Georgia-Pacific

Palatka Pulp and Paper Operations
Consumer Products Division

P.O. Box 919
Palatka, FL 32178-0919
(386) 325-2001

May 27, 2010

Mr. Christopher L. Kirts, P.E.
State of Florida
Department of Environmental Protection
7825 Baymeadows Way, Suite B200
Jacksonville, FL 32256-7590

Reference: No. 4 Lime Kiln (EU No. 017)
Report of Annual Compliance April 13, 2010
Permit No. 1070005-064-AV

Dear Mr. Kirts:

The subject test reports and executive summary are enclosed for your review. This testing was conducting to satisfy the following objectives for this emissions unit:

1. Complete annual stack testing as required under referenced permit and rule 62-297.310(7)(a)4.c. F.A.C.;
2. Demonstrate compliance with the applicable permit limitations.

We request that the department acknowledge that this report satisfies these objectives. If you have any questions concerning this report, please contact Ron Reynolds at 386-329-0967.

We, the undersigned, are the responsible officials of the source for which this document is being submitted. We hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and the data contained in this document are true, accurate, and complete.

Sincerely,

Gary Frost
Vice President

EMISSION TEST REPORT EXECUTIVE SUMMARY
NO. 4 LIME KILN (EU017)
APRIL 13, 2010

COMPLIANCE TEST

Emission testing was performed on the above-referenced Emissions Unit as required by Permit No. 1070005-064-AV. This testing fulfills the DEP annual testing requirement for the parameters listed in the table below. During the test, the Lime Kiln processed an average of 37.8 tons of lime mud solids (LMS) per hour, which is equivalent to 91% of the 24-hour average permitted capacity of 41.5 tons per hour of LMS.

Parameter	Reporting Units	Permit Limit	Test Value	Compliance Demonstrated
Particulate Matter (PM)	lb/hr	22.9	**14.9**	Yes
	lb/ ton LMS	0.55	**0.38**	Yes
Sulfur Dioxide (SO_2)	ppm @ 10 % O_2	16.9	**<0.5**	Yes
	lb/hr	9.1	**<0.2**	Yes
Nitrogen Oxides (NO_x)	ppm @ 10 % O_2	140	**68**	Yes
	lb/hr	54.2	**22.3**	Yes
Carbon Monoxide (CO)	ppm @ 10 % O_2	69	**15**	Yes
	lb/hr	16.3	**3.1**	Yes
Volatile Organic Compounds (VOC)	ppm @ 10 % O_2	70	**13**	Yes
	lb/hr (as MeOH)	9.4	**2.2**	Yes

***

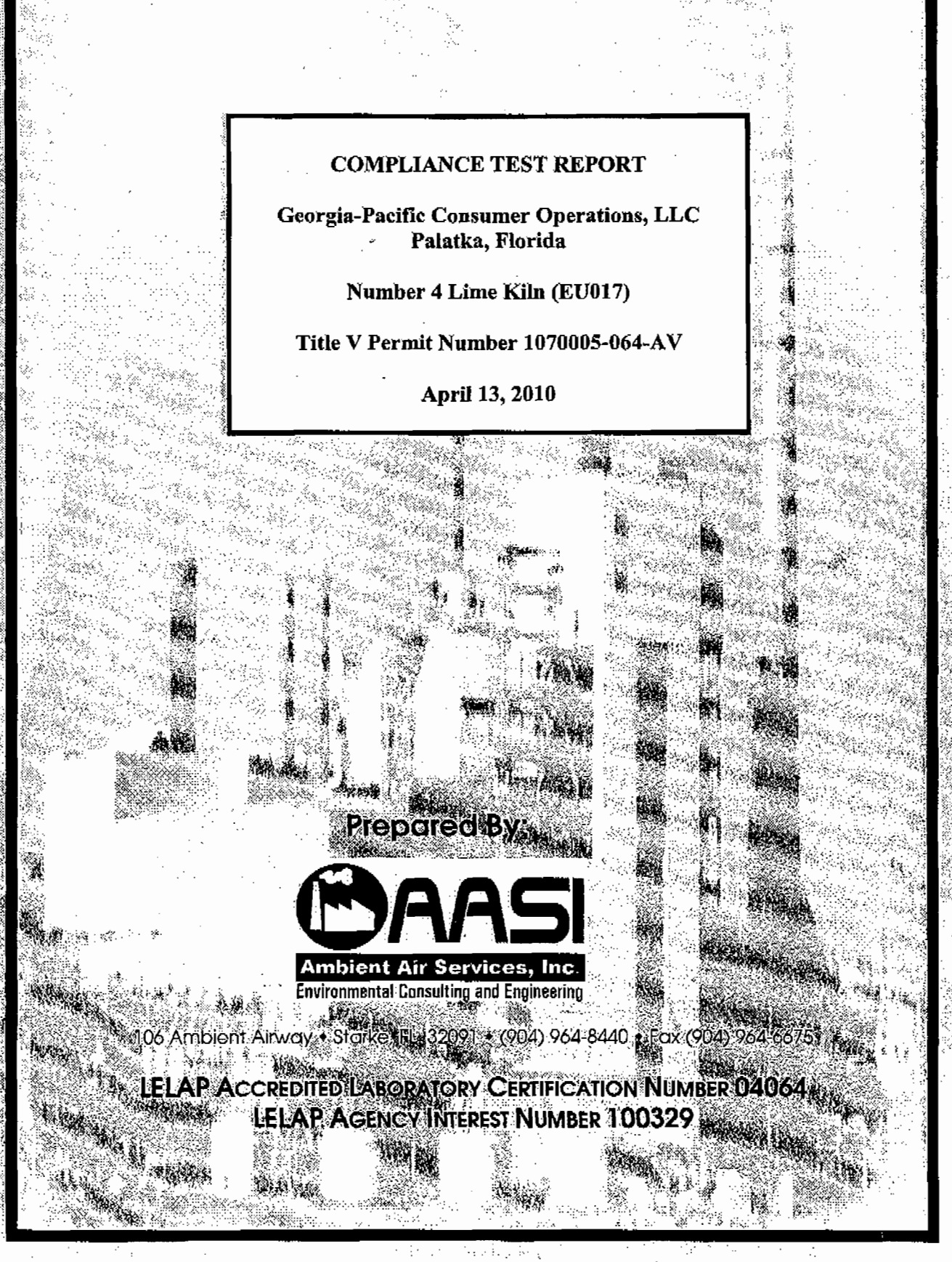
COMPLIANCE TEST REPORT

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida

Number 4 Lime Kiln (EU017)

