method 7E, Section 12.3, Equation 7E-2 (<5% error of span) 4. Method 25A, Section 13.1.2, (<3% of span) 5. Method 7E, Section 12.5, Equation 7E-4 (<3% drift of span from start of run)					

Unit 31A, Pollutant:	CO	NOx	THC	CO2	O2
Method:	1Q	7E	25A	3A	3A

Password to Unlock Sheet: rata

Paste Telogger response values directly below the line. It is important to keep the timestamp and measured values in the correct columns.

Timestamp - label pollutants here:	CO	NOx	THC	CO2	O2
12/12/2013 6:48	0.0	0.0	0.0	0.0	0.0
12/12/2013 6:49	0.0	0.0	0.0	0.0	0.0
12/12/2013 6:50	0.0	0.0	0.0	0.0	0.0
12/12/2013 6:51	0.0	27.0	0.0	0.0	0.3
12/12/2013 6:52	0.0	47.8	0.0	0.0	0.0
12/12/2013 6:53	0.0	48.9	0.0	0.0	0.0
12/12/2013 6:54	0.0	49.0	0.0	0.0	0.0
12/12/2013 6:55	0.0	37.2	0.0	0.0	1.9
12/12/2013 6:56	0.0	25.5	0.0	0.0	0.0
12/12/2013 6:57	0.0	25.5	0.0	0.0	0.0
12/12/2013 6:58	0.0	13.7	0.1	10.7	10.4
12/12/2013 6:59	0.0	0.2	0.1	19.6	20.0
12/12/2013 7:00	0.0	0.1	0.1	19.6	20.0
12/12/2013 7:01	0.0	0.1	0.1	19.6	20.0
12/12/2013 7:02	0.0	0.1	0.0	13.4	14.2
12/12/2013 7:03	0.0	0.0	0.0	9.9	10.0
12/12/2013 7:04	0.0	0.0	4.0	9.9	10.0
12/12/2013 7:05	28.4	0.0	48.9	2.7	4.4
12/12/2013 7:06	51.2	0.0	49.4	0.0	0.0
12/12/2013 7:07	51.2	0.0	49.1	0.0	0.0
12/12/2013 7:08	45.0	0.0	23.8	0.0	0.0
12/12/2013 7:09	12.2	0.0	9.5	0.0	0.0
12/12/2013 7:10	11.0	0.0	9.6	0.0	0.0
12/12/2013 7:11	11.0	0.0	8.9	0.0	0.0
12/12/2013 7:12	4.8	0.0	0.0	0.0	0.0
12/12/2013 7:13	0.0	0.0	0.0	0.0	0.0
12/12/2013 7:14	0.0	0.0	0.0	0.0	0.0
12/12/2013 7:25	60.8	0.1	101.0	2.6	3.0
12/12/2013 7:26	95.9	0.1	101.0	0.0	0.0
12/12/2013 7:27	86.5	0.1	65.0	0.0	0.0
12/12/2013 7:28	52.2	0.1	52.1	0.0	0.0
12/12/2013 7:29	51.4	0.1	52.0	0.0	0.0
12/12/2013 7:30	39.6	0.4	17.9	0.0	0.1
12/12/2013 7:31	11.6	0.1	10.4	0.0	0.0
12/12/2013 7:32	11.2	0.1	10.3	0.0	0.0
12/12/2013 7:33	7.9	0.0	1.9	0.0	0.0
12/12/2013 7:34	0.3	0.0	0.1	0.0	0.0
12/12/2013 7:35	0.2	0.0	0.1	0.0	0.0
12/12/2013 11:34	0.2	0.8	0.0	0.0	0.0
12/12/2013 11:35	0.1	0.6	0.0	0.0	0.0
12/12/2013 11:36	0.2	0.5	0.0	0.0	0.0
12/12/2013 11:37	0.2	39.0	0.0	0.0	0.0
12/12/2013 11:38	0.2	48.2	0.0	0.0	0.0
12/12/2013 11:39	0.2	48.3	0.0	0.0	0.0
12/12/2013 11:40	0.0	23.2	0.0	7.3	7.2
12/12/2013 11:41	0.0	0.5	0.0	9.8	10.0
12/12/2013 11:42	0.0	0.3	2.3	9.8	10.0
12/12/2013 11:43	6.6	0.4	10.3	2.3	2.7
12/12/2013 11:44	11.2	0.2	10.3	0.0	0.0
12/12/2013 11:45	11.2	0.2	10.4	0.0	0.0
12/12/2013 11:46	11.0	0.2	6.1	0.0	0.0
12/12/2013 11:47	2.0	20.0	0.1	0.0	0.0
12/12/2013 11:48	0.3	24.9	0.0	0.0	0.0
12/12/2013 11:49	0.2	24.9	0.0	0.0	0.0
12/12/2013 11:50	0.2	25.0	0.1	0.0	0.0
12/12/2013 12:20	3.4	7.3	0.1	4.9	14.2
12/12/2013 12:21	3.4	7.6	0.1	4.9	14.2
12/12/2013 12:22	3.5	7.4	0.1	4.9	14.2
12/12/2013 12:23	3.6	7.3	0.1	4.9	14.2
12/12/2013 12:24	3.5	7.7	0.1	4.9	14.2
12/12/2013 12:25	3.4	7.9	0.1	4.9	14.2

Unit 31A, Pollutant: Method:	CO	NOx	THC	CO2	O2
	10	7E	2SA	3A	3A
12/12/2013 12:26	3.3	8.0	0.1	4.9	14.1
12/12/2013 12:27	3.4	8.0	0.1	4.9	14.1
12/12/2013 12:28	3.6	7.9	0.1	4.9	14.2
12/12/2013 12:29	3.6	7.8	0.1	4.9	14.2
12/12/2013 12:30	3.7	7.9	0.1	4.9	14.2
12/12/2013 12:31	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:32	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:33	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:34	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:35	3.4	8.1	0.1	4.9	14.2
12/12/2013 12:36	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:37	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:38	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:39	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:40	3.5	8.2	0.1	4.9	14.2
12/12/2013 12:41	3.4	8.1	0.1	4.9	14.2
12/12/2013 12:42	3.5	8.0	0.1	4.9	14.2
12/12/2013 12:43	3.5	8.1	0.1	4.9	14.2
12/12/2013 12:44	3.5	8.2	0.1	4.9	14.2
12/12/2013 12:45	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:46	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:47	3.5	8.1	0.1	4.9	14.2
12/12/2013 12:48	3.6	8.2	0.1	4.9	14.2
12/12/2013 12:49	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:50	3.5	8.1	0.1	4.9	14.2
12/12/2013 12:51	3.4	8.2	0.1	4.9	14.1
12/12/2013 12:52	3.5	8.2	0.1	4.9	14.2
12/12/2013 12:53	3.5	8.0	0.1	4.9	14.2
12/12/2013 12:54	3.6	8.0	0.1	4.9	14.2
12/12/2013 12:55	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:56	3.5	8.2	0.1	4.9	14.2
12/12/2013 12:57	3.6	8.1	0.1	4.9	14.2
12/12/2013 12:58	3.5	8.0	0.1	4.9	14.2
12/12/2013 12:59	3.4	8.0	0.1	4.9	14.2
12/12/2013 13:00	3.6	8.1	0.1	4.9	14.2
12/12/2013 13:01	3.5	8.0	0.1	4.9	14.2
12/12/2013 13:02	3.4	8.2	0.1	4.9	14.2
12/12/2013 13:03	3.5	8.1	0.1	4.9	14.2
12/12/2013 13:04	3.5	8.0	0.1	4.9	14.2
12/12/2013 13:05	3.5	8.0	0.1	4.9	14.2
12/12/2013 13:06	3.6	8.0	0.1	4.9	14.2
12/12/2013 13:07	3.4	8.0	0.1	4.9	14.2
12/12/2013 13:08	3.4	8.2	0.1	4.9	14.2
12/12/2013 13:09	3.6	8.1	0.1	4.9	14.2
12/12/2013 13:10	3.5	8.0	0.1	4.9	14.2
12/12/2013 13:11	3.4	8.1	0.1	4.9	14.1
12/12/2013 13:12	3.3	8.0	0.1	4.9	14.1
12/12/2013 13:13	3.4	8.1	0.1	4.9	14.1
12/12/2013 13:14	3.6	8.0	0.1	4.9	14.2
12/12/2013 13:15	3.5	8.1	0.1	4.9	14.1
12/12/2013 13:16	3.4	8.2	0.1	4.9	14.1
12/12/2013 13:17	3.2	8.1	0.1	4.9	14.1
12/12/2013 13:18	3.2	8.2	0.1	4.9	14.1
12/12/2013 13:19	3.4	8.0	0.1	4.9	14.1
12/12/2013 13:20	3.4	8.0	0.4	4.9	14.1
12/12/2013 13:21	3.3	4.8	0.0	1.5	5.0
12/12/2013 13:22	0.2	0.2	0.0	0.0	0.0
12/12/2013 13:23	0.2	0.1	0.0	0.0	0.0
12/12/2013 13:24	0.2	30.0	0.0	0.0	0.0
12/12/2013 13:25	0.2	30.5	0.0	0.0	0.0
12/12/2013 13:26	0.2	24.7	0.0	0.0	0.0
12/12/2013 13:27	0.2	24.7	0.0	0.0	0.0
12/12/2013 13:28	0.0	11.7	0.1	7.4	7.3
12/12/2013 13:29	0.0	0.2	0.0	9.8	10.0
12/12/2013 13:30	0.0	0.1	1.7	9.8	10.0
12/12/2013 13:31	6.2	0.1	10.1	2.8	3.2
12/12/2013 13:32	11.1	0.1	10.1	0.0	0.0
12/12/2013 13:33	11.1	0.1	9.5	0.0	0.0

Unit 31A, Pollutant:	CO	NOx	THC	CO2	O2
Method:	10	7E	25A	3A	3A
12/12/2013 13:35	3.2	8.1	0.2	4.9	14.1
12/12/2013 13:36	3.2	8.1	0.1	4.9	14.1
12/12/2013 13:37	3.4	8.0	0.1	4.9	14.1
12/12/2013 13:38	3.5	8.0	0.1	4.9	14.1
12/12/2013 13:39	3.4	8.0	0.1	4.9	14.1
12/12/2013 13:40	3.3	8.1	0.1	4.9	14.1
12/12/2013 13:41	3.4	8.2	0.1	4.9	14.2
12/12/2013 13:42	3.4	8.0	0.1	4.9	14.2
12/12/2013 13:43	3.2	8.2	0.1	4.9	14.1
12/12/2013 13:44	3.4	8.2	0.1	4.9	14.2
12/12/2013 13:45	3.5	8.0	0.1	4.9	14.2
12/12/2013 13:46	3.2	8.1	0.1	4.9	14.1
12/12/2013 13:47	3.3	8.2	0.1	4.9	14.1
12/12/2013 13:48	3.2	8.0	0.1	4.9	14.1
12/12/2013 13:49	3.4	8.0	0.1	4.9	14.1
12/12/2013 13:50	3.5	7.9	0.1	4.9	14.2
12/12/2013 13:51	3.5	8.1	0.1	4.9	14.2
12/12/2013 13:52	3.2	8.3	0.1	4.9	14.1
12/12/2013 13:53	3.2	8.2	0.1	4.9	14.1
12/12/2013 13:54	3.2	8.0	0.1	4.9	14.1
12/12/2013 13:55	3.3	8.1	0.1	4.9	14.1
12/12/2013 13:56	3.1	8.0	0.1	4.9	14.1
12/12/2013 13:57	3.3	8.0	0.1	4.9	14.2
12/12/2013 13:58	3.4	7.8	0.1	4.9	14.2
12/12/2013 13:59	3.3	8.0	0.1	4.9	14.1
12/12/2013 14:00	3.3	8.1	0.1	4.9	14.1
12/12/2013 14:01	3.4	7.9	0.1	4.9	14.2
12/12/2013 14:02	3.2	8.0	0.1	4.9	14.1
12/12/2013 14:03	3.3	8.0	0.1	4.9	14.2
12/12/2013 14:04	3.4	7.8	0.1	4.9	14.2
12/12/2013 14:05	3.3	8.0	0.1	4.9	14.1
12/12/2013 14:06	3.3	8.2	0.1	4.9	14.1
12/12/2013 14:07	3.4	8.2	0.1	4.9	14.1
12/12/2013 14:08	3.4	8.0	0.1	4.9	14.2
12/12/2013 14:09	3.2	8.2	0.1	4.9	14.1
12/12/2013 14:10	3.3	8.2	0.1	4.9	14.1
12/12/2013 14:11	3.2	8.2	0.1	4.9	14.1
12/12/2013 14:12	3.1	8.2	0.1	4.9	14.1
12/12/2013 14:13	3.0	8.2	0.1	4.9	14.1
12/12/2013 14:14	3.0	8.1	0.1	4.9	14.1
12/12/2013 14:15	3.1	7.9	0.1	4.9	14.1
12/12/2013 14:16	3.3	8.1	0.1	4.9	14.2
12/12/2013 14:17	3.4	7.9	0.1	4.9	14.2
12/12/2013 14:18	3.3	8.2	0.1	4.9	14.2
12/12/2013 14:19	3.3	8.3	0.1	4.9	14.2
12/12/2013 14:20	3.3	8.3	0.1	4.9	14.2
12/12/2013 14:21	3.1	8.2	0.1	4.9	14.1
12/12/2013 14:22	3.0	8.2	0.1	4.9	14.1
12/12/2013 14:23	3.0	8.2	0.1	4.9	14.1
12/12/2013 14:24	3.2	8.2	0.1	4.9	14.2
12/12/2013 14:25	3.5	8.0	0.1	4.9	14.2
12/12/2013 14:26	3.3	8.3	0.1	4.9	14.2
12/12/2013 14:27	3.3	8.4	0.1	4.9	14.1
12/12/2013 14:28	3.2	8.2	0.1	4.9	14.1
12/12/2013 14:29	3.1	8.1	0.1	4.9	14.1
12/12/2013 14:30	3.2	8.1	0.1	4.9	14.2
12/12/2013 14:31	3.1	8.1	0.1	4.9	14.1
12/12/2013 14:32	3.0	8.2	0.1	4.9	14.1
12/12/2013 14:33	3.2	8.0	0.1	4.9	14.2
12/12/2013 14:34	3.3	7.9	0.1	4.9	14.2
12/12/2013 14:35	3.1	7.9	0.1	4.9	14.1
12/12/2013 14:36	3.2	5.0	0.1	2.4	7.6
12/12/2013 14:37	0.2	0.1	0.0	0.0	0.0
12/12/2013 14:38	0.2	0.1	0.0	0.0	0.0
12/12/2013 14:39	0.2	11.8	0.0	0.0	0.0
12/12/2013 14:40	0.2	25.0	0.0	0.0	0.0
12/12/2013 14:41	0.2	25.1	0.0	0.0	0.0
12/12/2013 14:42	0.0	6.7	0.1	8.1	8.0
12/12/2013 14:43	0.0	0.2	0.1	9.8	10.0

Unit 31A, Pollutant:	CO	NOx	THC	CO2	O2
Method:	10	7E	25A	3A	3A
12/12/2013 14:44	0.0	0.1	3.5	9.8	10.0
12/12/2013 14:45	7.8	0.1	10.3	1.2	1.6
12/12/2013 14:46	11.1	0.1	10.3	0.0	0.0
12/12/2013 14:47	11.2	0.1	10.0	0.0	0.0
12/12/2013 14:50	3.1	8.0	0.1	4.9	14.1
12/12/2013 14:51	3.2	7.8	0.1	4.9	14.1
12/12/2013 14:52	3.1	8.0	0.1	4.9	14.1
12/12/2013 14:53	3.2	8.0	0.1	4.9	14.1
12/12/2013 14:54	3.2	7.8	0.1	4.9	14.1
12/12/2013 14:55	3.1	7.8	0.1	4.9	14.1
12/12/2013 14:56	3.2	7.8	0.1	4.9	14.1
12/12/2013 14:57	3.1	7.9	0.1	4.9	14.1
12/12/2013 14:58	3.1	8.0	0.1	4.9	14.2
12/12/2013 14:59	3.2	7.9	0.1	4.9	14.2
12/12/2013 15:00	3.2	8.0	0.1	4.9	14.2
12/12/2013 15:01	3.1	8.2	0.1	4.9	14.2
12/12/2013 15:02	3.3	8.1	0.1	4.9	14.2
12/12/2013 15:03	3.3	8.0	0.1	4.9	14.2
12/12/2013 15:04	3.3	8.1	0.1	4.9	14.2
12/12/2013 15:05	3.2	8.1	0.1	4.9	14.1
12/12/2013 15:06	3.1	8.1	0.1	4.9	14.1
12/12/2013 15:07	3.0	8.2	0.1	4.9	14.1
12/12/2013 15:08	3.3	8.2	0.1	4.9	14.1
12/12/2013 15:09	3.4	8.1	0.1	4.9	14.2
12/12/2013 15:10	3.3	8.0	0.1	4.9	14.2
12/12/2013 15:11	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:12	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:13	3.2	8.1	0.1	4.9	14.2
12/12/2013 15:14	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:15	3.2	8.3	0.1	4.9	14.1
12/12/2013 15:16	3.2	8.3	0.1	4.9	14.1
12/12/2013 15:17	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:18	3.2	8.2	0.1	4.9	14.1
12/12/2013 15:19	3.2	8.0	0.1	4.9	14.2
12/12/2013 15:20	3.1	8.1	0.1	4.9	14.2
12/12/2013 15:21	3.2	8.1	0.1	4.9	14.2
12/12/2013 15:22	3.2	8.2	0.1	4.9	14.2
12/12/2013 15:23	3.1	8.2	0.1	4.9	14.2
12/12/2013 15:24	3.2	8.2	0.1	4.9	14.2
12/12/2013 15:25	3.3	8.2	0.1	4.9	14.2
12/12/2013 15:26	3.2	8.2	0.1	4.9	14.1
12/12/2013 15:27	3.3	8.2	0.2	4.9	14.2
12/12/2013 15:28	3.2	8.2	0.2	4.9	14.2
12/12/2013 15:29	3.1	8.2	0.1	4.9	14.2
12/12/2013 15:30	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:31	3.1	8.3	0.1	4.9	14.1
12/12/2013 15:32	3.1	8.3	0.1	4.9	14.1
12/12/2013 15:33	3.2	8.2	0.1	4.9	14.1
12/12/2013 15:34	3.1	8.1	0.1	4.9	14.2
12/12/2013 15:35	3.1	8.1	0.1	4.9	14.1
12/12/2013 15:36	3.1	8.2	0.1	4.9	14.1
12/12/2013 15:37	3.2	8.1	0.1	4.9	14.1
12/12/2013 15:38	3.1	8.1	0.1	4.9	14.1
12/12/2013 15:39	3.1	8.1	0.1	4.9	14.1
12/12/2013 15:40	3.1	8.1	0.1	4.9	14.1
12/12/2013 15:41	3.1	8.1	0.1	4.9	14.2
12/12/2013 15:42	3.3	7.9	0.1	4.9	14.2
12/12/2013 15:43	3.1	8.0	0.1	4.9	14.2
12/12/2013 15:44	3.0	8.2	0.1	4.9	14.2
12/12/2013 15:45	2.9	7.8	0.1	4.9	14.1
12/12/2013 15:46	2.8	8.2	0.1	4.9	14.1
12/12/2013 15:47	2.9	8.0	0.1	4.9	14.1
12/12/2013 15:48	3.1	8.0	0.1	4.9	14.2
12/12/2013 15:49	3.0	8.0	0.1	4.9	14.2
12/12/2013 15:50	2.9	8.1	0.1	4.9	14.1
12/12/2013 15:51	3.7	7.1	0.7	3.4	10.4
12/12/2013 15:52	0.6	0.2	0.0	0.0	0.1
12/12/2013 15:53	0.2	0.1	0.0	0.0	0.0

Unit 31A, Pollutant:	CO	NOx	THC	CO2	O2
Method:	10	7E	25A	3A	3A
12/12/2013 15:54	0.2	13.2	0.0	0.0	0.0
12/12/2013 15:55	0.2	24.9	0.0	0.0	0.0
12/12/2013 15:56	0.2	25.0	0.0	0.0	0.0
12/12/2013 15:57	0.0	7.9	0.0	7.9	7.8
12/12/2013 15:58	0.0	0.2	0.0	9.8	10.0
12/12/2013 15:59	0.0	0.1	2.2	9.8	10.0
12/12/2013 16:00	6.6	0.1	10.1	2.3	2.7
12/12/2013 16:01	11.2	0.1	10.2	0.0	0.0

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Unit 31A Annual Compliance Emission
Measurements 12-12-13.