Title V Permit Number 1070005-064-AV

April 13, 2010



Prepared By:

AASI
Ambient Air Services, Inc.
Environmental Consulting and Engineering
106 Ambient Airway • Starke, FL 32091 • (904) 964-8440 • Fax (904) 964-6675

LELAP Accredited Laboratory Certification Number 04064
LELAP Agency Interest Number 100329

COMPLIANCE TEST REPORT

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida

Number 4 Lime Kiln (EU017)

Title V Permit Number 1070005-064-AV

April 13, 2010

Prepared by:

AMBIENT AIR SERVICES, INC.
106 AMBIENT AIRWAY
STARKE, FLORIDA 32091
(904) 964-8440
LELAP Accredited Laboratory Certification Number: 04064
LELAP Agency Interest Number: 100329

CERTIFICATION

Ambient Air Services, Inc. (AASI) of Starke, Florida has completed the testing as described in this report for Georgia-Pacific Consumer Operations, LLC (GP) located in Palatka, Florida. To the best of our knowledge and abilities, all information, facts, and test data are true and correct. Information supplied to AASI for use in this report from GP is perceived to be accurate and is used as such where necessary.

This report contains pages 1 through 108.

This report was reviewed by:

Joseph L. Cooksey, Technical Director — Date: 5/19/10

David C. Sholtes, Quality Assurance Manager — Date: 5/19/10

Questions and or comments regarding this report or process conditions should be directed to:

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EXECUTIVE SUMMARY

Ambient Air Services, Inc. (AASI) conducted testing for particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and volatile organic compounds (VOC) emissions from the Number 4 Lime Kiln at Georgia-Pacific Consumer Operations, LLC (GP) located in Palatka, Florida. The testing was conducted on April 13, 2010. The testing was conducted in order to comply with the permit conditions for the Number 4 Lime Kiln. The results are summarized in the table below:

Executive Summary

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida

April 13, 2010

Source	Parameters	Permit Limits	Test Results
Number 4 Lime Kiln (EU-017)	Particulate Matter ✓(PM)	22.9 lbs/hr 0.55 lbs/ton LMS	14.9 lbs/hr 0.39 lbs/ton LMS
	Oxides of Nitrogen ✓(NO_x)	140 ppm @ 10% O_2 54.2 lbs/hr	68 ppm @ 10% O_2 22.3 lbs/hr
	Sulfur Dioxide ✓(SO_2)	16.9 ppm @ 10% O_2 9.1 lbs/hr	<0.5 ppm @ 10% O_2 <0.2 lbs/hr
	Carbon Monoxide ✓ (CO)	69 ppm @ 10% O_2 16.3 lbs/hr	15 ppm @ 10% O_2 3.1 lbs/hr
	Volatile Organic Compounds ✓(VOC)	70 ppm @ 10% O_2 9.4 lbs/hr (as methane)	13 ppm @ 10% O_2 2.2 lbs /hr (as methane)

Note:
"<" indicates that results were below the minimum detection limit.

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Revision History

Revision	Comments	Issue Date
0	Original issued to Ron Reynolds	May 19, 2010

1.0 INTRODUCTION

GP contracted with AASI to perform emission testing on their Number 4 Lime Kiln located in Palatka, Florida. The objective was to demonstrate compliance with permit limits for particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and volatile organic compounds (VOC) emissions. The testing was conducted April 13, 2010. A summary of the testing performed is presented in Table 1-1-1.

Table 1-1-1

Summary of Testing

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida

April 13, 2010

Source Description	Parameters	Reference Methods	Duration of Tests
Number 4 Lime Kiln (EU-017)	Particulate Matter (PM)	USEPA, 40 CFR, Part 60, Appendix A, Methods 1-5	3, 1 hour runs
	Carbon Monoxide (CO)	USEPA, 40 CFR, Part 60, Appendix A, Method 10	3, 1 hour runs
	Oxides of Nitrogen (NO_x)	USEPA, 40 CFR, Part 60, Appendix A, Method 7E	3, 1 hour runs
	Sulfur Dioxide (SO_2)	USEPA, 40 CFR, Part 60, Appendix A, Method 8	3, 1 hour runs
	Volatile Organic Compounds (VOC)	USEPA, 40 CFR, Part 60, Appendix A, Method 25A	3, 1 hour runs

1.2 Test Participants

The personnel indicated in Table 1-2-1 participated in this project:

Table 1-2-1

Name	Affiliation	Responsibility
David Pate	Ambient Air Services, Inc.	Project Manager, Field Testing
Clay O'Neal	Ambient Air Services, Inc.	Field Testing
Susan H. Anderson	Ambient Air Services, Inc.	Report Preparation
Joseph L. Cooksey	Ambient Air Services, Inc.	Technical Director
David C. Sholtes	Ambient Air Services, Inc.	Quality Assurance Manager
Ron Reynolds	Georgia-Pacific Consumer Operations, LLC	Environmental Representative
John Gay	FDEP	Observer

2.0 PROCESS DESCRIPTION

2.1 Kraft Process

In the Georgia-Pacific, Palatka Operations Kraft pulp process, wood chips are cooked in batch digesters with a solution of sodium hydroxide and sodium sulfide, known as white liquor. This process breaks down the lignin in the wood so that the paper can be produced from the remaining fiber.

Vapors from the digesters are passed through a condensing and decanting system in which separate streams of turpentine, condensate, and noncondensables are obtained.

The reaction of sodium sulfide and organics in the wood constitutes the major source of odorous sulfur compounds.

The slurry of wood and spent cooking liquor (black liquor) is pumped from the digester blow tank to a series of filters (brown stock washers) where the fibers are filtered and washed to remove the residual black liquor. From the brown stock washers the pulp proceeds to further processing as either bleached or unbleached pulp to the tissue paper machines or Kraft paper machines. The residual (weak) black liquor contains 95% to 98% of the total alkali charged to the digester. This is present as sodium carbonate and organic compounds of sodium, in combination with sodium sulfate.

The weak black liquor is then passed through a multiple effect evaporator which increases solids content to approximately 50%, followed by non-direct contact evaporators (NDCE) to increase

the solids content to approximately 65% to 70%. The concentrated black liquor is then burned in the #4 Recovery Boiler, generating steam from combustion of the liquor organics and recovering the inorganic chemicals.

The flue gases then pass through an electrostatic precipitator for particulate removal before discharge to the atmosphere. The inorganic chemicals are melted under reducing conditions to produce molten sodium carbonate and sodium sulfide. The molten chemical or "smelt" is allowed to drain from the bottom of the recovery boiler into a weak solution of "dissolving liquor" contained in the two (2) smelt dissolving tanks. The smelt dissolves immediately to form green liquor. Gases are vented through wet scrubbers for particulate and TRS control. The green liquor is pumped to the causticizing area. Impurities are allowed to settle. The clarified liquor is then causticized at the slaker by adding lime.

The result is a solution of sodium hydroxide and sodium sulfide, known as white liquor, contained in a slurry of calcium carbonate. The white liquor and $CaCO_3$ mixture is separated in a clarifier.

The clarified white liquor is sent to the digesters as cooking liquor. The underflow calcium carbonate, known as lime mud, is washed and sent to the pre-coat filters. Residual sulfide is washed and oxidized on the pre-coat filters and the lime mud solids are processed in the lime kiln to convert the $CaCO_3$ back to lime (CaO).

The kiln flue gases pass through a wet scrubber for particulate control.

3.0 SUMMARY AND DISCUSSION OF RESULTS

Results of testing are presented in the following tables:

Table 3-1 presents a summary of the testing.

Table 3-2 presents the results of particulate matter (PM) emissions.

Table 3-3 presents the results of carbon monoxide (CO) emissions.

Table 3-4 presents the results of sulfur dioxide (SO_2) emissions.

Table 3-5 presents the results of oxides of nitrogen (NO_x) emissions.

Table 3-6 presents the results of volatile organic compounds (VOC) emissions.

Table 3-1

Summary of Test Results Georgia-Pacific Consumer Operations, LLC Palatka, Florida April 13, 2010			
Source	**Parameters**	**Permit Limits**	**Test Results**
Number 4 Lime Kiln (EU-017)	Particulate Matter (PM)	22.9 lbs/hr 0.55 lbs/ton LMS	14.9 lbs/hr 0.39 lbs/ton LMS
	Oxides of Nitrogen (NO_x)	140 ppm @ 10% O_2 54.2 lbs/hr	68 ppm @ 10% O_2 22.3 lbs/hr
	Sulfur Dioxide (SO_2)	16.9 ppm @ 10% O_2 9.1 lbs/hr	<0.5 ppm @ 10% O_2 <0.2 lbs/hr
	Carbon Monoxide (CO)	69 ppm @ 10% O_2 16.3 lbs/hr	15 ppm @ 10% O_2 3.1 lbs/hr
	Volatile Organic Compounds (VOC)	70 ppm @ 10% O_2 9.4 lbs/hr (as methane)	13 ppm @ 10% O_2 2.2 lbs /hr (as methane)

Note:
"<" indicates that results were below the minimum detection limit.

Table 3-2

AASI

Particulate Emissions Summary

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
No. 4 Lime Kiln
April 13, 2010

AASI USEPA Method 5 24 Point Template w/10% O2 Correction saturated - Rev 0/1 31 08

Run			Particulate Emissions			Volumetric Flow Rates		Stack			Production	Sample Volume	Percent
Date	Number	Time (EDT)	GR/SCFD	LBS/HR	LBS/TON LMS	ACFM	SCFMD	Temp. °F	Moisture %	O_2%	LMS (TPH)	SCFD	Isokinetic
4/13/2010	1	8:35 9:37	0.0542	14.3	0.38	52717	30827	162	32	4.4	37.7	35.442	94
4/13/2010	2	12:08 13:10	0.0595	15.4	0.41	51346	30222	160	31	4.3	37.9	34.855	94
4/13/2010	3	14:10 15:12	0.0556	14.8	0.39	52921	31088	160	32	5.3	37.7	35.330	93
Average			0.0564	14.9	0.39	52328	30713	161	32	4.7	37.8	35.209	94

Table 3-3

AASI

Carbon Monoxide (CO) Emissions Summary
USEPA Method 10 (40 CFR Part 60 Appendix A)
Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
No. 4 Lime Kiln
April 13, 2010

Run			Concentration		Oxygen	Volumetric Flow Rates	Mass Emissions
Date	Number	Time (EDT)	ppm-v/v	ppm-v/v at 10% O_2	Percent	SCFM-Dry	Pounds per Hour
4/13/2010	1	8:35 9:35	25.7	17	4.4	30827	3.5
4/13/2010	2	12:08 13:08	25.4	17	4.3	30222	3.3
4/13/2010	3	14:10 15:10	17.7	12	5.3	31088	2.4
Average			**22.9**	**15**	**4.7**	**30712**	**3.1**