Gases Field Data Sheets

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER AND ASSOCIATES, INC.
INSTRUMENTAL GAS SAMPLING FIELD DATA RECORD

100%
Compliance

PLANT				DATE			
LOCATION				EMISSION UNIT			
TEST(s)				SYSTEM LEAK CHECK (Limit 1 inHg/2min)			
				Init. VAC inHg	Final VAC inHg		
Cylinder Identification				Calibration Gas Certified Concentration Value			
Instrument	Low	Mid	High	Test	Zero / Low-Gas	Mid-Gas	High-Gas(span)
CO (M10)				CO (M10)			
SO2 (M6C)				SO2 (M6C)			
NOx (M7E)				NOx (M7E)			
THC (M25A)				THC (M25A)			
CH4				CH4			
NMHC				NMHC			
CO2 (M3A)				CO2 (M3A)			
O2 (M3A)				O2 (M3A)			
TIME	Action / Comment			TIME	Action / Comment		
11:46	24.7 NOx on			16:01	CO 10.2		
11:48	NOx = 24.8						
12:20	Start Run #1						
13:21	End Run #1 N2 on						
13:22	CO = 0.3 NOx = 0.2 ^{THC = 0.03} O2 = 0.04						
13:24	24.7 NOx on						
13:26	NOx = 24.7						
13:28	9.74 CO / 9.82 O2 on						
13:29	CO2 = 9.75 O2 = 9.94						
13:31	10.5 CO 10.1 O2 on						
13:32	CO = 10.1 THC = 10.1						
13:35	Start Run #2						
14:37	CO = 0.2 NOx = 0.1 CO2 = 0 O2 = 0.04 THC = 0						
14:39	24.7 NOx on						
14:40	NOx = 24.25						
14:42	9.74 CO2 / 9.82 O2 on						
14:43	CO2 = 9.72 O2 = 9.93						
14:45	10.5 CO 10.1 O2 on						
14:46	CO = 10.1 THC = 10.1						
14:50	Start Run #3						
15:51	End Run #3 N2 on						
15:52	CO = 0.3 NOx = 0.18 CO2 = 0 O2 = 0.06 THC = 0						
15:54	24.7 NOx on						
15:55	NOx = 24.9						
15:57	9.74 CO2 / 9.82 O2 on						
15:58	CO2 = 9.73 O2 = 9.93						
16:00	10.5 CO 10.1 O2 on						
16:00	10.1 THC						

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Unit 31A Annual Compliance Emission
Measurements 12-12-13.

Ammonia Slip (NH₃) Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Spectrum Date Time NH3 (300) 191C (1of2) NH3 dry H2O% (40) 191C CO2% (40) 191C Ethylene (100,3000) 191C

Calibration Transfer Std., Section 8.6.1
ethylene = 98.6 ppm in N2

Start Ethylene Spike
12122013_00066.LAB
12122013_00067.LAB
12122013_00068.LAB
12122013_00069.LAB
12122013_00070.LAB
12122013_00071.LAB
End Ethylene Spike

98.6 ppm
99.30% Is CT gas +5% of surrogate value?
99.75% YES
98.4
99.84%
98.3
99.71%
98.1
99.51%
98.1
99.49%

calibration gas (25 ppm NH3)

12122013_000116.LAB 12/12/2013 9:04:27 25.20 25.54

Quality Assurance Spike, Section 8.6.2
DF C5m Diff unspike estimated at 0.4 ppm
Spike = 25 ppm

12122013_000142.LAB
12122013_000143.LAB
12122013_000144.LAB

12/12/2013 9:17:11 5.17 5.28 2.14
12/12/2013 9:17:40 5.12 5.24 2.15
12/12/2013 9:18:10 5.11 5.22 2.16

0.0 22.5% 5.93 87% YES
0.0 22.4% 5.92 87% YES
0.0 22.3% 5.89 87% YES

Start R1

12122013_000536.LAB
12122013_000537.LAB
12122013_000538.LAB
12122013_000539.LAB
12122013_000540.LAB
12122013_000541.LAB
12122013_000542.LAB
12122013_000543.LAB
12122013_000544.LAB
12122013_000545.LAB
12122013_000546.LAB
12122013_000547.LAB
12122013_000548.LAB
12122013_000549.LAB
12122013_000550.LAB
12122013_000551.LAB
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12122013_000561.LAB
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12122013_000570.LAB
12122013_000571.LAB
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12122013_000583.LAB
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12122013_000603.LAB
12122013_000604.LAB
12122013_000605.LAB
12122013_000606.LAB
12122013_000607.LAB
12122013_000608.LAB
12122013_000609.LAB
12122013_000610.LAB
12122013_000611.LAB
12122013_000612.LAB
12122013_000613.LAB
12122013_000614.LAB

12/12/2013 12:30:11 0.33 0.36 7.79 4.66
12/12/2013 12:30:40 0.35 0.38 7.73 4.67
12/12/2013 12:31:10 0.37 0.40 7.47 4.68
12/12/2013 12:31:39 0.32 0.35 7.67 4.68
12/12/2013 12:32:09 0.34 0.37 7.33 4.69
12/12/2013 12:32:38 0.34 0.37 7.19 4.72
12/12/2013 12:33:07 0.29 0.31 6.97 4.73
12/12/2013 12:33:37 0.30 0.33 7.14 4.71
12/12/2013 12:34:06 0.29 0.32 6.92 4.73
12/12/2013 12:34:36 0.29 0.31 6.81 4.73
12/12/2013 12:35:05 0.32 0.35 7.86 4.68
12/12/2013 12:35:34 0.31 0.33 7.97 4.67
12/12/2013 12:36:04 0.29 0.31 7.66 4.69
12/12/2013 12:36:33 0.30 0.33 7.59 4.69
12/12/2013 12:37:03 0.28 0.31 7.79 4.67
12/12/2013 12:37:32 0.30 0.33 7.76 4.67
12/12/2013 12:38:01 0.27 0.29 8.01 4.65
12/12/2013 12:38:31 0.32 0.35 8.08 4.66
12/12/2013 12:39:00 0.33 0.35 8.20 4.65
12/12/2013 12:39:30 0.32 0.34 8.47 4.63
12/12/2013 12:39:59 0.30 0.33 7.66 4.67
12/12/2013 12:40:28 0.28 0.31 7.49 4.68
12/12/2013 12:40:58 0.27 0.29 7.35 4.69
12/12/2013 12:41:27 0.30 0.32 7.28 4.71
12/12/2013 12:41:57 0.30 0.32 6.95 4.73
12/12/2013 12:42:26 0.29 0.32 7.44 4.71
12/12/2013 12:42:55 0.28 0.31 7.69 4.68
12/12/2013 12:43:25 0.28 0.30 7.60 4.68
12/12/2013 12:43:54 0.30 0.32 8.05 4.65
12/12/2013 12:44:23 0.32 0.34 8.17 4.66
12/12/2013 12:44:53 0.33 0.35 8.02 4.66
12/12/2013 12:45:22 0.31 0.34 7.60 4.68
12/12/2013 12:45:52 0.27 0.29 7.24 4.70
12/12/2013 12:46:21 0.27 0.29 6.90 4.72
12/12/2013 12:46:50 0.29 0.32 7.69 4.69
12/12/2013 12:47:20 0.30 0.32 7.83 4.67
12/12/2013 12:47:49 0.33 0.36 7.61 4.68
12/12/2013 12:48:18 0.31 0.34 7.88 4.66
12/12/2013 12:48:48 0.31 0.34 7.88 4.67
12/12/2013 12:49:17 0.30 0.32 7.54 4.68
12/12/2013 12:49:47 0.25 0.27 6.94 4.70
12/12/2013 12:50:16 0.31 0.33 7.55 4.68
12/12/2013 12:50:45 0.29 0.32 7.53 4.68
12/12/2013 12:51:15 0.30 0.32 7.29 4.70
12/12/2013 12:51:44 0.31 0.33 6.79 4.74
12/12/2013 12:52:14 0.28 0.30 7.09 4.72
12/12/2013 12:52:43 0.27 0.29 7.68 4.69
12/12/2013 12:53:12 0.28 0.30 7.01 4.72
12/12/2013 12:53:42 0.28 0.30 6.67 4.76
12/12/2013 12:54:11 0.31 0.33 6.47 4.73
12/12/2013 12:54:41 0.29 0.31 6.58 4.75
12/12/2013 12:55:10 0.28 0.30 6.74 4.72
12/12/2013 12:55:39 0.26 0.28 6.72 4.74
12/12/2013 12:56:09 0.31 0.33 7.17 4.72
12/12/2013 12:56:38 0.28 0.30 7.23 4.72
12/12/2013 12:57:08 0.30 0.32 7.19 4.72
12/12/2013 12:57:37 0.29 0.31 7.39 4.72
12/12/2013 12:58:06 0.29 0.32 7.61 4.67
12/12/2013 12:58:36 0.29 0.31 7.51 4.69
12/12/2013 12:59:05 0.31 0.33 7.42 4.68
12/12/2013 12:59:35 0.27 0.29 7.31 4.70
12/12/2013 13:00:04 0.29 0.31 7.72 4.68
12/12/2013 13:00:33 0.33 0.35 7.64 4.68
12/12/2013 13:01:03 0.31 0.33 7.10 4.70
12/12/2013 13:01:32 0.31 0.33 7.12 4.72
12/12/2013 13:02:01 0.30 0.32 7.18 4.71
12/12/2013 13:02:31 0.33 0.35 7.13 4.72
12/12/2013 13:03:00 0.31 0.33 7.15 4.72
12/12/2013 13:03:30 0.37 0.40 6.89 4.72
12/12/2013 13:03:59 0.33 0.36 6.57 4.74
12/12/2013 13:04:28 0.37 0.40 6.42 4.75
12/12/2013 13:04:58 0.71 0.76 6.98 4.73
12/12/2013 13:05:27 0.54 0.58 6.87 4.73
12/12/2013 13:05:57 0.47 0.51 6.86 4.73
12/12/2013 13:06:26 0.48 0.46 7.02 4.72
12/12/2013 13:06:55 0.41 0.44 6.97 4.71
12/12/2013 13:07:25 0.39 0.42 6.84 4.72
12/12/2013 13:07:54 0.41 0.45 7.47 4.70
12/12/2013 13:08:23 0.41 0.44 7.51 4.69

12122013_000615.LAB	12/12/2013	13:08:53	0.40	0.42	6.89	4.72
12122013_000616.LAB	12/12/2013	13:09:22	0.34	0.36	6.60	4.75
12122013_000617.LAB	12/12/2013	13:09:52	0.37	0.40	6.43	4.76
12122013_000618.LAB	12/12/2013	13:10:21	0.33	0.35	6.57	4.73
12122013_000619.LAB	12/12/2013	13:10:50	0.36	0.39	6.78	4.73
12122013_000620.LAB	12/12/2013	13:11:20	0.34	0.37	6.74	4.73
12122013_000621.LAB	12/12/2013	13:11:49	0.30	0.32	6.63	4.74
12122013_000622.LAB	12/12/2013	13:12:19	0.33	0.35	6.49	4.76
12122013_000623.LAB	12/12/2013	13:12:48	0.32	0.35	6.85	4.74
12122013_000624.LAB	12/12/2013	13:13:17	0.32	0.34	6.77	4.75
12122013_000625.LAB	12/12/2013	13:13:47	0.32	0.34	6.49	4.76
12122013_000626.LAB	12/12/2013	13:14:16	0.28	0.30	6.10	4.78
12122013_000627.LAB	12/12/2013	13:14:46	0.32	0.34	6.08	4.78
12122013_000628.LAB	12/12/2013	13:15:15	0.32	0.35	6.84	4.73
12122013_000629.LAB	12/12/2013	13:15:44	0.32	0.34	6.81	4.72
12122013_000630.LAB	12/12/2013	13:16:14	0.31	0.33	6.79	4.73
12122013_000631.LAB	12/12/2013	13:16:43	0.33	0.35	6.91	4.74
12122013_000632.LAB	12/12/2013	13:17:12	0.29	0.31	6.50	4.75
12122013_000633.LAB	12/12/2013	13:17:42	0.27	0.29	6.36	4.77
12122013_000634.LAB	12/12/2013	13:18:11	0.29	0.31	6.35	4.77
12122013_000635.LAB	12/12/2013	13:18:41	0.27	0.29	6.04	4.79
12122013_000636.LAB	12/12/2013	13:19:10	0.26	0.28	6.24	4.79
12122013_000637.LAB	12/12/2013	13:19:40	0.30	0.32	6.53	4.75
12122013_000638.LAB	12/12/2013	13:20:09	0.29	0.31	6.44	4.76
12122013_000639.LAB	12/12/2013	13:20:38	0.31	0.33	6.71	4.74
12122013_000640.LAB	12/12/2013	13:21:08	0.26	0.28	6.58	4.75
12122013_000641.LAB	12/12/2013	13:21:37	0.29	0.31	6.62	4.75
12122013_000642.LAB	12/12/2013	13:22:07	0.27	0.29	6.93	4.73
12122013_000643.LAB	12/12/2013	13:22:36	0.28	0.30	7.22	4.72
12122013_000644.LAB	12/12/2013	13:23:05	0.28	0.30	6.74	4.74
12122013_000645.LAB	12/12/2013	13:23:35	0.24	0.25	6.21	4.77
12122013_000646.LAB	12/12/2013	13:24:04	0.28	0.30	6.08	4.78
12122013_000647.LAB	12/12/2013	13:24:33	0.25	0.27	6.29	4.77
12122013_000648.LAB	12/12/2013	13:25:03	0.26	0.28	6.32	4.76
12122013_000649.LAB	12/12/2013	13:25:32	0.29	0.31	6.46	4.75
12122013_000650.LAB	12/12/2013	13:26:02	0.27	0.28	6.51	4.75
12122013_000651.LAB	12/12/2013	13:26:31	0.25	0.26	6.13	4.78
12122013_000652.LAB	12/12/2013	13:27:00	0.27	0.29	6.61	4.74
12122013_000653.LAB	12/12/2013	13:27:30	0.28	0.30	6.72	4.74
12122013_000654.LAB	12/12/2013	13:27:59	0.27	0.29	6.59	4.75
12122013_000655.LAB	12/12/2013	13:28:29	0.29	0.31	6.39	4.77
12122013_000656.LAB	12/12/2013	13:28:58	0.27	0.29	6.64	4.75
12122013_000657.LAB	12/12/2013	13:29:27	0.29	0.31	6.89	4.75
12122013_000658.LAB	12/12/2013	13:29:57	0.27	0.29	7.23	4.71

End R1

Start R2

12122013_000659.LAB	12/12/2013	13:30:26	0.27	0.29	7.11	4.72
12122013_000660.LAB	12/12/2013	13:30:55	0.26	0.28	6.46	4.75
12122013_000661.LAB	12/12/2013	13:31:25	0.23	0.24	6.10	4.78
12122013_000662.LAB	12/12/2013	13:31:54	0.24	0.26	5.94	4.77
12122013_000663.LAB	12/12/2013	13:32:24	0.24	0.26	6.02	4.78
12122013_000664.LAB	12/12/2013	13:32:54	0.28	0.30	6.71	4.75
12122013_000665.LAB	12/12/2013	13:33:22	0.28	0.30	6.82	4.73
12122013_000666.LAB	12/12/2013	13:33:52	0.29	0.31	7.12	4.72
12122013_000667.LAB	12/12/2013	13:34:21	0.28	0.31	7.06	4.72
12122013_000668.LAB	12/12/2013	13:34:51	0.27	0.29	7.42	4.70
12122013_000669.LAB	12/12/2013	13:35:20	0.30	0.32	7.26	4.71
12122013_000670.LAB	12/12/2013	13:35:49	0.28	0.30	7.47	4.72
12122013_000671.LAB	12/12/2013	13:36:19	0.30	0.33	7.10	4.71
12122013_000672.LAB	12/12/2013	13:36:48	0.27	0.28	6.86	4.73
12122013_000673.LAB	12/12/2013	13:37:17	0.27	0.29	6.79	4.74
12122013_000674.LAB	12/12/2013	13:37:47	0.28	0.30	6.62	4.74
12122013_000675.LAB	12/12/2013	13:38:16	0.27	0.29	6.64	4.74
12122013_000676.LAB	12/12/2013	13:38:46	0.26	0.27	6.41	4.76
12122013_000677.LAB	12/12/2013	13:39:15	0.26	0.28	6.96	4.73
12122013_000678.LAB	12/12/2013	13:39:44	0.27	0.30	7.22	4.71
12122013_000679.LAB	12/12/2013	13:40:14	0.23	0.25	7.06	4.72
12122013_000680.LAB	12/12/2013	13:40:43	0.30	0.32	6.95	4.74
12122013_000681.LAB	12/12/2013	13:41:13	0.27	0.29	7.46	4.72
12122013_000682.LAB	12/12/2013	13:41:42	0.26	0.28	7.31	4.70
12122013_000683.LAB	12/12/2013	13:42:11	0.28	0.30	7.16	4.72
12122013_000684.LAB	12/12/2013	13:42:41	0.28	0.30	7.48	4.69
12122013_000685.LAB	12/12/2013	13:43:10	0.25	0.27	7.51	4.68
12122013_000686.LAB	12/12/2013	13:43:40	0.26	0.28	7.60	4.69
12122013_000687.LAB	12/12/2013	13:44:09	0.28	0.30	7.41	4.70
12122013_000688.LAB	12/12/2013	13:44:38	0.27	0.29	7.20	4.71
12122013_000689.LAB	12/12/2013	13:45:08	0.27	0.29	7.33	4.72
12122013_000690.LAB	12/12/2013	13:45:37	0.28	0.30	6.79	4.74
12122013_000691.LAB	12/12/2013	13:46:07	0.26	0.27	6.57	4.74
12122013_000692.LAB	12/12/2013	13:46:36	0.24	0.26	6.81	4.74
12122013_000693.LAB	12/12/2013	13:47:05	0.27	0.29	7.63	4.71
12122013_000694.LAB	12/12/2013	13:47:35	0.23	0.25	7.26	4.71
12122013_000695.LAB	12/12/2013	13:48:04	0.26	0.28	7.28	4.72
12122013_000696.LAB	12/12/2013	13:48:34	0.26	0.28	7.22	4.73
12122013_000697.LAB	12/12/2013	13:49:03	0.25	0.27	7.24	4.73
12122013_000698.LAB	12/12/2013	13:49:32	0.26	0.28	7.05	4.74
12122013_000699.LAB	12/12/2013	13:50:02	0.24	0.26	7.17	4.72
12122013_000700.LAB	12/12/2013	13:50:31	0.30	0.32	7.42	4.71
12122013_000701.LAB	12/12/2013	13:51:00	0.26	0.28	6.89	4.72
12122013_000702.LAB	12/12/2013	13:51:30	0.23	0.25	6.84	4.73
12122013_000703.LAB	12/12/2013	13:51:59	0.24	0.26	6.48	4.75
12122013_000704.LAB	12/12/2013	13:52:29	0.26	0.28	6.52	4.74
12122013_000705.LAB	12/12/2013	13:52:58	0.27	0.30	7.02	4.73
12122013_000706.LAB	12/12/2013	13:53:27	0.24	0.26	6.89	4.74
12122013_000707.LAB	12/12/2013	13:53:57	0.26	0.28	7.03	4.73
12122013_000708.LAB	12/12/2013	13:54:26	0.27	0.29	6.86	4.74
12122013_000709.LAB	12/12/2013	13:54:56	0.27	0.29	7.69	4.69
12122013_000710.LAB	12/12/2013	13:55:25	0.28	0.30	7.49	4.70
12122013_000711.LAB	12/12/2013	13:55:54	0.26	0.28	6.99	4.72
12122013_000712.LAB	12/12/2013	13:56:24	0.26	0.27	6.98	4.74
12122013_000713.LAB	12/12/2013	13:56:53	0.26	0.28	6.78	4.75
12122013_000714.LAB	12/12/2013	13:57:23	0.26	0.28	7.02	4.75
12122013_000715.LAB	12/12/2013	13:57:52	0.24	0.26	7.05	4.73
12122013_000716.LAB	12/12/2013	13:58:21	0.25	0.27	7.01	4.72