Table 3-4

AASI

Sulfur Dioxide (SO_2) Emissions Summary
USEPA Method 8 (40 CFR Part 60 Appendix A)
Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
No. 4 Lime Kiln
April 13, 2010

Run			Concentration		Oxygen	Volumetric Flow Rates	Mass Emissions
Date	Number	Time (EDT)	ppm-v/v	ppm-v/v at 10% O_2	Percent	SCFM-Dry	Pounds per Hour
4/13/2010	1	8:35 9:37	< 0.68	< 0.5	4.4	30827	< 0.2
4/13/2010	2	12:08 13:10	< 0.69	< 0.5	4.3	30222	< 0.2
4/13/2010	3	14:10 15:12	< 0.69	< 0.5	5.3	31088	< 0.2
Average			**< 0.69**	**< 0.5**	**4.7**	**30713**	**< 0.2**

Note: "<" indicates that sample was below the minimum detection limit.

Table 3-5

AAS

Oxides of Nitrogen (NO_x) Emissions Summary
USEPA Method 7e (40 CFR Part 60 Appendix A)
Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
No. 4 Lime Kiln
April 13, 2010

Run			Concentration		Oxygen	Volumetric Flow Rates	Mass Emissions
Date	Number	Time (EDT)	ppm-v/v	ppm-v/v at 10% O_2	Percent	SCFM-Dry	Pounds per Hour
4/13/2010	1	8:35 9:35	95.4	63	4.4	30827	21.1
4/13/2010	2	12:08 13:08	108.5	71	4.3	30222	23.5
4/13/2010	3	14:10 15:10	100.2	70	5.3	31088	22.3
Average			**101.4**	**68**	**4.7**	**30712**	**22.3**

Table 3-6

AASI

Volatile Organic Compounds (VOC) Emissions Summary
USEPA Method 25a (40 CFR Part 60 Appendix A)
Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
No. 4 Lime Kiln
April 13, 2010

Run			Total VOC (as Propane)	Total VOC (as Methane)	Total VOC (as Methane)	Oxygen	Volumetric Flow Rates	Mass Emissions
Date	Number	Time (EDT)	ppm-v/v (as Propane)	ppm-v/v (as Methane)	ppm-v/v (as Methane) at 10% O_2	Percent	SCFM-Wet	Pounds per Hour (as Methane)
4/13/2010	1	8:35 9:35	6.8	20.4	13	4.4	45067	2.3
4/13/2010	2	12:08 13:08	6.1	18.3	12	4.3	44059	2.0
4/13/2010	3	14:10 15:10	6.4	19.2	13	5.3	45402	2.2
Average			6.4	19.3	13	4.7	44843	2.2

4.0 TESTING METHODOLOGY AND PROCEDURES

4.1 Particulate Matter

Sample and Velocity Traverse

USEPA Method 1, as published in 40 CFR, Part 60, Appendix A, was used as the reference method to determine the location of the traverse points for velocity and particulate measurements.

Velocity and Volumetric Flow Rate

USEPA Method 2, as published in 40 CFR, Part 60, Appendix A, was used as the reference method to determine average gas velocity. A type "S" pitot tube and oil manometer were used for velocity determination. Gas temperature was measured with a type K thermocouple. Calibration checks were performed on the pitot tube to verify the face opening alignments, external tubing diameter, and base-to-opening plane distances. A base-line coefficient of 0.84 was assigned to the pitot tube.

Oxygen and Carbon Dioxide

USEPA Method 3A, as published in 40 CFR, Part 60, Appendix A, was used as the reference method for determining oxygen and carbon dioxide concentrations in the effluent gas stream. A Servomex Model 1440 O_2/CO_2 analyzer was used.

Moisture Content

USEPA Method 4, as published in 40 CFR, Part 60, Appendix A, was used as the reference method to determine the moisture content of the gas stream by extracting the gas sample at a known and regulated rate through a glass condenser train. The condenser train consisted of the impinger portion of the Method 5/8 sampling train. The gas sample was extracted through the impinger train (maintained at below 68° F in an ice bath) with a vacuum pump. The amount of

gas sampled was measured with a calibrated dry gas meter. The amount of moisture collected during the test was volumetrically determined and the amount of gas drawn, corrected to dry standard conditions, was determined. Oregon Method 4 was used to determine the saturation moisture content of the gas stream. The average temperature of the run was measured. The wet bulb temperature was assumed to be the same. A set of curve-fit equations from a psychrometric chart were then used to determine saturation moisture content. The lower of the values between saturation and measured was used in the calculations.

Particulate Testing

USEPA Method 5, as published in 40 CFR, Part 60, Appendix A, was used to determine the particulate matter referencing EPA Methods 1-4 for traverse point selection, determination of stack gas molecular weight, stack gas moisture, and volumetric flow rate. The following is a synopsis of the method, a list of equipment and specifications, and a diagram illustrating the equipment used. Particulate emissions were withdrawn isokinetically from the source and collected on a filter and in a prefilter wash. The collected samples were dried and then weighed.