12122013_000717.LAB	12/12/2013	13:58:51	0.28	0.30	7.25	4.70
12122013_000718.LAB	12/12/2013	13:59:20	0.27	0.29	7.28	4.71
12122013_000719.LAB	12/12/2013	13:59:50	0.25	0.27	7.51	4.69
12122013_000720.LAB	12/12/2013	14:00:19	0.25	0.26	6.97	4.72
12122013_000721.LAB	12/12/2013	14:00:48	0.23	0.25	6.51	4.76
12122013_000722.LAB	12/12/2013	14:01:18	0.23	0.25	6.15	4.78
12122013_000723.LAB	12/12/2013	14:01:47	0.26	0.28	6.56	4.75
12122013_000724.LAB	12/12/2013	14:02:17	0.27	0.29	6.97	4.73
12122013_000725.LAB	12/12/2013	14:02:46	0.25	0.27	7.06	4.73
12122013_000726.LAB	12/12/2013	14:03:15	0.24	0.26	6.84	4.74
12122013_000727.LAB	12/12/2013	14:03:45	0.25	0.27	7.19	4.72
12122013_000728.LAB	12/12/2013	14:04:14	0.26	0.28	6.83	4.73
12122013_000729.LAB	12/12/2013	14:04:43	0.26	0.28	7.31	4.70
12122013_000730.LAB	12/12/2013	14:05:13	0.29	0.31	7.47	4.69
12122013_000731.LAB	12/12/2013	14:05:42	0.25	0.27	7.11	4.71
12122013_000732.LAB	12/12/2013	14:06:12	0.24	0.26	6.88	4.73
12122013_000733.LAB	12/12/2013	14:06:41	0.27	0.30	7.19	4.72
12122013_000734.LAB	12/12/2013	14:07:10	0.26	0.28	7.36	4.71
12122013_000735.LAB	12/12/2013	14:07:40	0.28	0.30	7.11	4.73
12122013_000736.LAB	12/12/2013	14:08:09	0.25	0.26	6.86	4.73
12122013_000737.LAB	12/12/2013	14:08:39	0.27	0.30	7.68	4.68
12122013_000738.LAB	12/12/2013	14:08:08	0.24	0.26	7.76	4.66
12122013_000739.LAB	12/12/2013	14:09:37	0.26	0.29	7.78	4.68
12122013_000740.LAB	12/12/2013	14:10:07	0.26	0.29	7.80	4.68
12122013_000741.LAB	12/12/2013	14:10:36	0.24	0.26	7.60	4.69
12122013_000742.LAB	12/12/2013	14:11:06	0.25	0.27	7.42	4.68
12122013_000743.LAB	12/12/2013	14:11:35	0.25	0.27	7.32	4.70
12122013_000744.LAB	12/12/2013	14:12:04	0.25	0.27	7.51	4.70
12122013_000745.LAB	12/12/2013	14:12:34	0.27	0.29	7.09	4.71
12122013_000746.LAB	12/12/2013	14:13:03	0.25	0.27	6.84	4.73
12122013_000747.LAB	12/12/2013	14:13:33	0.27	0.29	6.58	4.75
12122013_000748.LAB	12/12/2013	14:14:02	0.25	0.27	6.88	4.74
12122013_000749.LAB	12/12/2013	14:14:31	0.24	0.26	7.09	4.74
12122013_000750.LAB	12/12/2013	14:15:01	0.23	0.25	6.89	4.74
12122013_000751.LAB	12/12/2013	14:15:30	0.28	0.30	7.09	4.73
12122013_000752.LAB	12/12/2013	14:16:00	0.25	0.27	6.72	4.74
12122013_000753.LAB	12/12/2013	14:16:29	0.23	0.25	6.97	4.73
12122013_000754.LAB	12/12/2013	14:16:58	0.25	0.27	7.32	4.71
12122013_000755.LAB	12/12/2013	14:17:28	0.26	0.28	7.04	4.72
12122013_000756.LAB	12/12/2013	14:17:57	0.24	0.26	7.31	4.69
12122013_000757.LAB	12/12/2013	14:18:26	0.22	0.23	7.12	4.72
12122013_000758.LAB	12/12/2013	14:18:56	0.24	0.26	7.04	4.71
12122013_000759.LAB	12/12/2013	14:19:25	0.25	0.28	7.42	4.71
12122013_000760.LAB	12/12/2013	14:19:55	0.26	0.28	6.99	4.71
12122013_000761.LAB	12/12/2013	14:20:24	0.28	0.30	7.33	4.70
12122013_000762.LAB	12/12/2013	14:20:53	0.27	0.29	7.17	4.71
12122013_000763.LAB	12/12/2013	14:21:23	0.25	0.27	7.14	4.72
12122013_000764.LAB	12/12/2013	14:21:52	0.26	0.28	7.50	4.71
12122013_000765.LAB	12/12/2013	14:22:22	0.24	0.26	7.26	4.70
12122013_000766.LAB	12/12/2013	14:22:51	0.25	0.26	6.78	4.75
12122013_000767.LAB	12/12/2013	14:23:20	0.24	0.25	7.02	4.74
12122013_000768.LAB	12/12/2013	14:23:50	0.24	0.26	6.71	4.74
12122013_000769.LAB	12/12/2013	14:24:19	0.25	0.27	6.85	4.74
12122013_000770.LAB	12/12/2013	14:24:48	0.25	0.27	6.79	4.75
12122013_000771.LAB	12/12/2013	14:25:18	0.26	0.28	7.05	4.71
12122013_000772.LAB	12/12/2013	14:25:47	0.25	0.27	7.17	4.70
12122013_000773.LAB	12/12/2013	14:26:17	0.22	0.24	6.82	4.71
12122013_000774.LAB	12/12/2013	14:26:46	0.25	0.27	6.89	4.72
12122013_000775.LAB	12/12/2013	14:27:15	0.25	0.27	7.16	4.71
12122013_000776.LAB	12/12/2013	14:27:45	0.28	0.30	6.73	4.73
12122013_000777.LAB	12/12/2013	14:28:14	0.21	0.22	7.09	4.72
12122013_000778.LAB	12/12/2013	14:28:44	0.25	0.27	7.26	4.71
12122013_000779.LAB	12/12/2013	14:29:13	0.24	0.26	7.39	4.71
12122013_000780.LAB	12/12/2013	14:29:42	0.21	0.23	6.98	4.72
End R2						
Start R3						
12122013_000781.LAB	12/12/2013	14:30:12	0.26	0.28	6.81	4.73
12122013_000782.LAB	12/12/2013	14:30:41	0.24	0.26	7.56	4.69
12122013_000783.LAB	12/12/2013	14:31:11	0.25	0.27	7.31	4.70
12122013_000784.LAB	12/12/2013	14:31:40	0.26	0.28	7.91	4.68
12122013_000785.LAB	12/12/2013	14:32:09	0.27	0.29	7.66	4.67
12122013_000786.LAB	12/12/2013	14:32:39	0.28	0.31	7.35	4.70
12122013_000787.LAB	12/12/2013	14:33:08	0.25	0.27	7.43	4.71
12122013_000788.LAB	12/12/2013	14:33:37	0.26	0.28	7.33	4.69
12122013_000789.LAB	12/12/2013	14:34:07	0.25	0.27	7.25	4.72
12122013_000790.LAB	12/12/2013	14:34:37	0.26	0.28	7.70	4.68
12122013_000791.LAB	12/12/2013	14:35:06	0.28	0.30	7.27	4.70
12122013_000792.LAB	12/12/2013	14:35:35	0.27	0.29	6.89	4.72
12122013_000793.LAB	12/12/2013	14:36:04	0.25	0.27	6.90	4.73
12122013_000794.LAB	12/12/2013	14:36:34	0.27	0.29	6.92	4.73
12122013_000795.LAB	12/12/2013	14:37:03	0.24	0.26	6.64	4.74
12122013_000796.LAB	12/12/2013	14:37:33	0.26	0.27	6.56	4.75
12122013_000797.LAB	12/12/2013	14:38:02	0.23	0.25	6.99	4.74
12122013_000798.LAB	12/12/2013	14:38:31	0.23	0.25	6.94	4.73
12122013_000799.LAB	12/12/2013	14:39:01	0.24	0.25	6.92	4.73
12122013_000800.LAB	12/12/2013	14:39:30	0.21	0.23	6.75	4.75
12122013_000801.LAB	12/12/2013	14:40:00	0.26	0.28	6.69	4.73
12122013_000802.LAB	12/12/2013	14:40:29	0.22	0.23	6.72	4.73
12122013_000803.LAB	12/12/2013	14:40:59	0.24	0.26	7.49	4.71
12122013_000804.LAB	12/12/2013	14:41:28	0.26	0.28	7.67	4.67
12122013_000805.LAB	12/12/2013	14:41:57	0.26	0.28	7.57	4.68
12122013_000806.LAB	12/12/2013	14:42:27	0.28	0.30	7.58	4.68
12122013_000807.LAB	12/12/2013	14:42:56	0.25	0.27	7.03	4.71
12122013_000808.LAB	12/12/2013	14:43:26	0.26	0.27	6.96	4.72
12122013_000809.LAB	12/12/2013	14:43:55	0.23	0.25	7.40	4.70
12122013_000810.LAB	12/12/2013	14:44:24	0.26	0.29	7.28	4.68
12122013_000811.LAB	12/12/2013	14:44:54	0.25	0.27	6.84	4.73
12122013_000812.LAB	12/12/2013	14:45:23	0.25	0.27	6.51	4.75
12122013_000813.LAB	12/12/2013	14:45:52	0.25	0.27	6.50	4.75
12122013_000814.LAB	12/12/2013	14:46:22	0.24	0.26	6.60	4.74
12122013_000815.LAB	12/12/2013	14:46:51	0.28	0.28	7.71	4.69
12122013_000816.LAB	12/12/2013	14:47:20	0.25	0.27	7.43	4.68
12122013_000817.LAB	12/12/2013	14:47:50	0.25	0.27	7.20	4.70
12122013_000818.LAB	12/12/2013	14:48:19	0.26	0.29	7.32	4.70

12122013_000819.LAB	12/12/2013	14:48:49	0.23	0.25	7.14	4.71
12122013_000820.LAB	12/12/2013	14:49:18	0.25	0.27	7.12	4.71
12122013_000821.LAB	12/12/2013	14:49:48	0.25	0.26	6.81	4.74
12122013_000822.LAB	12/12/2013	14:50:17	0.27	0.29	7.39	4.71
12122013_000823.LAB	12/12/2013	14:50:46	0.26	0.28	7.32	4.71
12122013_000824.LAB	12/12/2013	14:51:16	0.25	0.27	7.12	4.72
12122013_000825.LAB	12/12/2013	14:51:45	0.27	0.30	8.00	4.67
12122013_000826.LAB	12/12/2013	14:52:14	0.26	0.28	7.82	4.67
12122013_000827.LAB	12/12/2013	14:52:44	0.28	0.31	7.50	4.69
12122013_000828.LAB	12/12/2013	14:53:13	0.29	0.31	7.77	4.69
12122013_000829.LAB	12/12/2013	14:53:43	0.25	0.27	7.59	4.70
12122013_000830.LAB	12/12/2013	14:54:12	0.23	0.25	7.38	4.70
12122013_000831.LAB	12/12/2013	14:54:41	0.27	0.29	7.88	4.68
12122013_000832.LAB	12/12/2013	14:55:11	0.24	0.26	7.52	4.69
12122013_000833.LAB	12/12/2013	14:55:40	0.24	0.26	6.99	4.72
12122013_000834.LAB	12/12/2013	14:56:10	0.26	0.28	6.83	4.75
12122013_000835.LAB	12/12/2013	14:56:39	0.23	0.24	6.17	4.78
12122013_000836.LAB	12/12/2013	14:57:08	0.24	0.26	6.29	4.77
12122013_000837.LAB	12/12/2013	14:57:38	0.26	0.27	6.38	4.77
12122013_000838.LAB	12/12/2013	14:58:07	0.24	0.26	6.36	4.77
12122013_000839.LAB	12/12/2013	14:58:36	0.25	0.26	7.06	4.74
12122013_000840.LAB	12/12/2013	14:59:06	0.23	0.25	6.82	4.73
12122013_000841.LAB	12/12/2013	14:59:35	0.25	0.26	6.59	4.74
12122013_000842.LAB	12/12/2013	15:00:05	0.22	0.24	6.62	4.74
12122013_000843.LAB	12/12/2013	15:00:34	0.24	0.26	6.62	4.74
12122013_000844.LAB	12/12/2013	15:01:03	0.26	0.28	6.50	4.75
12122013_000845.LAB	12/12/2013	15:01:33	0.23	0.25	7.10	4.72
12122013_000846.LAB	12/12/2013	15:02:02	0.23	0.25	6.70	4.74
12122013_000847.LAB	12/12/2013	15:02:32	0.25	0.26	6.90	4.73
12122013_000848.LAB	12/12/2013	15:03:01	0.30	0.33	7.14	4.72
12122013_000849.LAB	12/12/2013	15:03:30	0.25	0.27	7.39	4.70
12122013_000850.LAB	12/12/2013	15:04:00	0.25	0.27	7.06	4.70
12122013_000851.LAB	12/12/2013	15:04:29	0.25	0.27	6.56	4.74
12122013_000852.LAB	12/12/2013	15:04:59	0.23	0.25	6.67	4.73
12122013_000853.LAB	12/12/2013	15:05:28	0.24	0.26	6.52	4.74
12122013_000854.LAB	12/12/2013	15:05:57	0.21	0.22	6.11	4.78
12122013_000855.LAB	12/12/2013	15:06:27	0.23	0.25	6.34	4.76
12122013_000856.LAB	12/12/2013	15:06:56	0.23	0.25	6.79	4.74
12122013_000857.LAB	12/12/2013	15:07:26	0.22	0.24	6.77	4.75
12122013_000858.LAB	12/12/2013	15:07:55	0.25	0.27	6.83	4.75
12122013_000859.LAB	12/12/2013	15:08:24	0.26	0.29	7.50	4.72
12122013_000860.LAB	12/12/2013	15:08:54	0.26	0.28	6.99	4.72
12122013_000861.LAB	12/12/2013	15:09:23	0.25	0.26	6.76	4.73
12122013_000862.LAB	12/12/2013	15:09:53	0.24	0.26	6.40	4.74
12122013_000863.LAB	12/12/2013	15:10:22	0.21	0.22	6.26	4.75
12122013_000864.LAB	12/12/2013	15:10:51	0.24	0.25	6.10	4.76
12122013_000865.LAB	12/12/2013	15:11:21	0.22	0.24	6.19	4.75
12122013_000866.LAB	12/12/2013	15:11:50	0.22	0.24	6.28	4.77
12122013_000867.LAB	12/12/2013	15:12:20	0.25	0.27	7.61	4.68
12122013_000868.LAB	12/12/2013	15:12:49	0.23	0.25	7.95	4.67
12122013_000869.LAB	12/12/2013	15:13:18	0.26	0.28	7.58	4.68
12122013_000870.LAB	12/12/2013	15:13:48	0.27	0.29	7.00	4.71
12122013_000871.LAB	12/12/2013	15:14:17	0.21	0.23	7.19	4.72
12122013_000872.LAB	12/12/2013	15:14:46	0.26	0.28	7.54	4.69
12122013_000873.LAB	12/12/2013	15:15:16	0.27	0.29	7.36	4.70
12122013_000874.LAB	12/12/2013	15:15:45	0.24	0.26	6.94	4.74
12122013_000875.LAB	12/12/2013	15:16:15	0.26	0.28	6.74	4.75
12122013_000876.LAB	12/12/2013	15:16:44	0.25	0.26	7.30	4.72
12122013_000877.LAB	12/12/2013	15:17:13	0.25	0.27	7.49	4.71
12122013_000878.LAB	12/12/2013	15:17:43	0.28	0.31	7.38	4.70
12122013_000879.LAB	12/12/2013	15:18:12	0.26	0.28	7.25	4.73
12122013_000880.LAB	12/12/2013	15:18:41	0.27	0.29	7.25	4.73
12122013_000881.LAB	12/12/2013	15:19:11	0.26	0.28	7.43	4.72
12122013_000882.LAB	12/12/2013	15:19:40	0.25	0.27	7.40	4.69
12122013_000883.LAB	12/12/2013	15:20:10	0.27	0.28	6.62	4.71
12122013_000884.LAB	12/12/2013	15:20:39	0.23	0.25	6.07	4.79
12122013_000885.LAB	12/12/2013	15:21:08	0.24	0.25	6.47	4.76
12122013_000886.LAB	12/12/2013	15:21:38	0.24	0.26	6.80	4.74
12122013_000887.LAB	12/12/2013	15:22:07	0.27	0.29	6.56	4.74
12122013_000888.LAB	12/12/2013	15:22:37	0.24	0.25	6.96	4.73
12122013_000889.LAB	12/12/2013	15:23:06	0.23	0.25	7.09	4.72
12122013_000890.LAB	12/12/2013	15:23:35	0.24	0.26	7.36	4.71
12122013_000891.LAB	12/12/2013	15:24:05	0.27	0.29	6.95	4.72
12122013_000892.LAB	12/12/2013	15:24:34	0.21	0.23	6.24	4.76
12122013_000893.LAB	12/12/2013	15:25:04	0.23	0.24	6.12	4.77
12122013_000894.LAB	12/12/2013	15:25:33	0.24	0.26	6.26	4.76
12122013_000895.LAB	12/12/2013	15:26:02	0.20	0.21	6.10	4.76
12122013_000896.LAB	12/12/2013	15:26:32	0.26	0.27	6.92	4.72
12122013_000897.LAB	12/12/2013	15:27:01	0.23	0.25	6.71	4.73
12122013_000898.LAB	12/12/2013	15:27:31	0.25	0.27	7.12	4.00
12122013_000899.LAB	12/12/2013	15:28:00	0.24	0.26	7.14	3.10

End R3

Start Ethylene Spike

12122013_000965.LAB

12122013_000966.LAB

End Ethylene Spike

12/12/2013

12/12/2013

16:00:20

16:00:49

0.66

0.61

0.67

0.62

1.22

1.20

-0.01

0.00

97.5

97.5

calib transfer std.

ethylene

98.85% Is CT gas +5% of surrogate value?

98.93% YES

C-4

Unit 31A Annual Compliance Emission
Measurements 12-12-13.

Ammonia Slip (NH₃) Field Data Sheets

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

12/12/13 Ffir NH₃ slip unit 3-1A North

0740 liquid N₂ added

0758 N₂ @ 2 l/min direct

0812 new background

0823 new background, open to loop

0836 N₂ through loop off, Ethylene on @ 3 l/min

0843 Ethylene off, NH₃ on @ 3 l/min

0903 NH₃ → 0.7 l/min

0912 NH₃ → 0.5 l/min

0917 NH₃ off, N₂ on @ 3 l/min

0927 N₂ off, stack gas on

1110 refill liquid N₂

1145 turbine from 70 → 100%

1221 R1 start

1321 R1 END, R2 start

1422 R2 END, R3 start

1524 R3 END

1526 NH₃ on @ 0.5 l/min

1544 NH₃ off, Ethylene on @ 3 l/min

1602 Ethylene off, N₂ on @ 3 l/min

1606 Ffir off

C-5

**Unit 31A Annual Compliance Emission
Measurements 12-12-13.**

Visible Emission Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES									
SUMMARY OF 180 MINUTE VISIBLE EMISSIONS									
PLANT : Florida Power & Light- Cape Canaveral, FL					TIME START: 12:21				
SOURCE: EU-031 "A"					TIME FINISH: 15:23				
DATE : December 12, 2013									
RESULTS:									
AVERAGE OPACITY:					0.0 %				
MAXIMUM OPACITY:					0.0 %				
HIGHEST SIX-MINUTE ROLLING AVERAGE:					0.0 %				
OBSERVATIONS:									
SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
1	0	0	0	0	46	0	0	0	0
2	0	0	0	0	47	0	0	0	0
3	0	0	0	0	48	0	0	0	0
4	0	0	0	0	49	0	0	0	0
5	0	0	0	0	50	0	0	0	0
6	0	0	0	0	51	0	0	0	0
7	0	0	0	0	52	0	0	0	0
8	0	0	0	0	53	0	0	0	0
9	0	0	0	0	54	0	0	0	0
10	0	0	0	0	55	0	0	0	0
11	0	0	0	0	56	0	0	0	0
12	0	0	0	0	57	0	0	0	0
13	0	0	0	0	58	0	0	0	0
14	0	0	0	0	59	0	0	0	0
15	0	0	0	0	60	0	0	0	0
16	0	0	0	0	61	0	0	0	0
17	0	0	0	0	62	0	0	0	0
18	0	0	0	0	63	0	0	0	0
19	0	0	0	0	64	0	0	0	0
20	0	0	0	0	65	0	0	0	0
21	0	0	0	0	66	0	0	0	0
22	0	0	0	0	67	0	0	0	0
23	0	0	0	0	68	0	0	0	0
24	0	0	0	0	69	0	0	0	0
25	0	0	0	0	70	0	0	0	0
26	0	0	0	0	71	0	0	0	0
27	0	0	0	0	72	0	0	0	0
28	0	0	0	0	73	0	0	0	0
29	0	0	0	0	74	0	0	0	0
30	0	0	0	0	75	0	0	0	0
31	0	0	0	0	76	0	0	0	0
32	0	0	0	0	77	0	0	0	0
33	0	0	0	0	78	0	0	0	0
34	0	0	0	0	79	0	0	0	0
35	0	0	0	0	80	0	0	0	0
36	0	0	0	0	81	0	0	0	0
37	0	0	0	0	82	0	0	0	0
38	0	0	0	0	83	0	0	0	0
39	0	0	0	0	84	0	0	0	0
40	0	0	0	0	85	0	0	0	0
41	0	0	0	0	86	0	0	0	0
42	0	0	0	0	87	0	0	0	0
43	0	0	0	0	88	0	0	0	0
44	0	0	0	0	89	0	0	0	0
45	0	0	0	0	90	0	0	0	0

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES									
SUMMARY OF 180 MINUTE VISIBLE EMISSIONS									
PLANT : Florida Power & Light- Cape Canaveral, FL						TIME START: 12:21			
SOURCE: EU-031 "A"						TIME FINISH: 15:23			
DATE : December 12, 2013									
OBSERVATIONS:									
SECONDS	0	15	30	45	SECONDS	0	15	30	45
MINUTES	OPACITY (%)				MINUTES	OPACITY (%)			
91	0	0	0	0	136	0	0	0	0
92	0	0	0	0	137	0	0	0	0
93	0	0	0	0	138	0	0	0	0
94	0	0	0	0	139	0	0	0	0
95	0	0	0	0	140	0	0	0	0
96	0	0	0	0	141	0	0	0	0
97	0	0	0	0	142	0	0	0	0
98	0	0	0	0	143	0	0	0	0
99	0	0	0	0	144	0	0	0	0
100	0	0	0	0	145	0	0	0	0
101	0	0	0	0	146	0	0	0	0
102	0	0	0	0	147	0	0	0	0
103	0	0	0	0	148	0	0	0	0
104	0	0	0	0	149	0	0	0	0
105	0	0	0	0	150	0	0	0	0
106	0	0	0	0	151	0	0	0	0
107	0	0	0	0	152	0	0	0	0
108	0	0	0	0	153	0	0	0	0
109	0	0	0	0	154	0	0	0	0
110	0	0	0	0	155	0	0	0	0
111	0	0	0	0	156	0	0	0	0
112	0	0	0	0	157	0	0	0	0
113	0	0	0	0	158	0	0	0	0
114	0	0	0	0	159	0	0	0	0
115	0	0	0	0	160	0	0	0	0
116	0	0	0	0	161	0	0	0	0
117	0	0	0	0	162	0	0	0	0
118	0	0	0	0	163	0	0	0	0
119	0	0	0	0	164	0	0	0	0
120	0	0	0	0	165	0	0	0	0
121	0	0	0	0	166	0	0	0	0
122	0	0	0	0	167	0	0	0	0
123	0	0	0	0	168	0	0	0	0
124	0	0	0	0	169	0	0	0	0
125	0	0	0	0	170	0	0	0	0
126	0	0	0	0	171	0	0	0	0
127	0	0	0	0	172	0	0	0	0
128	0	0	0	0	173	0	0	0	0
129	0	0	0	0	174	0	0	0	0
130	0	0	0	0	175	0	0	0	0
131	0	0	0	0	176	0	0	0	0
132	0	0	0	0	177	0	0	0	0
133	0	0	0	0	178	0	0	0	0
134	0	0	0	0	179	0	0	0	0
135	0	0	0	0	180	0	0	0	0

KOUGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES

SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 12:21

SOURCE: EU-031 "A"

TIME FINISH: 15:23

DATE : December 12, 2013

CALCULATIONS:

SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS

1	-	-	-	-	46	0.0	0.0	0.0	0.0
2	-	-	-	-	47	0.0	0.0	0.0	0.0
3	-	-	-	-	48	0.0	0.0	0.0	0.0
4	-	-	-	-	49	0.0	0.0	0.0	0.0
5	-	-	-	-	50	0.0	0.0	0.0	0.0
6	-	-	-	0.0	51	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	58	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	65	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	72	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	78	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	79	0.0	0.0	0.0	0.0
35	0.0	0.0	0.0	0.0	80	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	81	0.0	0.0	0.0	0.0
37	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0
38	0.0	0.0	0.0	0.0	83	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	84	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	85	0.0	0.0	0.0	0.0
41	0.0	0.0	0.0	0.0	86	0.0	0.0	0.0	0.0
42	0.0	0.0	0.0	0.0	87	0.0	0.0	0.0	0.0
43	0.0	0.0	0.0	0.0	88	0.0	0.0	0.0	0.0
44	0.0	0.0	0.0	0.0	89	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	90	0.0	0.0	0.0	0.0

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
 SUMMARY OF 180 MINUTE VISIBLE EMISSIONS

PLANT : Florida Power & Light- Cape Canaveral, FL TIME START: 12:21
 SOURCE: EU-031 "A" TIME FINISH: 15:23
 DATE : December 12, 2013

CALCULATIONS:

SIX-MINUTE ROLLING AVERAGES OF VISIBLE EMISSIONS

91	0.0	0.0	0.0	0.0	136	0.0	0.0	0.0	0.0
92	0.0	0.0	0.0	0.0	137	0.0	0.0	0.0	0.0
93	0.0	0.0	0.0	0.0	138	0.0	0.0	0.0	0.0
94	0.0	0.0	0.0	0.0	139	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	140	0.0	0.0	0.0	0.0
96	0.0	0.0	0.0	0.0	141	0.0	0.0	0.0	0.0
97	0.0	0.0	0.0	0.0	142	0.0	0.0	0.0	0.0
98	0.0	0.0	0.0	0.0	143	0.0	0.0	0.0	0.0
99	0.0	0.0	0.0	0.0	144	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	145	0.0	0.0	0.0	0.0
101	0.0	0.0	0.0	0.0	146	0.0	0.0	0.0	0.0
102	0.0	0.0	0.0	0.0	147	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	148	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	149	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	150	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	151	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	152	0.0	0.0	0.0	0.0
108	0.0	0.0	0.0	0.0	153	0.0	0.0	0.0	0.0
109	0.0	0.0	0.0	0.0	154	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	155	0.0	0.0	0.0	0.0
111	0.0	0.0	0.0	0.0	156	0.0	0.0	0.0	0.0
112	0.0	0.0	0.0	0.0	157	0.0	0.0	0.0	0.0
113	0.0	0.0	0.0	0.0	158	0.0	0.0	0.0	0.0
114	0.0	0.0	0.0	0.0	159	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	160	0.0	0.0	0.0	0.0
116	0.0	0.0	0.0	0.0	161	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	162	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	163	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	164	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	165	0.0	0.0	0.0	0.0
121	0.0	0.0	0.0	0.0	166	0.0	0.0	0.0	0.0
122	0.0	0.0	0.0	0.0	167	0.0	0.0	0.0	0.0
123	0.0	0.0	0.0	0.0	168	0.0	0.0	0.0	0.0
124	0.0	0.0	0.0	0.0	169	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	170	0.0	0.0	0.0	0.0
126	0.0	0.0	0.0	0.0	171	0.0	0.0	0.0	0.0
127	0.0	0.0	0.0	0.0	172	0.0	0.0	0.0	0.0
128	0.0	0.0	0.0	0.0	173	0.0	0.0	0.0	0.0
129	0.0	0.0	0.0	0.0	174	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	175	0.0	0.0	0.0	0.0
131	0.0	0.0	0.0	0.0	176	0.0	0.0	0.0	0.0
132	0.0	0.0	0.0	0.0	177	0.0	0.0	0.0	0.0
133	0.0	0.0	0.0	0.0	178	0.0	0.0	0.0	0.0
134	0.0	0.0	0.0	0.0	179	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	180	0.0	0.0	0.0	0.0

C-6

Unit 31A Annual Compliance Emission
Measurements 12-12-13.

Visible Emission Field Data Sheet

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

SOURCE NAME
Florida Power & Light - Cape Canaveral

ADDRESS
6000 North U.S. Highway 1

CITY *Cocoa* STATE *FL* ZIP *32927*

PHONE SOURCE ID NUMBER
EU-031 unit "A"

PROCESS EQUIPMENT OPERATING MODE
ULSD Fueloil Combustion BASE Load

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START STOP
Large circular stack located at north end of Plant

HEIGHT ABOVE GROUND LEVEL HEIGHT RELATIVE TO OBSERVER
START STOP START STOP
~150' ~150' ~145' ~145'

DISTANCE FROM OBSERVER DIRECTION FROM OBSERVER
START STOP START STOP
~700' ~700' ~48° ~48°

DESCRIBE EMISSIONS
START STOP
None None

EMISSION COLOR PLUME TYPE: CONTINUOUS
START STOP FUGITIVE INTERMITTENT
None None

WATER DROPLETS PRESENT: IF WATER DROPLET PLUME:
NO YES ATTACHED DETACHED

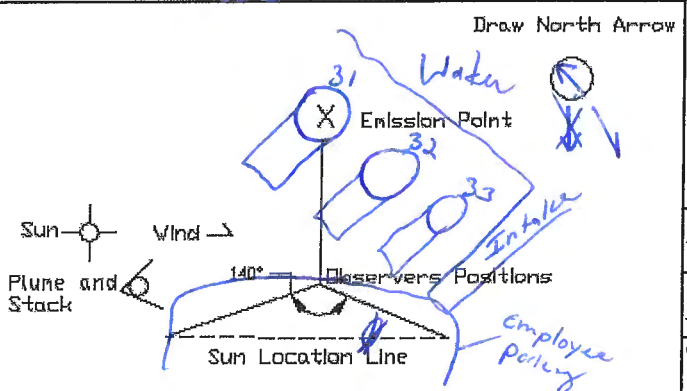
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START STOP
10 feet above stack exit

DESCRIBE BACKGROUND
START STOP
sky sky

BACKGROUND COLOR SKY CONDITIONS
START STOP START STOP
blue blue clear clear

WIND SPEED WIND DIRECTION
START STOP START STOP
0-30 0-30 N N

AMBIENT TEMP: WET BULB TEMP RH.percent
START STOP
67 66 55 73



OBSERVATION DATE	START TIME				STOP TIME			
	0	15	30	45	0	15	30	45
12-12-13	0	0	0	0	31	0	0	0
	0	0	0	0	32	0	0	0
	0	0	0	0	33	0	0	0
	0	0	0	0	34	0	0	0
	0	0	0	0	35	0	0	0
	0	0	0	0	36	0	0	0
	0	0	0	0	37	0	0	0
	0	0	0	0	38	0	0	0
	0	0	6	0	39	0	0	0
	0	0	0	0	40	0	0	0
	0	0	0	0	41	0	0	0
	0	6	0	0	42	0	0	0
	0	0	0	0	43	0	0	0
	0	0	0	0	44	0	0	0
	0	0	0	0	45	0	0	0
	0	0	0	0	46	0	0	0
	0	0	0	0	47	0	0	0
	0	0	0	0	48	0	0	0
	0	0	0	0	49	0	0	0
	0	0	0	0	50	0	0	0
	0	0	0	0	51	0	0	0
	0	0	0	0	52	0	0	0
	0	0	6	0	53	0	0	0
	0	0	0	0	54	0	0	0
	0	0	0	0	55	0	0	0
	0	0	0	0	56	0	0	0
	0	0	0	0	57	0	0	0
	0	0	0	0	58	0	0	0
	0	0	0	0	59	0	0	0
	0	0	0	0	60	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE % WERE _____

RANGE OF OPACITY READINGS
MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Ewall

OBSERVER'S SIGNATURE _____ DATE *12-12-13*

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____ CERTIFIED BY *Whitlow* DATE *July 2013*

TITLE _____ DATE _____ VERIFIED BY _____ DATE _____



SOURCE NAME
Florida Power & Light - Cape Canaveral

ADDRESS
6000 North U.S. Highway 1

CITY *Cocoa* STATE *FL* ZIP *32927*

PHONE SOURCE ID NUMBER
60-031 Unit "A"

PROCESS EQUIPMENT OPERATING MODE
USDO Fuel oil combustion BASE load

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START *large circular stack located at north end of Plant*

HEIGHT ABOVE GROUND LEVEL HEIGHT RELATIVE TO OBSERVER
START *~150'* STOP *~150'* START *~145'* STOP *~145'*

DISTANCE FROM OBSERVER DIRECTION FROM OBSERVER
START *~700'* STOP *~700'* START *~45°* STOP *~45°*

DESCRIBE EMISSIONS
START *none* STOP *none*

EMISSION COLOR PLUME TYPE: CONTINUOUS
START *none* STOP *none* FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: IF WATER DROPLET PLUME:
NO YES ATTACHED DETACHED

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START *10 feet above stack exit*

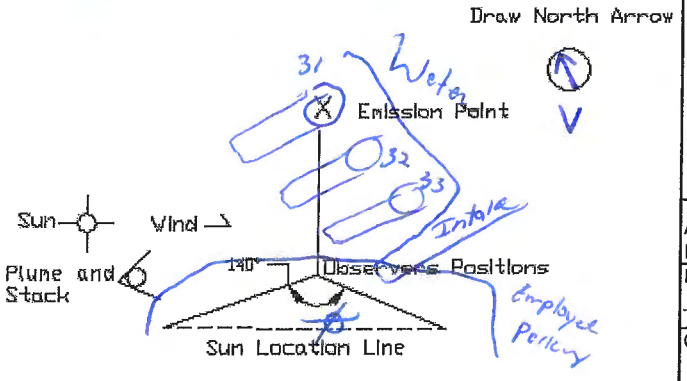
DESCRIBE BACKGROUND
START *sky* STOP *sky*

BACKGROUND COLOR SKY CONDITIONS
START *Blue* STOP *Blue* START *Clear* STOP *Clear*

WIND SPEED WIND DIRECTION
START *2-30* STOP *0-30* START *N* STOP *N*

AMBIENT TEMP: WET BULB TEMP RH, percent
START *66* STOP *64* *52* *60*

OBSERVATION	OBSERVATION DATE				START TIME				STOP TIME			
	SEC	MIN	0	15	30	45	SEC	MIN	0	15	30	45
1	0	0	0	0	0	31	0	0	0	0	0	0
2	0	0	0	0	0	32	0	0	0	0	0	0
3	0	0	0	0	0	33	0	0	0	0	0	0
4	0	0	0	0	0	34	0	0	0	0	0	0
5	0	0	0	0	0	35	0	0	0	0	0	0
6	0	0	0	0	0	36	0	0	0	0	0	0
7	0	0	0	0	0	37	0	0	0	0	0	0
8	0	0	0	0	0	38	0	0	0	0	0	0
9	0	0	0	0	0	39	0	0	0	0	0	0
10	0	0	0	0	0	40	0	0	0	0	0	0
11	0	0	0	0	0	41	0	0	0	0	0	0
12	0	0	0	0	0	42	0	0	0	0	0	0
13	0	0	0	0	0	43	0	0	0	0	0	0
14	0	0	0	0	0	44	0	0	0	0	0	0
15	0	0	0	0	0	45	0	0	0	0	0	0
16	0	0	0	0	0	46	0	0	0	0	0	0
17	0	0	0	0	0	47	0	0	0	0	0	0
18	0	0	0	0	0	48	0	0	0	0	0	0
19	0	0	0	0	0	49	0	0	0	0	0	0
20	0	0	0	0	0	50	0	0	0	0	0	0
21	0	0	0	0	0	51	0	0	0	0	0	0
22	0	0	0	0	0	52	0	0	0	0	0	0
23	0	0	0	0	0	53	0	0	0	0	0	0
24	0	0	0	0	0	54	0	0	0	0	0	0
25	0	0	0	0	0	55	0	0	0	0	0	0
26	0	0	0	0	0	56	0	0	0	0	0	0
27	0	0	0	0	0	57	0	0	0	0	0	0
28	0	0	0	0	0	58	0	0	0	0	0	0
29	0	0	0	0	0	59	0	0	0	0	0	0
30	0	0	0	0	0	60	0	0	0	0	0	0