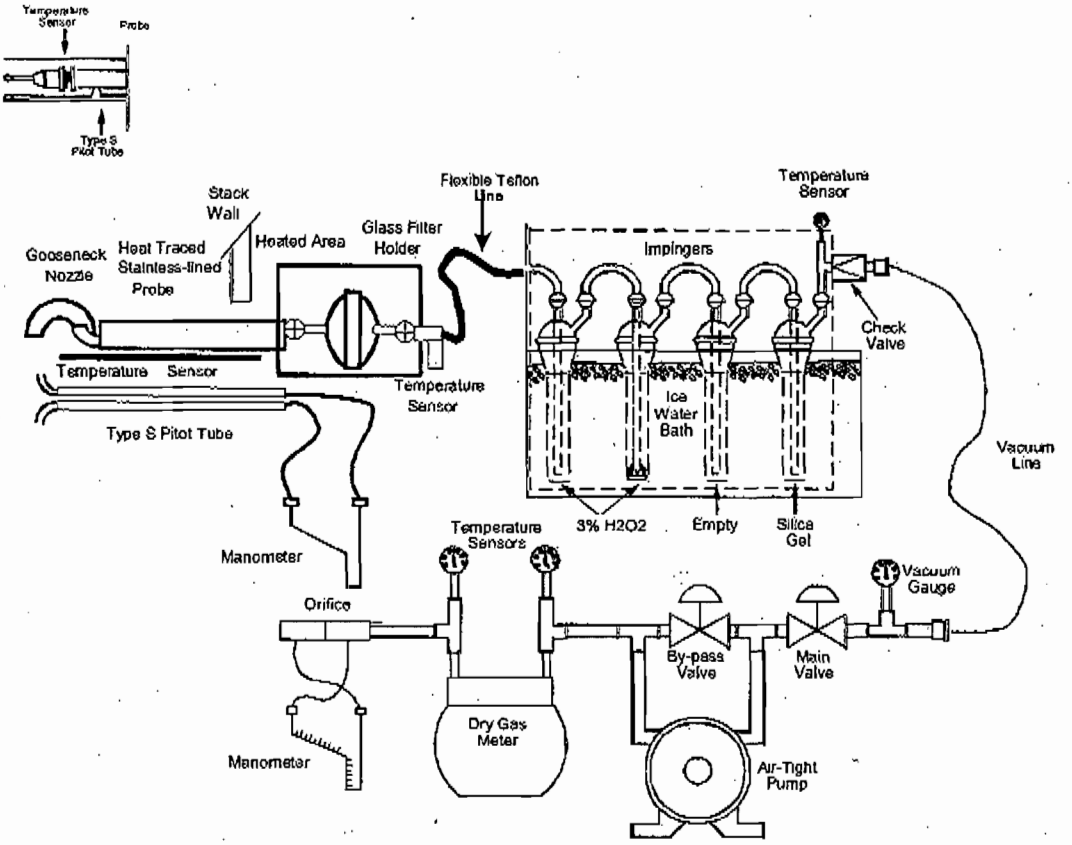
Sampling Apparatus

1)	Probe Nozzle	Stainless steel with sharp tapered leading edge.
2)	Probe	Stainless steel sheath with a 5/8" OD stainless steel insert.
3)	Pitot Tube	Standard "type S", attached to the probe.
4)	Filter Holder	The filter holder was constructed of Borosilicate glass. The gasket used was made of silicone rubber. The filter holder was designed to provide a positive seal against leakage from the outside or around the filter.
5)	Impingers	Four (4) glass impingers connected in series with glass ball joint fittings. The first, third, and fourth were of the Greenburg-Smith design modified by replacing the tip with a 1.3 cm (1/2 inch) Id glass tube extending to about ½ inch from the bottom of the flask.

		The second was of the Greenburg-Smith design with a standard tip. All were submerged in an ice bath during the sample runs.
6)	Meter Box	Module contained a vacuum gauge, leak free pump, dry gas meter with a minimum of one percent accuracy, valves, and related equipment to maintain isokinetic sampling rate and to determine sample volume.
7)	Barometer	Aneroid type measured atmospheric pressure on-site to ±0.05 inches of mercury.
8)	Thermocouples	Type K thermocouples were utilized to monitor temperatures for stack gas, last impinger, and dry gas meter.
9)	Filters	Whatman glass fiber filter, type 934-A/H.

Figure 4-1-1

Method 5/8 Sampling System



4.2 Oxides of Nitrogen

USEPA Method 7E, as published in 40 CFR, Part 60, Appendix A, was used as the reference method for determining the oxides of nitrogen (NO_x) concentration in the effluent gas stream. A Thermo Environmental Instrument (TEI) Model 42i chemiluminescence analyzer was used.

4.3 Sulfur Dioxide

USEPA Method 8 as published in 40 CFR, Part 60, Appendix A, was used to determine the sulfur dioxide (SO_2) emissions in the effluent gas stream. The water specified in the Method 5 impinger system was replaced with a 3% H_2O_2 solution. This option is allowed in Section 6.1.1 of Method 6 to allow concurrent testing of sulfur dioxide and particulate matter. The samples were then analyzed with the barium-thorin titration method.

4.4 Carbon Monoxide

USEPA Method 10, as published in 40 CFR, Part 60, Appendix A, was used as the reference method to determine carbon monoxide (CO) concentration in the effluent gas stream. A Thermo Environmental Instrument (TEI) Model 48 gas filter correlation, non-dispersive infrared (GFC-NDIR) analyzer was used.

4.5 Volatile Organic Compounds

USEPA Method 25A, as published in 40 CFR, Part 60, Appendix A, was used as the reference method for determining the volatile organic compounds (VOC) concentration in the effluent gas stream. A VIG Model 210 flame ionization analyzer was used. Measurements were taken as volume concentration equivalents of propane and are reported as pounds per hour as methane.

4.6 Sample System

The VOC/CO sample system consisted of the following components: a heated stainless steel probe, calibration tee, 150 feet of heated sample line (teflon), a sample pump, moisture removal system, particulate filter, and a sample manifold to distribute the sample gas to the analytical instruments. The system was designed so that all bias check gases were injected at the probe and passed through the same system as the sample gas. The $NO_x/O_2/CO_2$ sample system was identical to the one just described with the following exceptions: a moisture removal system was placed at the sampling location and 200 feet of non-heated teflon line was used to convey the stack gas to the analytical instruments. A schematic of each sampling system is shown in Figure 4-6-1 and Figure 4-6-2.