AVERAGE OPACITY FOR HIGHEST PERIOD _____ NUMBER OF READINGS ABOVE _____ % WERE _____

RANGE OF OPACITY READINGS
MINIMUM _____ MAXIMUM _____

OBSERVER'S NAME (PRINT)
Christian K. Enval

OBSERVER'S SIGNATURE _____ DATE *12-12-13*

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE _____

CERTIFIED BY *Whitlow* DATE *July 2013*

TITLE _____ DATE _____

VERIFIED BY _____ DATE _____



SOURCE NAME
Florida Power & Light - Cape Canaveral

ADDRESS
6000 North U.S. Highway 1

CITY *Cocoa* STATE *FL* ZIP *32927*

PHONE SOURCE ID NUMBER
6U-031 unit "A"

PROCESS EQUIPMENT OPERATING MODE
VLSD Fuel Oil Combustion Base Load

CONTROL EQUIPMENT OPERATING MODE
100%

DESCRIBE EMISSION POINT
START *Large circular stack located at north end of Plant* STOP

HEIGHT ABOVE GROUND LEVEL HEIGHT RELATIVE TO OBSERVER
START *~150'* STOP *~150'* START *~145'* STOP *~145'*

DISTANCE FROM OBSERVER DIRECTION FROM OBSERVER
START *~700'* STOP *~700'* START *~45°* STOP *~45°*

DESCRIBE EMISSIONS
START *None* STOP *None*

EMISSION COLOR PLUME TYPE: CONTINUOUS
START *None* STOP *None* FUGITIVE INTERMITTENT

WATER DROPLETS PRESENT: IF WATER DROPLET PLUME:
NO YES ATTACHED DETACHED

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED
START *10 feet above the stack exit* STOP

DESCRIBE BACKGROUND
START *Blue Sky* STOP *Sky*

BACKGROUND COLOR SKY CONDITIONS
START *Blue* STOP *Blue* START *clear* STOP *clear*

WIND SPEED WIND DIRECTION
START *5-30* STOP START *N* STOP

AMBIENT TEMP: WET BULB TEMP RH.percent
START *64* STOP *48* *56*

Draw North Arrow

COMMENTS

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE

TITLE DATE

SEC MIN	O				15				30				45			
	0	15	30	45	0	15	30	45	0	15	30	45	0	15	30	45
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AVERAGE OPACITY FOR HIGHEST PERIOD NUMBER OF READINGS ABOVE % WERE

RANGE OF OPACITY READINGS MINIMUM MAXIMUM

OBSERVER'S NAME (PRINT)
Christian K. Envall

OBSERVER'S SIGNATURE DATE
[Signature] *12-12-13*

ORGANIZATION **KOGLER AND ASSOCIATES, INC.**

CERTIFIED BY DATE
Whitlow *July 2013*

VERIFIED BY DATE



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**Unit 31A Annual Compliance Emission
Measurements 12-12-13.**

Plant Operating Data

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

flowrate calculation

Date / Time	GT LOAD	GT LOAD	TOTAL FUEL	TOTAL WATER	EPA Method 19
	MW	%	OIL FLOW KPPH	INJECTION FLOW PPH	
2013/12/12 07:30:00.000	151.933	70.9	82.680	28,216.400	scf/hr
2013/12/12 07:31:00.000	151.823	70.8	82.606	28,054.300	mmbtu/hr
2013/12/12 07:32:00.000	152.372	71.0	82.606	28,065.300	1,642
2013/12/12 07:33:00.000	152.372	70.8	82.606	28,076.900	
2013/12/12 07:34:00.000	151.741	70.8	82.606	28,197.200	
2013/12/12 07:35:00.000	151.658	70.7	82.606	28,199.600	
2013/12/12 07:36:00.000	152.070	70.8	82.606	28,024.900	
2013/12/12 07:37:00.000	151.795	70.9	82.679	28,765.500	
2013/12/12 07:38:00.000	151.741	70.9	82.578	28,125.400	
2013/12/12 07:39:00.000	151.905	70.8	82.678	28,278.400	
2013/12/12 07:40:00.000	152.152	70.9	82.646	28,113.600	
2013/12/12 07:41:00.000	151.933	70.8	82.646	28,113.600	
2013/12/12 07:42:00.000	151.933	70.8	82.597	28,113.600	
2013/12/12 07:43:00.000	151.988	70.8	82.597	28,113.600	
2013/12/12 07:44:00.000	151.988	70.9	82.686	28,503.400	
2013/12/12 07:45:00.000	151.988	70.9	82.612	28,088.800	
2013/12/12 07:46:00.000	151.988	70.9	82.612	28,136.900	
2013/12/12 07:47:00.000	151.988	70.9	82.516	28,141.800	
2013/12/12 07:48:00.000	151.988	70.9	82.669	28,093.100	
2013/12/12 07:49:00.000	151.988	70.8	82.611	28,163.300	
2013/12/12 07:50:00.000	152.317	70.9	82.661	28,236.000	
2013/12/12 07:51:00.000	151.933	70.8	82.644	28,139.500	
2013/12/12 07:52:00.000	152.207	70.9	82.644	27,976.600	
2013/12/12 07:53:00.000	151.960	70.8	82.583	28,092.700	
2013/12/12 07:54:00.000	151.960	70.9	82.636	28,128.600	
2013/12/12 07:55:00.000	151.960	70.8	82.636	27,916.000	
2013/12/12 07:56:00.000	152.015	70.8	82.636	28,017.800	
2013/12/12 07:57:00.000	152.015	70.7	82.636	27,926.800	
2013/12/12 07:58:00.000	152.015	70.8	82.636	28,224.300	
2013/12/12 07:59:00.000	152.015	70.8	82.636	28,293.000	
2013/12/12 08:00:00.000	152.015	70.8	82.636	28,305.200	
2013/12/12 08:01:00.000	151.795	70.8	82.636	28,416.800	
2013/12/12 08:02:00.000	151.878	70.8	82.577	29,329.100	
2013/12/12 08:03:00.000	151.960	70.8	82.618	28,671.100	
2013/12/12 08:04:00.000	151.960	70.9	82.643	28,909.800	
2013/12/12 08:05:00.000	151.960	70.6	82.643	28,468.400	
2013/12/12 08:06:00.000	151.768	70.8	82.571	28,670.200	
2013/12/12 08:07:00.000	151.933	70.8	82.685	28,641.400	
2013/12/12 08:08:00.000	152.043	70.8	82.685	28,666.000	
2013/12/12 08:09:00.000	152.043	70.7	82.716	28,647.100	
2013/12/12 08:10:00.000	151.493	70.7	82.674	29,119.500	
2013/12/12 08:11:00.000	152.152	70.7	82.674	28,555.600	
2013/12/12 08:12:00.000	152.400	70.7	82.678	28,555.600	
2013/12/12 08:13:00.000	152.070	70.7	82.678	28,656.500	
2013/12/12 08:14:00.000	151.438	70.7	82.643	28,725.600	
2013/12/12 08:15:00.000	151.795	70.7	82.681	28,682.500	
2013/12/12 08:16:00.000	151.988	70.8	82.611	28,687.500	
2013/12/12 08:17:00.000	151.988	70.7	82.720	28,442.800	
2013/12/12 08:18:00.000	151.988	70.7	82.662	28,787.300	
2013/12/12 08:19:00.000	151.988	70.6	82.598	29,761.400	
2013/12/12 08:20:00.000	151.988	70.5	82.640	28,709.100	
2013/12/12 08:21:00.000	151.988	70.6	82.640	28,589.300	
2013/12/12 08:22:00.000	151.988	70.7	82.640	28,575.200	
2013/12/12 08:23:00.000	152.125	70.5	82.640	28,701.000	
2013/12/12 08:24:00.000	152.537	70.6	82.628	28,695.700	
2013/12/12 08:25:00.000	151.960	70.6	82.628	28,653.000	
2013/12/12 08:26:00.000	151.960	70.5	82.628	28,567.900	
2013/12/12 08:27:00.000	152.125	70.5	82.628	28,776.300	
2013/12/12 08:28:00.000	151.933	70.4	82.628	28,827.200	
2013/12/12 08:29:00.000	151.850	70.5	82.554	29,154.300	
2013/12/12 08:30:00.000	151.741	70.4	82.557	28,652.000	
2013/12/12 08:31:00.000	152.015	70.5	82.681	29,390.000	
2013/12/12 08:32:00.000	152.015	70.4	82.589	28,614.700	
2013/12/12 08:33:00.000	152.015	70.4	82.646	28,651.300	
2013/12/12 08:34:00.000	152.015	70.4	82.568	28,514.500	
2013/12/12 08:35:00.000	152.015	70.4	82.568	28,538.800	
2013/12/12 08:36:00.000	152.015	70.4	82.664	28,668.600	
2013/12/12 08:37:00.000	152.015	70.4	82.519	28,776.600	
2013/12/12 08:38:00.000	152.015	70.2	82.599	28,599.200	
2013/12/12 08:39:00.000	152.207	70.4	82.590	28,695.000	
2013/12/12 08:40:00.000	152.015	70.4	82.590	28,646.600	
2013/12/12 08:41:00.000	152.015	70.3	82.590	28,561.300	
2013/12/12 08:42:00.000	152.015	70.4	82.632	28,897.100	
2013/12/12 08:43:00.000	152.015	70.2	82.692	28,638.800	
2013/12/12 08:44:00.000	152.015	70.1	82.692	28,622.100	
2013/12/12 08:45:00.000	151.905	70.4	82.652	29,355.300	
2013/12/12 08:46:00.000	151.988	70.1	82.693	28,628.200	
2013/12/12 08:47:00.000	151.988	70.0	82.693	28,640.700	
2013/12/12 08:48:00.000	151.988	70.1	82.596	29,173.300	
2013/12/12 08:49:00.000	151.988	70.0	82.693	28,901.100	
2013/12/12 08:50:00.000	151.741	69.7	82.587	28,169.600	
2013/12/12 08:51:00.000	152.125	69.9	82.587	28,426.300	
2013/12/12 08:52:00.000	152.235	69.8	82.587	28,448.100	
2013/12/12 08:53:00.000	151.768	69.8	82.575	28,432.400	
2013/12/12 08:54:00.000	151.795	69.7	82.560	28,275.700	
2013/12/12 08:55:00.000	151.933	69.8	82.560	28,608.800	
2013/12/12 08:56:00.000	151.933	69.9	82.560	29,166.000	
2013/12/12 08:57:00.000	151.795	69.7	82.583	28,249.500	
2013/12/12 08:58:00.000	151.795	69.8	82.601	28,374.700	
2013/12/12 08:59:00.000	152.070	69.8	82.544	28,217.300	
2013/12/12 09:00:00.000	152.043	70.0	82.582	28,507.100	
2013/12/12 09:01:00.000	152.043	69.8	82.582	28,801.100	
2013/12/12 09:02:00.000	151.548	69.9	82.561	28,624.100	
2013/12/12 09:03:00.000	152.097	69.8	82.561	28,764.600	
2013/12/12 09:04:00.000	152.235	69.9	82.561	28,454.000	
2013/12/12 09:05:00.000	151.905	70.0	82.648	29,049.300	
2013/12/12 09:06:00.000	151.823	69.9	82.648	28,801.500	
2013/12/12 09:07:00.000	152.125	69.8	82.547	28,530.900	
2013/12/12 09:08:00.000	152.070	69.9	82.595	28,512.800	
2013/12/12 09:09:00.000	152.070	69.8	82.483	28,558.900	
2013/12/12 09:10:00.000	152.427	69.7	82.625	28,219.500	
2013/12/12 09:11:00.000	152.619	69.7	82.522	28,249.400	
2013/12/12 09:12:00.000	151.905	69.7	82.571	28,376.900	
2013/12/12 09:13:00.000	151.933	70.0	82.662	29,520.700	
2013/12/12 09:14:00.000	151.933	69.8	82.557	28,547.800	
2013/12/12 09:15:00.000	152.070	69.8	82.557	28,546.900	
2013/12/12 09:16:00.000	152.125	70.0	82.614	28,472.400	
2013/12/12 09:17:00.000	152.043	70.2	82.614	29,364.400	
2013/12/12 09:18:00.000	152.043	70.0	82.542	28,654.200	
2013/12/12 09:19:00.000	151.850	70.1	82.542	29,280.500	
2013/12/12 09:20:00.000	152.043	70.0	82.549	28,481.300	
2013/12/12 09:21:00.000	152.043	70.0	82.649	28,710.100	
2013/12/12 09:22:00.000	151.960	70.0	82.633	28,647.900	

$$\frac{scf}{hr} = \left(\frac{1000 \text{ fuel lb}}{hr} \right) \left(\frac{gal}{7.05 \text{ lb}} \right) \left(\frac{137,000 \text{ btu}}{gal} \right) \left(\frac{mmbtu}{1,000,000 \text{ btu}} \right) \left(\frac{9,190 \text{ dscf}}{mmbtu} \right) \left(\frac{20.9\% O_2}{20.9 - 15.0} \right)$$