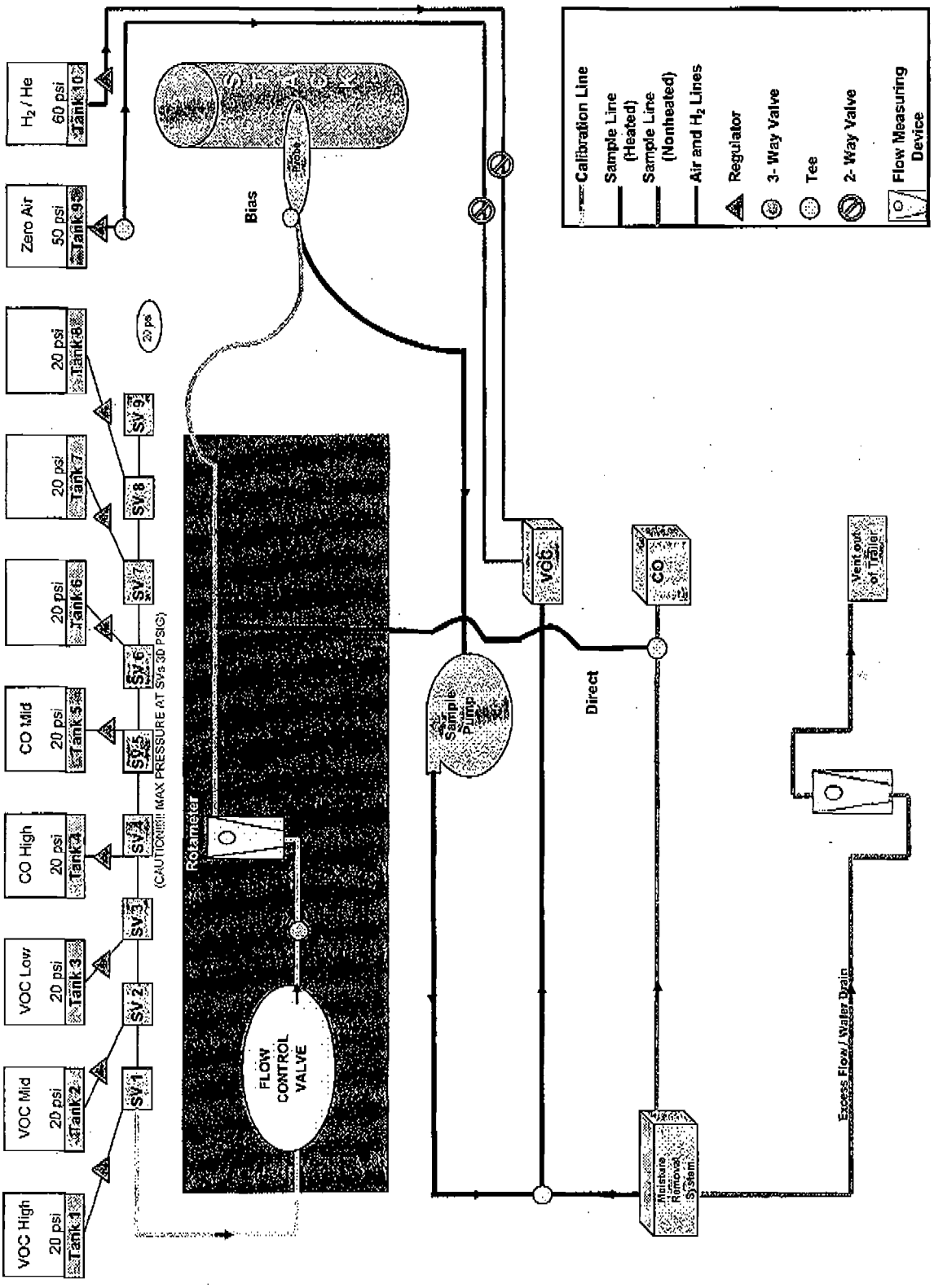
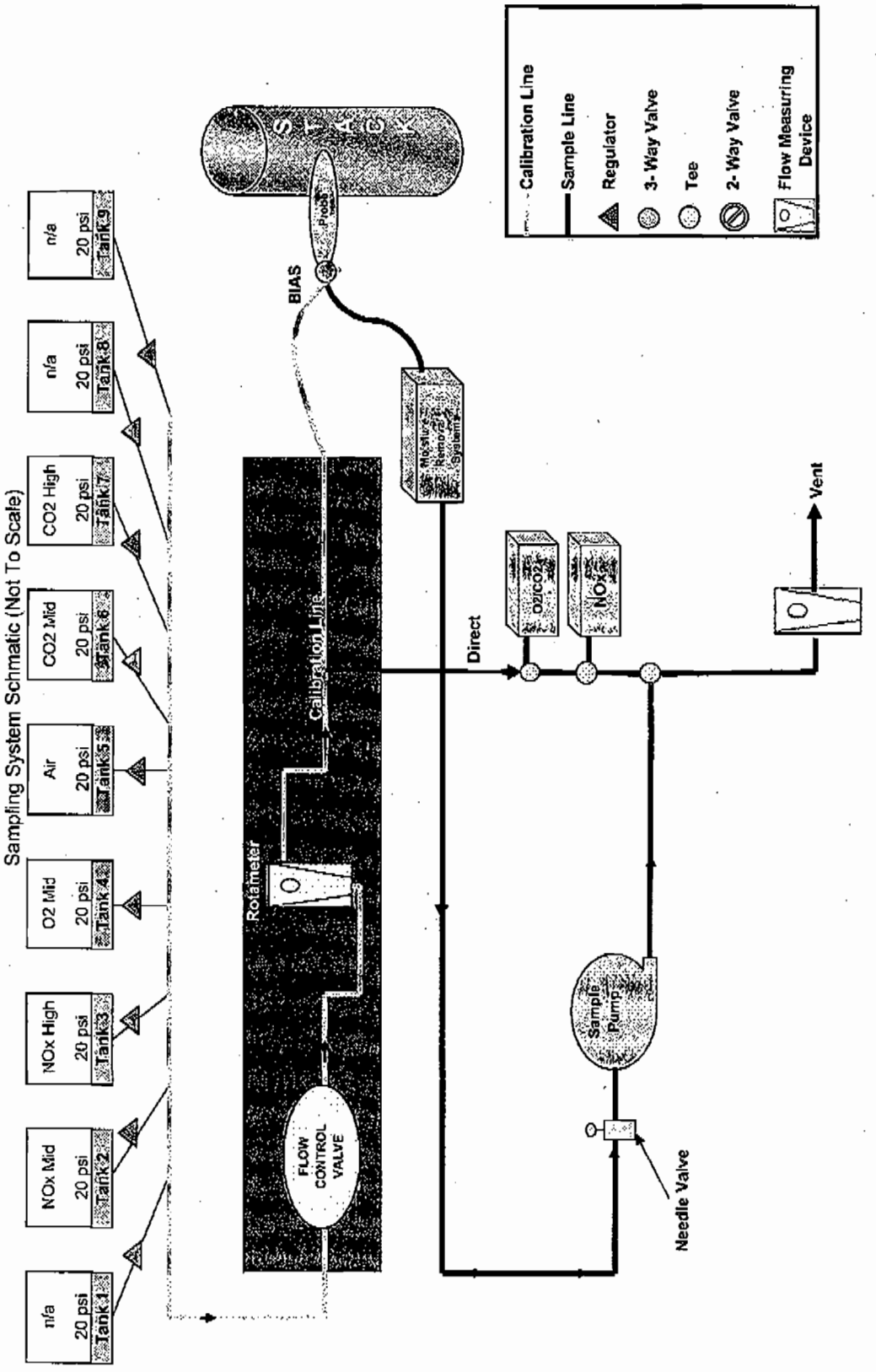


Figure 4-6-1
Sampling Schematic System (Not To Scale)

Figure 4-6-2

Sampling System Schmatic (Not To Scale)



5.0 TEST COMMENTS

- The CO_2 concentrations for Runs 1 and 2 exceeded the allowable span as defined by Method 7E. The CO_2 concentrations for these runs were determined by extrapolation. CO_2 was used only in the calculation of molecular weight.

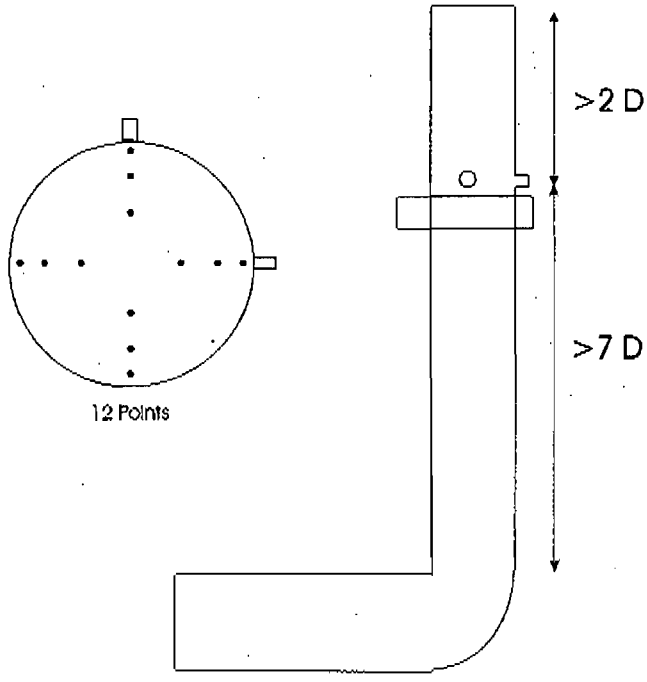
SAMPLING POINT LOCATION

Figure 6-1

Georgia-Pacific Consumer Operations, LLC
Palatka, Florida
Number 4 Lime Kiln (EU-017)

Diameters Upstream:	>2 Dia
Diameters Downstream	>7 Dia
Stack diameter	54"
Drawing Date	7/25/06

Drawing Not to Scale



Sampling Points (inches) (PM, SO_2)	
1	2.4"
2	7.9"
3	16.0"
4	38.0"
5	46.1"
6	51.6"

Sampling Points (Gases)	
1	27"

Note: Two equal distance, ninety-degree ports. Two ports with 6 points per port, 12 total points. All distances are approximate.

LIST OF APPENDICES

APPENDIX A

PARTICULATE MATTER (PM) AND SULFUR DIOXIDE (SO_2)

-PM Example Calculations
-PM Emission Run Summaries
-Gas Stream Saturation Calculations
-PM Field Data Sheets
-PM Laboratory Analysis
-Chain of Custody
-SO_2 Titration Data Sheet
-SO_2 Calculations
-Barium Perchlorate Standardization Form
-Meter Box Pre Test Calibration
-Meter Box Post Test Calibration
-Pitot Tube Calibration
-Thermocouple Calibration

Ambient Air Services, Inc.
Environmental Consultants
106 Ambient Airway Starke, Florida 32091 (904) 964-8440

AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-06

Example Calculations, PM Test Run 1

Facility	**Georgia-Pacific Consumer Operations, LLC**	**Source**	**No. 4 Lime Kiln**
Location	**Palatka, Florida**	**Date**	**April 13, 2010**