2013/12/12 09:23:00:000	151.960	70.1	82.633	29,186.400	52,275,213
2013/12/12 09:24:00:000	151.795	69.9	82.551	28,479.300	52,222,958
2013/12/12 09:25:00:000	152.043	70.1	82.638	28,721.600	52,278,123
2013/12/12 09:26:00:000	152.043	70.1	82.638	28,384.000	52,278,123
2013/12/12 09:27:00:000	151.631	70.0	82.638	28,737.800	52,278,123
2013/12/12 09:28:00:000	152.372	70.0	82.669	28,506.900	52,297,670
2013/12/12 09:29:00:000	151.933	70.1	82.658	29,435.400	52,290,965
2013/12/12 09:30:00:000	151.256	69.8	82.634	28,306.200	52,275,972
2013/12/12 09:31:00:000	152.070	70.1	82.634	28,459.000	52,275,972
2013/12/12 09:32:00:000	151.988	70.0	82.634	28,682.100	52,275,972
2013/12/12 09:33:00:000	151.988	70.3	82.566	28,777.700	52,232,574
2013/12/12 09:34:00:000	151.988	70.0	82.566	28,745.600	52,232,574
2013/12/12 09:35:00:000	151.988	70.0	82.589	29,080.600	52,247,124
2013/12/12 09:36:00:000	151.988	70.1	82.589	28,574.400	52,247,124
2013/12/12 09:37:00:000	151.988	70.1	82.589	28,806.000	52,247,124
2013/12/12 09:38:00:000	151.988	70.0	82.630	29,026.200	52,273,251
2013/12/12 09:39:00:000	151.878	70.1	82.630	28,452.600	52,273,251
2013/12/12 09:40:00:000	152.262	70.2	82.630	28,732.700	52,273,251
2013/12/12 09:41:00:000	151.933	70.1	82.630	28,435.600	52,273,251
2013/12/12 09:42:00:000	152.345	70.3	82.630	29,521.700	52,273,251
2013/12/12 09:43:00:000	152.152	70.0	82.482	28,850.300	52,179,308
2013/12/12 09:44:00:000	152.152	70.1	82.630	28,799.600	52,273,378
2013/12/12 09:45:00:000	151.988	70.2	82.558	28,648.400	52,277,373
2013/12/12 09:46:00:000	151.988	70.1	82.655	28,706.600	52,289,257
2013/12/12 09:47:00:000	151.988	70.3	82.655	28,626.300	52,289,257
2013/12/12 09:48:00:000	151.988	70.2	82.542	28,781.800	52,217,644
2013/12/12 09:49:00:000	151.988	70.2	82.631	28,716.000	52,273,947
2013/12/12 09:50:00:000	151.988	70.1	82.631	28,550.400	52,273,947
2013/12/12 09:51:00:000	151.988	70.1	82.702	28,540.900	52,318,990
2013/12/12 09:52:00:000	151.741	69.9	82.615	28,555.700	52,263,889
2013/12/12 09:53:00:000	151.933	69.9	82.636	28,446.200	52,276,984
2013/12/12 09:54:00:000	151.933	70.2	82.636	28,825.100	52,276,984
2013/12/12 09:55:00:000	151.850	70.1	82.565	28,759.000	52,231,878
2013/12/12 09:56:00:000	152.125	70.1	82.561	28,668.400	52,229,285
2013/12/12 09:57:00:000	151.933	70.1	82.724	28,768.100	52,332,591
2013/12/12 09:58:00:000	151.988	70.1	82.626	28,849.700	52,270,594
2013/12/12 09:59:00:000	151.988	69.9	82.626	29,198.100	52,270,594
2013/12/12 10:00:00:000	151.988	70.0	82.653	28,512.600	52,287,928
2013/12/12 10:01:00:000	151.988	69.9	82.653	28,503.500	52,287,928
2013/12/12 10:02:00:000	151.988	70.1	82.653	28,945.900	52,287,928
2013/12/12 10:03:00:000	151.988	70.1	82.653	28,464.900	52,287,928
2013/12/12 10:04:00:000	151.988	70.2	82.552	28,712.500	52,223,781
2013/12/12 10:05:00:000	151.548	70.3	82.612	28,467.900	52,261,738
2013/12/12 10:06:00:000	151.988	70.2	82.612	28,684.000	52,261,738
2013/12/12 10:07:00:000	151.988	70.2	82.612	28,772.500	52,261,738
2013/12/12 10:08:00:000	151.988	70.2	82.612	28,925.400	52,261,738
2013/12/12 10:09:00:000	151.988	70.0	82.695	28,464.900	52,314,372
2013/12/12 10:10:00:000	151.988	70.2	82.591	28,681.500	52,248,200
2013/12/12 10:11:00:000	151.988	70.2	82.637	29,358.600	52,277,363
2013/12/12 10:12:00:000	152.180	69.9	82.588	28,663.800	52,246,365
2013/12/12 10:13:00:000	152.454	69.8	82.544	28,258.100	52,218,783
2013/12/12 10:14:00:000	152.152	70.1	82.713	28,822.600	52,325,759
2013/12/12 10:15:00:000	152.043	70.1	82.713	28,845.700	52,325,759
2013/12/12 10:16:00:000	152.043	70.1	82.668	28,735.500	52,296,911
2013/12/12 10:17:00:000	152.230	70.1	82.686	28,685.600	52,308,868
2013/12/12 10:18:00:000	152.180	70.0	82.686	28,657.400	52,308,868
2013/12/12 10:19:00:000	151.960	69.9	82.545	27,073.900	52,319,669
2013/12/12 10:20:00:000	151.960	70.1	82.663	27,700.700	52,294,318
2013/12/12 10:21:00:000	151.933	70.2	82.663	28,022.600	52,294,318
2013/12/12 10:22:00:000	151.933	70.3	82.597	28,213.800	52,251,995
2013/12/12 10:23:00:000	152.097	69.9	82.665	28,057.200	52,295,077
2013/12/12 10:24:00:000	151.576	70.2	82.665	28,494.900	52,295,077
2013/12/12 10:25:00:000	151.493	70.2	82.665	28,414.200	52,295,077
2013/12/12 10:26:00:000	151.878	70.3	82.624	28,806.000	52,269,582
2013/12/12 10:27:00:000	151.603	70.0	82.624	28,417.700	52,269,582
2013/12/12 10:28:00:000	151.933	70.4	82.589	28,928.700	52,247,251
2013/12/12 10:29:00:000	152.235	70.1	82.589	28,524.000	52,247,251
2013/12/12 10:30:00:000	151.933	70.3	82.705	28,888.800	52,320,698
2013/12/12 10:31:00:000	152.180	70.2	82.575	28,670.800	52,238,584
2013/12/12 10:32:00:000	152.707	70.0	82.603	28,660.600	52,255,981
2013/12/12 10:33:00:000	152.180	70.2	82.603	28,809.000	52,255,981
2013/12/12 10:34:00:000	151.933	70.1	82.603	28,666.000	52,255,981
2013/12/12 10:35:00:000	152.235	70.1	82.547	28,684.800	52,230,365
2013/12/12 10:36:00:000	152.262	70.1	82.617	28,834.600	52,264,774
2013/12/12 10:37:00:000	151.960	70.0	82.672	28,619.800	52,300,011
2013/12/12 10:38:00:000	151.960	70.4	82.555	29,799.500	52,225,489
2013/12/12 10:39:00:000	152.152	70.1	82.647	28,853.100	52,283,816
2013/12/12 10:40:00:000	152.125	70.0	82.662	28,989.100	52,293,305
2013/12/12 10:41:00:000	151.933	70.0	82.662	28,596.700	52,293,305
2013/12/12 10:42:00:000	151.933	70.2	82.699	28,842.900	52,316,902
2013/12/12 10:43:00:000	151.768	69.9	82.609	28,626.500	52,259,840
2013/12/12 10:44:00:000	151.850	70.3	82.715	29,244.400	52,327,150
2013/12/12 10:45:00:000	151.850	70.1	82.614	28,684.000	52,262,877
2013/12/12 10:46:00:000	151.960	70.1	82.703	28,505.100	52,319,116
2013/12/12 10:47:00:000	151.960	70.2	82.703	28,582.500	52,319,116
2013/12/12 10:48:00:000	152.207	70.2	82.597	28,971.400	52,252,565
2013/12/12 10:49:00:000	151.933	70.3	82.527	28,680.700	52,208,092
2013/12/12 10:50:00:000	152.207	70.2	82.527	28,829.700	52,208,092
2013/12/12 10:51:00:000	151.988	70.1	82.636	28,654.400	52,276,794
2013/12/12 10:52:00:000	151.988	70.3	82.636	29,279.800	52,276,794
2013/12/12 10:53:00:000	151.988	70.0	82.522	28,713.400	52,205,119
2013/12/12 10:54:00:000	151.988	70.1	82.635	28,622.700	52,276,415
2013/12/12 10:55:00:000	151.988	70.2	82.635	28,754.300	52,276,415
2013/12/12 10:56:00:000	151.988	70.2	82.635	28,660.100	52,276,415
2013/12/12 10:57:00:000	151.988	70.3	82.635	28,962.900	52,276,415
2013/12/12 10:58:00:000	151.988	70.2	82.553	29,098.400	52,224,540
2013/12/12 10:59:00:000	151.741	70.1	82.553	28,745.200	52,224,540
2013/12/12 11:00:00:000	151.960	70.0	82.656	28,634.300	52,289,636
2013/12/12 11:01:00:000	151.960	70.0	82.674	28,469.300	52,301,087
2013/12/12 11:02:00:000	151.960	70.4	82.674	29,587.200	52,301,087
2013/12/12 11:03:00:000	151.768	70.3	82.680	28,769.300	52,305,009
2013/12/12 11:04:00:000	152.070	70.2	82.516	28,804.800	52,200,817
2013/12/12 11:05:00:000	151.631	70.3	82.618	29,782.800	52,265,723
2013/12/12 11:06:00:000	151.933	70.1	82.558	28,827.400	52,227,703
2013/12/12 11:07:00:000	151.631	69.8	82.558	28,369.700	52,227,703
2013/12/12 11:08:00:000	152.207	70.2	82.560	28,895.500	52,228,905
2013/12/12 11:09:00:000	151.384	70.1	82.645	28,614.800	52,282,677
2013/12/12 11:10:00:000	152.097	70.1	82.501	28,552.500	52,151,770
2013/12/12 11:11:00:000	152.454	70.3	82.582	28,749.900	52,242,886
2013/12/12 11:12:00:000	151.493	70.4	82.530	29,266.300	52,209,863
2013/12/12 11:13:00:000	152.097	70.2	82.530	29,455.200	52,209,863
2013/12/12 11:14:00:000	151.741	70.0	82.530	28,579.400	52,209,863
2013/12/12 11:15:00:000	151.905	70.1	82.574	28,656.500	52,237,635
2013/12/12 11:16:00:000	152.125	70.2	82.595	28,890.200	52,251,173
2013/12/12 11:17:00:000	152.097	70.1	82.595	29,154.200	52,251,173
2013/12/12 11:18:00:000	152.070	70.1	82.656	29,549.100	52,289,699
2013/12/12 11:19:00:000	152.070	69.8	82.578	28,553.000	52,240,292
2013/12/12 11:20:00:000	151.905	70.0	82.636	28,768.000	52,276,984
2013/12/12 11:21:00:000	151.988	70.0	82.636	28,408.900	52,276,984
2013/12/12 11:22:00:000	151.988	70.0	82.573	28,904.100	52,237,129
2013/12/12 11:23:00:000	151.988	70.2	82.537	29,920.500	52,214,418

2013/12/12 11:24:00:000	151.988	69.8	82.623	28,167.300			52,268,760
2013/12/12 11:25:00:000	151.988	69.9	82.565	28,687.900			52,232,258
2013/12/12 11:26:00:000	152.317	69.9	82.513	28,624.900			52,199,233
2013/12/12 11:27:00:000	151.905	69.8	82.620	28,484.400			52,266,862
2013/12/12 11:28:00:000	151.741	69.9	82.528	28,484.400			52,208,345
2013/12/12 11:29:00:000	152.157	69.8	82.615	28,515.200			52,263,767
2013/12/12 11:30:00:000	151.905	69.7	82.556	27,991.300			52,226,628
2013/12/12 11:31:00:000	152.262	69.9	82.556	28,401.000			52,226,628
2013/12/12 11:32:00:000	151.960	70.1	82.528	29,653.300			52,208,345
2013/12/12 11:33:00:000	151.960	69.9	82.528	28,623.800			52,208,345
2013/12/12 11:34:00:000	152.619	69.8	82.518	28,641.300			52,202,335
2013/12/12 11:35:00:000	151.905	70.0	82.447	28,656.200			52,157,103
2013/12/12 11:36:00:000	151.905	69.9	82.539	28,779.800			52,215,810
2013/12/12 11:37:00:000	152.015	69.8	82.467	28,168.400			52,170,261
2013/12/12 11:38:00:000	152.015	69.8	82.535	28,168.400			52,212,963
2013/12/12 11:39:00:000	152.015	70.0	82.535	28,655.600			52,212,963
2013/12/12 11:40:00:000	151.658	70.0	82.465	28,746.900			52,168,616
2013/12/12 11:41:00:000	152.070	69.9	82.536	28,421.800			52,213,912
2013/12/12 11:42:00:000	152.070	70.1	82.538	29,753.400			52,215,177
2013/12/12 11:43:00:000	151.493	69.9	82.455	28,970.700			52,162,607
2013/12/12 11:44:00:000	151.933	70.0	82.580	29,133.800			52,241,368
2013/12/12 11:45:00:000	152.345	70.0	82.570	28,774.900			52,235,205
2013/12/12 11:46:00:000	151.960	69.8	82.446	28,402.100			52,156,669
2013/12/12 11:47:00:000	151.960	69.8	82.570	28,155.700			52,231,168
2013/12/12 11:48:00:000	153.937	71.2	83.700	29,029.700			52,633,464
2013/12/12 11:49:00:000	164.399	75.8	86.591	26,433.000			54,778,797
2013/12/12 11:50:00:000	174.842	80.7	90.021	26,923.700			56,948,801
2013/12/12 11:51:00:000	184.335	85.4	93.918	32,828.400			59,414,175
2013/12/12 11:52:00:000	196.143	90.2	97.379	38,360.800			61,603,601
2013/12/12 11:53:00:000	209.941	94.2	101.291	40,477.900			64,078,464
2013/12/12 11:54:00:000	215.007	98.5	105.320	44,321.800			66,627,280
2013/12/12 11:55:00:000	220.087	99.9	107.415	45,749.600			67,952,614
2013/12/12 11:56:00:000	219.895	99.2	107.149	49,519.200			67,784,338
2013/12/12 11:57:00:000	220.554	98.9	107.574	50,366.500			68,053,200
2013/12/12 11:58:00:000	221.268	98.5	107.470	49,934.400			67,987,408
2013/12/12 11:59:00:000	221.982	98.8	107.470	49,499.300			67,987,408
2013/12/12 12:00:00:000	220.801	98.6	107.310	49,785.400			67,886,189
2013/12/12 12:01:00:000	221.323	98.6	107.367	49,751.200			67,922,249
2013/12/12 12:02:00:000	221.131	98.6	107.367	49,555.700			67,922,249
2013/12/12 12:03:00:000	220.801	98.5	107.367	49,332.400			67,922,249
2013/12/12 12:04:00:000	221.076	98.6	107.384	49,365.300			67,933,003
2013/12/12 12:05:00:000	221.076	98.5	107.384	49,232.500			67,933,003
2013/12/12 12:06:00:000	220.829	98.5	107.258	49,298.700			67,853,293
2013/12/12 12:07:00:000	220.829	98.5	107.382	49,909.200			67,931,738
2013/12/12 12:08:00:000	220.829	98.6	107.270	49,208.500			67,860,885
2013/12/12 12:09:00:000	220.636	98.5	107.266	49,986.000			67,858,354
2013/12/12 12:10:00:000	221.103	98.5	107.418	49,497.100			67,954,512
2013/12/12 12:11:00:000	220.883	98.6	107.418	49,543.000			67,954,512
2013/12/12 12:12:00:000	220.883	98.5	107.235	49,610.800			67,838,743
2013/12/12 12:13:00:000	220.417	98.5	107.233	50,633.100			67,837,478
2013/12/12 12:14:00:000	220.334	98.4	107.233	50,857.400			67,837,478
2013/12/12 12:15:00:000	220.883	98.6	107.369	50,209.100			67,923,514
2013/12/12 12:16:00:000	220.746	98.5	107.245	50,400.900			67,845,069
2013/12/12 12:17:00:000	220.417	98.6	107.176	51,112.400			67,801,419
2013/12/12 12:18:00:000	221.076	98.5	107.283	51,627.800			67,869,109
2013/12/12 12:19:00:000	221.268	98.7	107.344	51,332.500	run 1		67,907,698
2013/12/12 12:20:00:000	221.048	98.7	107.381	51,310.700	67,881,476	67,931,105	67,931,105
2013/12/12 12:21:00:000	221.048	98.6	107.381	51,307.000		67,931,105	67,931,105
2013/12/12 12:22:00:000	221.048	98.6	107.381	51,500.500		67,931,105	67,931,105
2013/12/12 12:23:00:000	220.801	98.5	107.282	51,636.500		67,868,476	67,868,476
2013/12/12 12:24:00:000	220.691	98.6	107.375	52,236.200		67,927,309	67,927,309
2013/12/12 12:25:00:000	221.378	98.7	107.340	51,713.200		67,905,168	67,905,168
2013/12/12 12:26:00:000	221.103	98.7	107.447	51,794.600		67,972,858	67,972,858
2013/12/12 12:27:00:000	220.746	98.7	107.447	51,882.900		67,972,858	67,972,858
2013/12/12 12:28:00:000	221.021	98.6	107.297	51,453.200		67,877,965	67,877,965
2013/12/12 12:29:00:000	220.856	98.6	107.249	51,477.600		67,847,600	67,847,600
2013/12/12 12:30:00:000	220.856	98.6	107.249	51,242.900		67,847,600	67,847,600
2013/12/12 12:31:00:000	220.993	98.6	107.349	51,629.600		67,910,861	67,910,861
2013/12/12 12:32:00:000	220.993	98.6	107.252	51,417.800		67,849,497	67,849,497
2013/12/12 12:33:00:000	220.993	98.7	107.298	51,182.400		67,878,598	67,878,598
2013/12/12 12:34:00:000	221.048	98.6	107.298	51,309.500		67,878,598	67,878,598
2013/12/12 12:35:00:000	221.048	98.8	107.358	51,819.400		67,916,555	67,916,555
2013/12/12 12:36:00:000	221.048	98.7	107.266	51,663.100		67,858,354	67,858,354
2013/12/12 12:37:00:000	221.048	98.6	107.361	51,734.300		67,918,453	67,918,453
2013/12/12 12:38:00:000	221.048	98.6	107.259	51,557.500		67,853,926	67,853,926
2013/12/12 12:39:00:000	221.048	98.8	107.323	51,552.700		67,894,413	67,894,413
2013/12/12 12:40:00:000	221.543	98.7	107.300	51,518.700		67,879,863	67,879,863
2013/12/12 12:41:00:000	220.938	98.5	107.287	51,122.700		67,871,639	67,871,639
2013/12/12 12:42:00:000	221.323	98.7	107.287	51,745.000		67,871,639	67,871,639
2013/12/12 12:43:00:000	221.021	98.6	107.287	51,709.600		67,871,639	67,871,639
2013/12/12 12:44:00:000	221.048	98.7	107.341	51,486.000		67,905,800	67,905,800
2013/12/12 12:45:00:000	221.433	98.8	107.341	51,136.500		67,905,800	67,905,800
2013/12/12 12:46:00:000	221.350	98.7	107.341	51,235.300		67,905,800	67,905,800
2013/12/12 12:47:00:000	220.609	98.6	107.341	51,726.500		67,905,800	67,905,800
2013/12/12 12:48:00:000	221.103	98.6	107.279	51,211.600		67,866,578	67,866,578
2013/12/12 12:49:00:000	221.103	98.7	107.279	51,311.400		67,866,578	67,866,578
2013/12/12 12:50:00:000	221.570	98.8	107.345	51,408.800		67,908,331	67,908,331
2013/12/12 12:51:00:000	221.240	98.8	107.345	51,494.500		67,908,331	67,908,331
2013/12/12 12:52:00:000	220.911	98.7	107.262	51,662.600		67,855,824	67,855,824
2013/12/12 12:53:00:000	221.076	98.7	107.262	51,327.500		67,855,824	67,855,824
2013/12/12 12:54:00:000	221.076	98.6	107.250	51,327.500		67,848,232	67,848,232
2013/12/12 12:55:00:000	221.076	98.8	107.285	51,376.200		67,870,374	67,870,374
2013/12/12 12:56:00:000	221.625	98.6	107.291	51,421.200		67,874,170	67,874,170
2013/12/12 12:57:00:000	221.048	98.7	107.291	51,421.200		67,874,170	67,874,170
2013/12/12 12:58:00:000	221.076	98.8	107.204	51,275.100		67,819,132	67,819,132
2013/12/12 12:59:00:000	220.883	98.7	107.328	51,708.700		67,897,576	67,897,576
2013/12/12 01:00:00:000	221.295	98.8	107.351	51,364.700		67,912,127	67,912,127
2013/12/12 01:01:00:000	221.295	98.8	107.244	51,425.600		67,844,437	67,844,437
2013/12/12 01:02:00:000	221.295	98.8	107.303	51,611.100		67,881,761	67,881,761
2013/12/12 01:03:00:000	221.103	98.8	107.227	51,143.100		67,833,682	67,833,682
2013/12/12 01:04:00:000	221.103	98.7	107.267	51,214.500		67,858,987	67,858,987
2013/12/12 01:05:00:000	221.103	98.8	107.150	51,565.800		67,784,971	67,784,971
2013/12/12 01:06:00:000	221.103	98.7	107.150	51,286.000		67,784,971	67,784,971
2013/12/12 01:07:00:000	221.103	98.8	107.302	51,312.800		67,881,128	67,881,128
2013/12/12 01:08:00:000	221.323	98.8	107.302	51,484.200		67,881,128	67,881,128
2013/12/12 01:09:00:000	221.323	98.8	107.326	51,223.800		67,896,311	67,896,311
2013/12/12 01:10:00:000	221.323	98.8	107.243	51,621.900		67,843,804	67,843,804
2013/12/12 01:11:00:000	221.735	98.7	107.298	51,639.400		67,878,598	67,878,598
2013/12/12 01:12:00:000	221.515	98.8	107.421	51,751.000		67,956,410	67,956,410
2013/12/12 01:13:00:000	220.829	98.7	107.246	50,986.100		67,845,702	67,845,702
2013/12/12 01:14:00:000	221.076	98.7	107.246	51,433.200		67,845,702	67,845,702
2013/12/12 01:15:00:000	221.735	98.8	107.246	51,669.400		67,845,702	67,845,702
2013/12/12 01:16:00:000	221.076	98.8	107.327	51,909.500		67,896,944	

2013/12/12 01:25:00:000	220.966	98.8	107.236	51,165.600		67,839,376
2013/12/12 01:26:00:000	221.268	98.9	107.236	51,622.600		67,839,376
2013/12/12 01:27:00:000	221.570	98.9	107.299	51,933.300		67,879,231
2013/12/12 01:28:00:000	221.707	98.9	107.400	51,750.800		67,943,125
2013/12/12 01:29:00:000	221.131	98.7	107.204	51,468.300		67,819,132
2013/12/12 01:30:00:000	221.186	98.8	107.273	51,507.200		67,862,782
2013/12/12 01:31:00:000	221.680	98.9	107.300	51,472.600		67,879,863
2013/12/12 01:32:00:000	221.488	98.9	107.300	51,428.300		67,879,863
2013/12/12 01:33:00:000	221.954	99.0	107.373	51,363.200		67,926,044
2013/12/12 01:34:00:000	221.735	98.9	107.373	51,977.000		67,926,044
2013/12/12 01:35:00:000	221.323	98.9	107.267	51,867.600		67,858,987
2013/12/12 01:36:00:000	221.076	98.8	107.167	51,204.300		67,795,725
2013/12/12 01:37:00:000	221.543	98.8	107.167	51,091.900		67,795,725
2013/12/12 01:38:00:000	220.417	98.8	107.188	51,336.300		67,809,010
2013/12/12 01:39:00:000	221.625	99.0	107.272	51,372.400		67,862,150
2013/12/12 01:40:00:000	221.625	99.0	107.391	51,146.900		67,937,431
2013/12/12 01:41:00:000	221.680	98.9	107.244	51,433.900		67,844,437
2013/12/12 01:42:00:000	220.911	98.9	107.350	51,530.900		67,911,494
2013/12/12 01:43:00:000	222.009	99.0	107.479	51,845.400		67,993,102
2013/12/12 01:44:00:000	221.323	98.9	107.281	51,064.700		67,867,843
2013/12/12 01:45:00:000	221.323	99.0	107.281	51,518.800		67,867,843
2013/12/12 01:46:00:000	221.680	99.0	107.444	51,953.400		67,970,600
2013/12/12 01:47:00:000	221.350	98.8	107.249	51,283.000		67,847,600
2013/12/12 01:48:00:000	221.350	98.8	107.353	51,676.900		67,913,392
2013/12/12 01:49:00:000	221.350	98.7	107.117	51,142.800		67,764,024
2013/12/12 01:50:00:000	221.213	98.7	107.185	51,599.100		67,807,112
2013/12/12 01:51:00:000	221.213	98.9	107.353	51,726.600		67,913,392
2013/12/12 01:52:00:000	221.735	99.0	107.453	51,726.600		67,976,654
2013/12/12 01:53:00:000	220.746	98.9	107.259	51,573.300		67,853,926
2013/12/12 01:54:00:000	222.284	99.0	107.356	52,264.300		67,915,290
2013/12/12 01:55:00:000	221.625	99.0	107.356	52,085.900		67,915,290
2013/12/12 01:56:00:000	221.707	99.0	107.356	51,799.400		67,915,290
2013/12/12 01:57:00:000	221.131	98.7	107.111	51,754.000		67,760,298
2013/12/12 01:58:00:000	221.131	98.8	107.231	50,961.200		67,836,213
2013/12/12 01:59:00:000	221.268	99.0	107.443	51,135.100		67,970,327
2013/12/12 02:00:00:000	221.625	98.9	107.288	51,224.600		67,872,272
2013/12/12 02:01:00:000	221.460	98.9	107.327	51,698.800		67,896,944
2013/12/12 02:02:00:000	221.460	99.0	107.370	51,777.200		67,924,146
2013/12/12 02:03:00:000	220.829	98.8	107.197	51,579.400		67,814,704
2013/12/12 02:04:00:000	221.323	98.9	107.197	51,766.700		67,814,704
2013/12/12 02:05:00:000	221.323	98.9	107.290	51,394.200		67,902,637
2013/12/12 02:06:00:000	221.323	98.9	107.379	51,595.300		67,929,840
2013/12/12 02:07:00:000	221.268	98.9	107.293	51,091.400		67,875,435
2013/12/12 02:08:00:000	221.268	98.9	107.220	51,716.000		67,829,254
2013/12/12 02:09:00:000	221.680	98.9	107.337	51,659.300		67,903,270
2013/12/12 02:10:00:000	221.790	98.9	107.404	51,879.200		67,945,655
2013/12/12 02:11:00:000	221.186	98.9	107.285	51,400.500		67,870,374
2013/12/12 02:12:00:000	221.707	98.9	107.386	51,597.300		67,934,268
2013/12/12 02:13:00:000	221.762	99.1	107.386	52,101.300		67,934,268
2013/12/12 02:14:00:000	221.762	99.0	107.276	51,185.100		67,864,680
2013/12/12 02:15:00:000	221.543	98.9	107.339	51,490.900		67,904,535
2013/12/12 02:16:00:000	221.186	98.8	107.236	51,290.700		67,839,376
2013/12/12 02:17:00:000	221.186	98.8	107.170	51,548.900		67,797,623
2013/12/12 02:18:00:000	221.680	98.9	107.368	51,487.800		67,922,881
2013/12/12 02:19:00:000	221.652	99.0	107.202	51,281.800		67,817,867
2013/12/12 02:20:00:000	221.213	98.9	107.202	51,285.000		67,817,867
2013/12/12 02:21:00:000	221.433	99.0	107.331	51,934.500		67,899,474
2013/12/12 02:22:00:000	221.570	99.0	107.429	51,624.600		67,957,676
2013/12/12 02:23:00:000	221.570	99.0	107.336	51,620.300		67,902,637
2013/12/12 02:24:00:000	220.966	98.8	107.158	51,209.900		67,790,031
2013/12/12 02:25:00:000	221.048	98.9	107.158	51,708.800		67,790,031
2013/12/12 02:26:00:000	222.229	99.1	107.298	51,707.200		67,878,598
2013/12/12 02:27:00:000	221.570	98.9	107.318	51,537.000		67,891,250
2013/12/12 02:28:00:000	221.240	98.9	107.318	51,164.400		67,891,250
2013/12/12 02:29:00:000	221.680	98.9	107.318	51,652.100		67,891,250
2013/12/12 02:30:00:000	221.350	99.0	107.318	51,391.400		67,891,250
2013/12/12 02:31:00:000	221.762	99.1	107.465	51,863.600		67,984,245
2013/12/12 02:32:00:000	221.762	99.0	107.337	51,875.100		67,903,270
2013/12/12 02:33:00:000	221.515	99.0	107.337	51,719.300		67,903,270
2013/12/12 02:34:00:000	221.515	99.0	107.192	51,370.800		67,811,540
2013/12/12 02:35:00:000	222.394	99.1	107.398	51,771.300		67,941,860
2013/12/12 02:36:00:000	221.488	99.1	107.302	51,681.200		67,881,128
2013/12/12 02:37:00:000	221.295	98.9	107.271	51,685.200		67,861,517
2013/12/12 02:38:00:000	221.954	99.1	107.365	51,679.400		67,920,983
2013/12/12 02:39:00:000	221.405	98.9	107.181	51,534.700		67,804,582
2013/12/12 02:40:00:000	221.405	98.9	107.286	51,251.900		67,869,741
2013/12/12 02:41:00:000	221.405	98.9	107.284	51,822.400		67,869,741
2013/12/12 02:42:00:000	221.240	98.9	107.284	51,472.800		67,869,741
2013/12/12 02:43:00:000	221.762	98.7	107.091	51,032.700		67,747,646
2013/12/12 02:44:00:000	221.515	99.0	107.348	51,479.300	run 2	67,910,229
2013/12/12 02:45:00:000	221.515	99.0	107.348	51,527.700	67,898,525	67,910,229
2013/12/12 02:46:00:000	221.515	99.0	107.275	51,563.600		67,864,048
2013/12/12 02:47:00:000	221.872	99.0	107.348	51,046.900		67,910,229
2013/12/12 02:48:00:000	221.460	99.0	107.262	51,746.300		67,855,824
2013/12/12 02:49:00:000	221.460	99.1	107.453	51,552.200		67,976,654
2013/12/12 02:50:00:000	221.543	98.9	107.256	51,797.100		67,852,028
2013/12/12 02:51:00:000	221.543	99.1	107.447	51,636.400		67,972,858
2013/12/12 02:52:00:000	222.064	99.2	107.404	52,260.300		67,945,655
2013/12/12 02:53:00:000	221.488	98.9	107.404	51,754.200		67,945,655
2013/12/12 02:54:00:000	220.746	98.9	107.293	52,374.800		67,875,435
2013/12/12 02:55:00:000	221.707	99.0	107.386	52,651.400		67,934,268
2013/12/12 02:56:00:000	220.911	98.9	107.277	51,877.800		67,865,313
2013/12/12 02:57:00:000	221.460	99.1	107.428	51,926.100		67,960,838
2013/12/12 02:58:00:000	221.543	98.9	107.203	51,860.200		67,818,499
2013/12/12 02:59:00:000	221.240	98.9	107.318	51,373.700		67,891,250
2013/12/12 03:00:00:000	221.240	98.9	107.262	52,268.700		67,855,824
2013/12/12 03:01:00:000	221.378	98.9	107.357	51,678.700		67,915,922
2013/12/12 03:02:00:000	221.268	98.9	107.265	51,984.600		67,857,722
2013/12/12 03:03:00:000	221.515	99.0	107.311	51,506.700		67,886,822
2013/12/12 03:04:00:000	221.323	98.9	107.247	51,803.400		67,846,334
2013/12/12 03:05:00:000	221.213	98.9	107.247	51,801.200		67,846,334
2013/12/12 03:06:00:000	221.350	99.0	107.307	52,529.800		67,884,291
2013/12/12 03:07:00:000	221.872	99.1	107.525	52,204.700		68,022,202
2013/12/12 03:08:00:000	221.817	99.0	107.359	51,905.300		67,917,188
2013/12/12 03:09:00:000	221.652	98.8	107.218	51,718.300		67,827,988
2013/12/12 03:10:00:000	222.009	99.0	107.348	51,893.200		67,910,229
2013/12/12 03:11:00:000	221.543	99.1	107.348	51,729.800		67,910,229
2013/12/12 03:12:00:000	220.993	98.8	107.210	51,982.700		67,822,928
2013/12/12 03:13:00:000	221.405	99.0	107.210	51,823.000		67,822,928
2013/12/12 03:14:00:000	221.405	99.0	107.407	52,185.500		67,947,553
2013/12/12 03:15:00:000	221.762	99.0	107.334	52,229.800		67,901,372
2013/12/12 03:16:00:000	221.762	99.1	107.467	51,438.500		67,985,510
2013/12/12 03:17:00:000	221.735	99.0	107.325	52,425.700		67,895,679
2013/12/12 03:18:00:000	221.762	99.0	107.288	51,521.000		67,872,272
2013/12/12 03:19:00:000	221.570	99.0	107.379	52,205.700		67,929,840
2013/12/12 03:20:00:000	221.048	98.9	107.311	51,973.000		67,886,822
2013/12/12 03:21:00:000	221.323	99.0	107.280	51,604.700		67,867,211
2013/12/12 03:22:00:000	221.597	98.9	107.280	52,352.500		67,867,211
2013/12/12 03:23:00:000	221.762	98.9	107.280	51,847.500		67,867,211
2013/12/12 03:24:00:000	221.460	99.0	107.280	51,841.100		67,867,211
2013/12/12 03:25:00:000	221.680	99.0	107.280	52,160.400		67,867,211

2013/12/12 03:26:00.000	221.680	99.0	107.410	51,500.100	67,949,451	67,949,451
2013/12/12 03:27:00.000	221.680	99.0	107.327	51,588.900	67,896,944	67,896,944
2013/12/12 03:28:00.000	221.790	99.1	107.403	51,898.100	67,945,023	67,945,023
2013/12/12 03:29:00.000	221.460	99.0	107.290	51,768.900	67,873,537	67,873,537
2013/12/12 03:30:00.000	221.460	99.0	107.363	51,747.200	67,919,718	67,919,718
2013/12/12 03:31:00.000	221.900	99.1	107.430	52,384.100	67,962,103	67,962,103
2013/12/12 03:32:00.000	221.543	99.1	107.401	51,829.700	67,943,758	67,943,758
2013/12/12 03:33:00.000	221.795	99.1	107.401	51,803.600	67,943,758	67,943,758
2013/12/12 03:34:00.000	221.186	98.9	107.241	51,724.100	67,842,539	67,842,539
2013/12/12 03:35:00.000	221.597	99.0	107.382	52,011.300	67,931,738	67,931,738
2013/12/12 03:36:00.000	220.993	98.7	107.208	51,908.800	67,821,662	67,821,662
2013/12/12 03:37:00.000	221.460	98.9	107.336	52,460.200	67,902,637	67,902,637
2013/12/12 03:38:00.000	221.460	99.0	107.336	52,089.500	67,902,637	67,902,637
2013/12/12 03:39:00.000	221.570	98.9	107.336	51,983.300	67,902,637	67,902,637
2013/12/12 03:40:00.000	222.449	99.2	107.433	52,340.000	67,964,001	67,964,001
2013/12/12 03:41:00.000	220.911	99.0	107.278	51,719.800	67,865,946	67,865,946
2013/12/12 03:42:00.000	221.350	99.0	107.214	51,823.900	67,825,458	67,825,458
2013/12/12 03:43:00.000	221.652	99.1	107.377	52,365.800	67,928,575	67,928,575
2013/12/12 03:44:00.000	221.652	99.0	107.377	53,118.500	67,928,575	67,928,575
2013/12/12 03:45:00.000	221.845	99.1	107.496	52,389.900	68,003,856	68,003,856
2013/12/12 03:46:00.000	221.845	99.0	107.441	51,978.600	67,969,062	67,969,062
2013/12/12 03:47:00.000	221.845	99.1	107.331	52,138.900	67,899,474	67,899,474
2013/12/12 03:48:00.000	221.488	99.0	107.331	51,855.800	67,899,474	67,899,474
2013/12/12 03:49:00.000	221.488	99.0	107.287	52,314.600	67,871,639	67,871,639
2013/12/12 03:50:00.000	221.488	99.0	107.416	52,831.400	67,953,247	67,953,247
2013/12/12 03:51:00.000	221.652	99.0	107.416	52,581.900	67,953,247	67,953,247
2013/12/12 03:52:00.000	221.652	99.1	107.435	52,358.800	67,965,267	67,965,267
2013/12/12 03:53:00.000	221.378	99.1	107.435	52,451.000 run 3	67,965,267	67,965,267
2013/12/12 03:54:00.000	221.405	99.1	107.435	52,384.600 67,935,624	67,965,267	67,965,267
2013/12/12 03:55:00.000	221.707	99.0	107.397	52,488.700	67,941,227	67,941,227
2013/12/12 03:56:00.000	221.707	99.0	107.397	52,564.300	67,941,227	67,941,227
2013/12/12 03:57:00.000	221.515	99.0	107.442	52,304.000	67,969,695	67,969,695
2013/12/12 03:58:00.000	221.515	98.9	107.342	52,296.000	67,906,433	67,906,433
2013/12/12 03:59:00.000	221.268	99.0	107.311	52,415.800	67,886,822	67,886,822
2013/12/12 04:00:00.000	221.680	99.0	107.393	52,520.900	67,938,697	67,938,697

D-1

NOx Converter Efficiency Test
Calculations

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Date & Time	NO	NOx	NOx Converter Stability Test		
12/13/2013 9:10	99.95	100.03	<< 100 NOx		
12/13/2013 9:11	99.83	100.15	NO	NOx	
12/13/2013 9:12	77.25	70.18	99.89	100.09	<average
12/13/2013 9:13	47.98	48.45	<< 48.7 NOx		
12/13/2013 9:14	47.85	48.15	NO	NOx	
12/13/2013 9:15	34.03	36.55	47.91	48.30	<average
12/13/2013 9:16	0.10	0.55	<< Zero Air		
12/13/2013 9:17	0.05	0.20	NO	NOx	
12/13/2013 9:18	0.08	0.33	0.07	0.38	<average
12/13/2013 9:19	0.10	0.43			
12/13/2013 9:20	0.08	0.23			
12/13/2013 9:21	0.08	0.15			
12/13/2013 9:22	0.08	0.13			
12/13/2013 9:23	0.05	0.10			
12/13/2013 9:24	0.05	0.10			
12/13/2013 9:25	0.05	0.10			
12/13/2013 9:26	0.05	0.10			
12/13/2013 9:27	34.15	50.45	<< Bag On		
12/13/2013 9:28	44.28	47.75			
12/13/2013 9:29	46.50	46.95			
12/13/2013 9:30	45.83	46.73	<< Start Converter Stability Test (NOx Peak)		
12/13/2013 9:31	45.40	46.68			
12/13/2013 9:32	44.95	46.65			
12/13/2013 9:33	44.50	46.63			
12/13/2013 9:34	44.15	46.60			
12/13/2013 9:35	43.78	46.58			
12/13/2013 9:36	43.38	46.53			
12/13/2013 9:37	42.98	46.48			
12/13/2013 9:38	42.70	46.53			
12/13/2013 9:39	42.33	46.55			
12/13/2013 9:40	42.00	46.48			
12/13/2013 9:41	41.63	46.45			
12/13/2013 9:42	41.25	46.38			
12/13/2013 9:43	40.93	46.33			
12/13/2013 9:44	40.58	46.30			
12/13/2013 9:45	40.30	46.33			
12/13/2013 9:46	39.95	46.23			
12/13/2013 9:47	39.63	46.20			
12/13/2013 9:48	39.33	46.13			
12/13/2013 9:49	39.03	46.10			
12/13/2013 9:50	38.75	46.05			
12/13/2013 9:51	38.58	46.30			
12/13/2013 9:52	38.20	46.10			
12/13/2013 9:53	37.98	46.15			
12/13/2013 9:54	37.68	46.00			
12/13/2013 9:55	37.38	45.90			

12/13/2013 9:56	37.15	45.98
12/13/2013 9:57	36.88	45.90
12/13/2013 9:58	36.63	45.88
12/13/2013 9:59	36.45	45.95 << End Converter Stability Test (NOx Final)
12/13/2013 10:00	33.15	42.20
12/13/2013 10:01	1.25	3.98
12/13/2013 10:02	3.78	1.68
12/13/2013 10:03	0.05	0.13
12/13/2013 10:04	0.03	0.08
12/13/2013 10:05	18.68	12.55
12/13/2013 10:06	46.20	46.45
12/13/2013 10:07	46.35	46.80
12/13/2013 10:08	46.45	47.05

<< Zero Air		
NO	NOx	
0.04	0.10	<average
<< 48.7 NOx		
NO	NOx	
46.40	46.93	<average

Maximum 2 % Loss Allowed

NOx Converter Stability	1.66	% Loss
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$$\frac{(\text{NOx Peak} - \text{NOx Final})}{\text{NOx Peak}} \times 100$$

D-2

NOx Converter Efficiency Test

Field Data Sheet

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

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Calibration Gas Certification

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KOGLER & ASSOCIATES, INC.

ENVIRONMENTAL SERVICES

CERTIFICATE OF BATCH ANALYSIS NITROGEN - ULTRA HIGH PURITY-PURE

Part Number:	NI UHP15A	Reference Number:	55-400124427-1
Cylinder Analyzed:	CC69736	Cylinder Volume:	142.0 CF
Laboratory:	ASO - Jacksonville - FL	Cylinder Pressure:	2000 PSIG
Analysis Date:	Dec 06, 2012	Valve Outlet:	580
Lot Number:	55-400124427-1		

ANALYTICAL RESULTS

Component	Requested Purity	Certified Concentration
CO + CO2	< 1 PPM	0.2 PPM
Moisture	< 1 PPM	0.2 PPM
Oxygen	< 1 PPM	0.1 PPM
THC	< 0.5 PPM	<LDL 0.1 PPM
NITROGEN	99.999 %	99.999 %

Cylinders in Batch:

1015058, CC120952, CC15137, CC176647, CC192886, CC201403, CC255600, CC263045,
CC265574, CC69736

Notes:

Impurities verified against analytical standards traceable to NIST by weight and/or analysis.

Signature on file

Approved for Release



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

Customer

Koogler & Associates (Gainesville, FL)

Date

January 14, 2013

Delivery Receipt

DR-45438

Purchase Order

RM011013

Gas Standard

100.0 ppm Ethylene/Nitrogen (UHP) - Certified Standard

Mixture Specifications

Cylinder Number:

EB-0042221

Components

Requested

Actual

Ethylene

100.0 ppm

98.6 ppm

Nitrogen, UHP

Balance

Balance

- Certified Standard -

Traceability Information

Traceability Type

Traceable to

Blending Process:

Gravimetric

Mole Percent

Blend Tolerance:

Weight

NIST

Analytical Tolerance:

Gas Standard

NIST

Traceability Certificate:

822/266926-02

Cylinder Data

Cylinder Outlet:

CGA 350

Cylinder Volume:

140 Cubic Feet

Cylinder Pressure:

2000 psig, 70°F

Analytical Tolerance:

+/- 2.0%

Expiration Date:

January 14, 2016

Certified by:

David Scott

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

<u>Customer</u>	<u>Koogler & Associates (Gainesville, FL)</u>
<u>Date</u>	<u>August 16, 2013</u>
<u>Delivery Receipt</u>	<u>DR-48049</u>
<u>Purchase Order</u>	<u>0001300</u>
<u>Gas Standard</u>	<u>25.0 ppm Ammonia/Nitrogen (UHP) - Certified Standard</u>

Mixture Specifications

Cylinder Number: EB-0047286


<u>Components</u>	<u>Requested</u>	<u>Actual</u>
Ammonia	25.0 ppm	25.0 ppm
Nitrogen, UHP	Balance	Balance

- Certified Standard -

<u>Traceability Information</u>	<u>Traceability Type</u>	<u>Traceable to</u>
Blending Process:	Gravimetric	Mole Percent
Blend Tolerance:	Weight	NIST
Analytical Tolerance:	Gas Standard	NIST
Traceability Certificate:	822/266926-02	

<u>Cylinder Data</u>	
Cylinder Outlet:	CGA 705
Cylinder Volume:	140 Cubic Feet
Cylinder Pressure:	2000 psig, 70°F
Analytical Tolerance:	+/- 2.0%
Expiration Date:	August 16, 2014

Certified by:


David Scott

"UNMATCHED EXCELLENCE"

2048 APEX COURT APOPKA, FLORIDA 32703 ~ PHONE (407)-292-2990 FAX (407)-292-3313
WWW.LIQUIDTECHCORP.COM
APOPKA, FL • HOUSTON, TX

CERTIFICATE OF BATCH ANALYSIS NITROGEN - CEM-CAL ZERO

Airgas USA, LLC

5837 W. 5th Street

Jacksonville, FL 32254

Phone: (904) 781-8450 Fax: (904) 783-8931

www.airgas.com

Part Number: NI CZ15A
Cylinder Analyzed: CC110554
Laboratory: ASO - Jacksonville - FL
Analysis Date: Jun 27, 2013
Lot Number: 55-400217852-1

Reference Number: 55-400217852-1
Cylinder Volume: 142.0 CF
Cylinder Pressure: 2000 PSIG
Valve Outlet: 580

Expiration Date: Jun 27, 2018

ANALYTICAL RESULTS

Component	Requested Purity	Certified Concentration
NITROGEN	99.9995 %	99.9995 %
CARBON DIOXIDE	< 1.0 PPM	0.2 PPM
NOx	< 0.1 PPM	< 0.1 PPM
SO2	< 0.1 PPM	< 0.1 PPM
THC	< 0.1 PPM	<LDL 0.1 PPM
CARBON MONOXIDE	< 0.5 PPM	0.2 PPM

Permanent Notes: Airgas certifies that the contents of this cylinder meet the requirements of 40 CFR 72.2

Cylinders in Batch:

CC110554, CC169127, CC185045, CC185666, CC259343, CC271246, CC271291, CC271325, CC36175, CC49407, CC96219, EB0026671

Notes:

Impurities verified against analytical standards traceable to NIST by weight and/or analysis.



Approved for Release



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, Florida)
Date February 20, 2013
Delivery Receipt DR-45833
Gas Standard 10.0 ppm Propane, 10.0 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date February 19, 2013
Expiration Date February 19, 2021

Component Propane, Carbon Monoxide
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Propane: 10.1 ppm +/- 0.10 ppm
Carbon Monoxide: 10.5 ppm +/- 0.10 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-185070	CC-115999
Concentration:	9.94 ppm C3H8	10.268 ppm CO
Expiration Date:	04/09/14	03/07/14

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	NEXUS 6700
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	February 07, 2013	January 30, 2013

Cylinder Data

Cylinder Serial Number:	CC-184994	Cylinder Outlet:	CGA 350
Cylinder Volume:	138 Cubic Feet	Cylinder Pressure:	1975 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, Florida)
Date February 20, 2013
Delivery Receipt DR-45833
Gas Standard 50.0 ppm Propane, 50.0 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date February 19, 2013
Expiration Date February 19, 2021

Component Propane, Carbon Monoxide
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Propane: 52.0 ppm +/- 0.16 ppm
Carbon Monoxide: 51.3 ppm +/- 0.29 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0016017	EB-0015869
Concentration:	52.92 ppm C3H8	50.89 ppm CO
Expiration Date:	04/09/14	10/20/14

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	NEXUS 6700
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	February 07, 2013	January 30, 2013

Cylinder Data

Cylinder Serial Number:	EB-0021641	Cylinder Outlet:	CGA 350
Cylinder Volume:	138 Cubic Feet	Cylinder Pressure:	1975 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, Florida)
Date February 20, 2013
Delivery Receipt DR-45833
Gas Standard 100.0 ppm Propane, 100.0 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date February 19, 2013
Expiration Date February 19, 2021

Component Propane, Carbon Monoxide
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Propane: 100.7 ppm +/- 0.36 ppm
Carbon Monoxide: 102.8 ppm +/- 0.28 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-231424	EB-0015869
Concentration:	106.42 ppm C ₃ H ₈	106.098 ppm CO
Expiration Date:	04/09/14	10/20/14

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	NEXUS 6700
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	February 07, 2013	January 30, 2013

Cylinder Data

Cylinder Serial Number:	CC-166547	Cylinder Outlet:	CGA 350
Cylinder Volume:	138 Cubic Feet	Cylinder Pressure:	1975 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, FL)
Date September 11, 2013
Delivery Receipt DR-48367
Gas Standard 50.0 ppm NO, 50.0 ppm SO2/Nitrogen - EPA PROTOCOL
Final Analysis Date September 10, 2013
Expiration Date September 10, 2016

Components Nitric Oxide, Sulfur Dioxide
Balance Gas Nitrogen

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1

DO NOT USE BELOW 100 psig

Reported Concentrations

Nitric Oxide: 48.7 ppm +/- 0.47 ppm
Sulfur Dioxide: 48.0 ppm +/- 0.48 ppm

Nitrogen: Balance

Total Oxides of Nitrogen: 48.7 ppm

** Total NOX for Reference Use Only **

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	ND-45512	EB-0014698
Concentration:	48.98 ppm NO	50.67 ppm SO2
Expiration Date:	08/23/20	09/20/14

Certification Instrumentation

Component:	Nitric Oxide	Sulfur Dioxide
Make/Model:	Nicolet 6700	Nicolet 6700
Serial Number:	APW1100563	APW1100563
Principal of Measurement:	FTIR	FTIR
Last Calibration:	August 28, 2013	August 28, 2013

Cylinder Data

Cylinder Serial Number:	EB-0015940	Cylinder Outlet:	CGA 660
Cylinder Volume:	135 Cubic Feet	Cylinder Pressure:	1925 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"

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LIQUID TECHNOLOGY CORPORATION
"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis
- EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, FL)
Date October 02, 2013
Delivery Receipt DR-48699
Gas Standard 25.0 ppm NO, 25.0 ppm SO2/Nitrogen - EPA PROTOCOL
Final Analysis Date September 24, 2013
Expiration Date September 24, 2016

Components Nitric Oxide, Sulfur Dioxide
Balance Gas Nitrogen

DO NOT USE BELOW 100 psig

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Nitric Oxide: 24.7 ppm +/- 0.18 ppm
Sulfur Dioxide: 24.9 ppm +/- 0.24 ppm
Nitrogen: Balance
Total Oxides of Nitrogen: 24.7 ppm
** Total NOX for Reference Use Only **

Reference Standards:

SRM/GMIS:	GMIS	GMIS/GMIS
Cylinder Number:	CC-54558	EB-0015832/EB-0014698
Concentration:	24.96 ppm NO	25.61 ppm SO2/50.67 ppm SO2
Expiration Date:	09/24/14	03/09/14 - 02/14/14

Certification Instrumentation

Component:	Nitric Oxide	Sulfur Dioxide
Make/Model:	NEXUS 6700	NEXUS 6700
Serial Number:	APW1100563	APW1100563
Principal of Measurement:	FTIR	FTIR
Last Calibration:	August 29, 2013	August 29, 2013

Cylinder Data

Cylinder Serial Number:	EB-0000520	Cylinder Outlet:	CGA 660
Cylinder Volume:	136 Cubic Feet	Cylinder Pressure:	1950 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, Florida)
Date February 20, 2013
Delivery Receipt DR-45833
Gas Standard 50.0 ppm Propane, 50.0 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date February 19, 2013
Expiration Date February 19, 2021

Component Propane, Carbon Monoxide
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Propane: 52.0 ppm +/- 0.16 ppm
Carbon Monoxide: 51.3 ppm +/- 0.29 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0016017	EB-0015869
Concentration:	52.92 ppm C ₃ H ₈	50.89 ppm CO
Expiration Date:	04/09/14	10/20/14

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	NEXUS 6700
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	February 07, 2013	January 30, 2013

Cylinder Data

Cylinder Serial Number:	EB-0021641	Cylinder Outlet:	CGA 350
Cylinder Volume:	138 Cubic Feet	Cylinder Pressure:	1975 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, Florida)
Date February 20, 2013
Delivery Receipt DR-45833
Gas Standard 100.0 ppm Propane, 100.0 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date February 19, 2013
Expiration Date February 19, 2021

Component Propane, Carbon Monoxide
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Propane: 100.7 ppm +/- 0.36 ppm
Carbon Monoxide: 102.8 ppm +/- 0.28 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-231424	EB-0015869
Concentration:	106.42 ppm C ₃ H ₈	106.098 ppm CO
Expiration Date:	04/09/14	10/20/14

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	NEXUS 6700
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	February 07, 2013	January 30, 2013

Cylinder Data

Cylinder Serial Number:	CC-166547	Cylinder Outlet:	CGA 350
Cylinder Volume:	138 Cubic Feet	Cylinder Pressure:	1975 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Koogler & Associates (Gainesville, FL)
Date August 26, 2013
Delivery Receipt DR-48095
Gas Standard 10.0% CO2, 10.0% Oxygen/Nitrogen - EPA PROTOCOL
Final Analysis Date August 26, 2013
Expiration Date August 26, 2021

Component Carbon Dioxide, Oxygen
Balance Gas Nitrogen

DO NOT USE BELOW 100 psig

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Carbon Dioxide: 9.74% +/- 0.09%
Oxygen: 9.82% +/- 0.09%
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-165377	CC-231332
Concentration:	9.924% CO2/Nitrogen	9.97% Oxygen/Nitrogen
Expiration Date:	10/14/14	04/06/14

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Nicolet 6700	Servomex 244a
Serial Number:	APW1200289	1847
Principal of Measurement:	FTIR	Paramagnetic
Last Calibration:	August 08, 2013	August 22, 2013

Cylinder Data

Cylinder Serial Number:	EB-0050207	Cylinder Outlet:	CGA 590
Cylinder Volume:	133 Cubic Feet	Cylinder Pressure:	1900 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:

David Scott

PGVP Vendor ID: E12013



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis **- EPA PROTOCOL GAS -**

Customer Koogler & Associates (Gainesville, FL)
Date October 18, 2012
Delivery Receipt DR-44433
Gas Standard 20.0% CO₂, 20.0% Oxygen/Nitrogen - EPA PROTOCOL
Final Analysis Date October 08, 2012
Expiration Date October 08, 2015

Component Carbon Dioxide, Oxygen
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Carbon Dioxide: 19.6% +/- 0.19%
Oxygen: 20.0% +/- 0.20%
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-184404	CC-159090
Concentration:	19.87% CO ₂ /Nitrogen	20.68% Oxygen/Nitrogen
Expiration Date:	02/04/13	04/06/14

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Agilent 7890A	Servomex 244a
Serial Number:	CN10736166	1847
Principal of Measurement:	GC-TCD	Paramagnetic
Last Calibration:	September 26, 2012	September 27, 2012

Cylinder Data

Cylinder Serial Number:	CC-117906	Cylinder Outlet:	CGA 590
Cylinder Volume:	135 Cubic Feet	Cylinder Pressure:	1925 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

David Scott

PGVP Vendor ID: E12012

"UNMATCHED EXCELLENCE"

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Visible Emission Certification

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES



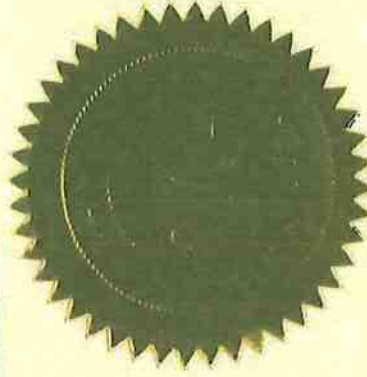
Whitlow Enterprises, LLC
www.smokeschool.net

Certifies that

Christian Enwall of Koogler & Associates, Inc.

Has passed the certification test required by EPA Method 9
40 CFR 60 Appendix A and is qualified as a visible emissions evaluator.
Certification Date: July 10, 2013 Location: Gainesville, FL

George Whitlow
President



GFL071013-06

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Ultra-low Sulfur Diesel Analysis

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KOGLER & ASSOCIATES, INC.

ENVIRONMENTAL SERVICES



January 10, 2014

Service Request No: J1307873

Christian Enwall
Koogler and Associates, Inc.
4014 NW 13th Street
Gainesville, FL 32609-1923

Laboratory Results for: FP&L Cape Canaveral/758-13-03

Dear Christian:

Enclosed are the results of the sample(s) submitted to our laboratory on December 20, 2013. For your reference, these analyses have been assigned our service request number **J1307873**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4410. You may also contact me via email at Jerry.Allen@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Jerry Allen
Project Manager

Page 1 of 5

Client: Koogler and Associates, Inc.
Project: FP&L Cape Canaveral/758-13-03

Service Request: J1307873

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J1307873-001	FP&L-Fuel Sample-C1	12/4/13	00:00

Cooler Receipt Form

Client: Roogler Service Request #: 11307873
 Project: EP FP & L Cape Canaveral
 Cooler received on 12.20.13 and opened on 12.20.13 GB
 COURIER: ALS UPS FEDEX Client Other _____ Airbill # _____

- 1 Were custody seals on outside of cooler? Yes No
- If yes, how many and where? #: _____ on lid other _____
- 2 Were seals intact and signature and date correct? Yes No N/A
- 3 Were custody papers properly filled out? Yes No N/A
- 4 Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C) Ambient
- 5 Thermometer ID N/A
- 6 Temperature Blank Present? Yes No
- 7 Were Ice or Ice Packs present Ice _____ Ice Packs _____ No
- 8 Did all bottles arrive in good condition (unbroken, etc....)? Yes No N/A
- 9 Type of packing material present Netting _____ Vial Holder _____ Bubble Wrap _____
 Paper _____ Styrofoam _____ Other N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)? Yes No N/A
- 11 Did all bottle labels and tags agree with custody papers? Yes No N/A
- 12 Were the correct bottles used for the tests indicated? Yes No N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?
 HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2
 Preservative additions noted below Yes No N/A
- 14 Were all samples received within analysis holding times? Yes No N/A
- 15 Were all VOA vials free of air bubbles? If present, note below Yes No N/A
- 16 Where did the bottles originate? ALS _____ Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: _____ Date: _____

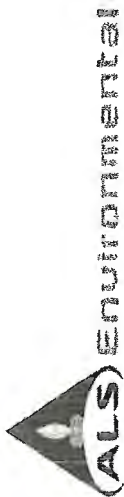


CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # 21307873
 CAS Contact

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011 Page 1 of 1

Project Name FP&L-Cape Canaveral		Project Number 758-13-03		ANALYSIS REQUESTED (Include Method Number)		INVOICE INFORMATION P.O. # <u>758-13-03</u> Bill to: <u>Koogler and Associates</u> <u>4014 NW 13th Street</u> <u>Gainesville FL 32609</u>	
Report To Chris Enwall		Report CC 758-13-03		Preservative Total Sulfur Content		REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MSMSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	
Company/Address 4014 NW 13th Street, Gainesville FL, 32609		FAX # 352-377-7158		NUMBER OF CONTAINERS 1		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE	
Phone # 352-377-5822		Sampler's Printed Name Chris Enwall		Matrix 1		RECEIVED BY Signature: <u>[Signature]</u> Printed Name: <u>Chris Enwall</u> Firm: <u>MS</u> Date/Time: <u>12-19-13 15:50</u>	
CLIENT SAMPLE ID FP&L-Fuel Sample- C1		LAB ID 12/4/2013		SAMPLING DATE TIME 12/4/2013		RELINQUISHED BY Signature: <u>[Signature]</u> Printed Name: <u>Jon Kalar</u> Firm: <u>Koogler and Associates</u> Date/Time: <u>12-19-13 / 16:24</u>	
Special Instructions/Comments: Please Analyze the Fuel sample for Total Sulfur Content							
Relinquished By Signature: <u>[Signature]</u> Printed Name: <u>Chris Enwall</u> Firm: <u>Koogler and Associates</u> Date/Time: <u>12-19-13</u>		Received By Signature: <u>[Signature]</u> Printed Name: <u>Jon Kalar</u> Firm: <u>Koogler and Associates</u> Date/Time: <u>12-19-13 / 15:50</u>		Relinquished By Signature: <u>[Signature]</u> Printed Name: <u>Jon Kalar</u> Firm: <u>MS</u> Date/Time: <u>12-20-13 15:50</u>		Received By Signature: <u>[Signature]</u> Printed Name: <u>Chris Enwall</u> Firm: <u>MS</u> Date/Time: <u>12-20-13 15:50</u>	



January 9, 2014

Client: Koogler and Associates, Inc
4014 NW 13th Street
Gainesville, FL 32609-1923
Attn: Christian Enwall
Project: FP&L Cape Canaveral

Date Received: December 20, 2013

Certificate of Analysis

Sample ID:	Sample Date & Time	Lab #:	Sulfur, Total			
FP&L-Fuel Sample-C1	12/4/13 0000	J1307873-001	D4294			
duplicate			As Received			
			ppm			
				11		
				12		

Note:

ALS-Tucson received sample on 12/27/13.
Analysis by ASTM D4294 - EDXRF. Reporting limit is 10 ppm.

Digitally signed by Ralph V. Poulson
Date: 2014.01.09 15:11:14 -0700

Ralph Poulson, Lab Director

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Project Participants

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KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

PROJECT PARTICIPANTS

Koogler and Associates, Inc.

John B. Koogler, Ph.D., P.E. Project Advisor
Maxwell Lee, Ph.D., P.E. Project Advisor
Christian Enwall Technical Manager/ Field Technician
Glen Haven QSTI Senior Field Technician
Rodney Paul Senior Field Technician
Josh Hayes Field Technician
Ryan Meyer Field Technician
Karl Seltzer Field Technician

Siemens Energy

Jordan Haywood Lead Air Quality Engineer