1. **Stack Pressure (P_s)**

$$P_s = P_{bar} + (P_g / 13.6)$$

Example.	P_{bar}	=	30.16	P_s	=	**30.13**	**in. Hg.**
	P_g	=	-0.44				

2. **Volume Water Vapor, ($V_{w(std)}$).**

$$V_{lc} \times 0.04706$$

Example.	V_{lc}	=	347.8	$V_{w(std)}$	=	**16.371**	**SCF**

3. **Meter Volume, corrected to Standard Conditions, ($V_{m(std)}$)**

$$V_m \times Y \times 17.64 \, (P_{bar} + (\Delta H/13.6))/T_m$$

Example.	V_m	=	35.900	$V_{m(std)}$	=	**35.442**	**SCF**
	P_{bar}	=	30.16				
	T_m	=	538.2				
	Y	=	0.996				
	K_1	=	17.64				
	ΔH_{avg}	=	1.116				

4. **Total Volume Of Sample, (V_t).**

$$V_{w(std)} + V_{m(std)}$$

Example.	$V_{m(std)}$	=	35.442	V_t	=	**51.813**	**SCF**
	$V_{w(std)}$	=	16.371				

5. **Measured Moisture in stack gas, volume fraction (B_{ws})**

$$V_{w(std)} / (V_{w(std)} + V_{m(std)})$$

Example.	$V_{m(std)}$	=	35.442	B_{ws}	=	**0.316**	
	$V_{w(std)}$	=	16.371				

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106 Ambient Airway Starke, Florida 32091 (904) 964-8440

AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Example Calculations, PM Test Run 1

Facility	**Georgia-Pacific Consumer Operations, LLC**	**Source**	**No. 4 Lime Kiln**
Location	**Palatka, Florida**	**Date**	**April 13, 2010**

6. **Dry Stack Gas, volume fraction (B_{wd})**

$$= 1 - B_{ws} \text{ or } 1 - TB_{ws}$$

Example.	TB_{ws}	=	0.334			
	B_{ws}	=	0.316	B_{wd}	=	**0.684**

7. **Molecular Weight of Stack Gas, Dry, (M_d).**

$$= (0.44 \times \%CO2) + (0.32 \times \%O2) + (0.28 \times \%N2) + (0.28 \times \%CO)$$

Example.	CO2	=	23	M_d	=	**31.86**
	O2	=	4.4			
	N2	=	72.6			
	CO	=	0.0			

8. **Molecular Weight of Stack Gas, Stack Conditions, (M_s).**

$$= M_d \times B_{wd} + 18.0 \times B_{ws}$$

Example.	M_d	=	31.86	M_s	=	**27.48**
	B_{wd}	=	0.684			
	B_{ws}	=	0.316			

9. **Specific Gravity of Gas, Relative to Air, (G_s)**

$$= M_S / 28.99$$

Example.	M_s	=	27.48	G_s	=	**0.948**

10. **Velocity of Stack Gas, as feet per minute, (v_s).**

$$(K_p \times C_p \times (\Delta p_{avg})^{0.5} \times (T_{s(abs)} / P_s \times M_s)^{0.5}) \times 60$$

Example.	C_p	=	0.84	v_s	=	**3314.6**	**FPM**
	Δp_{avg}	=	0.8876				
	$T_{s(abs)}$	=	621.9				
	P_s	=	30.13				
	M_s	=	27.48				
	K_p	=	85.49				

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AASI USEPA Method 6 24 Point Template w/10% O2 Correction,saturated - Rev 07-31-08

Example Calculations, PM Test Run 1

Facility	Georgia-Pacific Consumer Operations, LLC	**Source**	**No. 4 Lime Kiln**
Location	Palatka, Florida	**Date**	**April 13, 2010**

11. **Actual Stack Gas Flow Rate (Q_s).**

$$= A \times v_s$$

Example.	v_s	=	3314.6	Q_s	=	**52717**	**ACFM**
	A	=	15.904				

12. **Actual Stack Gas Flow Rate, Dry (Q_d)**

$$= Q_s \times B_{wd}$$

Example.	Q_s	=	52717	Q_d	=	**36060**	**ACFMD**
	B_{wd}	=	0.684				

13. **Stack Gas Flow Rate, Standard Temperature and Pressure, Dry, ($Q_{d(std)}$)**

$$= Q_d \times ((T_{std} \times P_s) / (P_{std} \times T_{s(abs)}))$$

Example	Q_d	=	36060	$Q_{d(std)}$	=	**30827**	**SCFMD**
	P_s	=	30.13				
	$T_{s(abs)}$	=	621.9				
	P_{std}	=	29.92				
	T_{std}	=	528				

14. **Stack Gas Flow Rate, Standard Temperature and Pressure ($Q_{s(std)}$)**

$$= Q_{d(std)} / B_{wd}$$

	$Q_{d(std)}$	=	30827	$Q_{s(std)}$	=	**45067**	**SCFMW**
	B_{wd}	=	0.684				

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction saturated Rev 0/1-31-08

Example Calculations, PM Test Run 1

Facility	**Georgia-Pacific Consumer Operations, LLC**	**Source**	**No. 4 Lime Kiln**
Location	**Palatka, Florida**	**Date**	**April 13, 2010**

15. **Percent Isokinetic Sampled, (I)**

$$I = (100 \times V_{m(std)} \times 29.92 \times T_{s(abs)}) / (528 \times v_s \times \Theta \times A_n \times P_s \times B_{wd})$$

Example.	A_n	=	0.0003247	I	=	**94**	%
	Θ	=	60	P_{std}	=	29.92	
	$V_{m(std)}$	=	35.44	T_{std}	=	528	
	$T_{s(abs)}$	=	621.9	P_s	=	30.13	
	v_s	=	3314.6	B_{wd}	=	0.684	

16. **Particulate Concentration, grains per Standard Cubic Foot, (C_s).**

$$(0.01543 \times Mg.) / V_{m(std)}$$

Example.	Mg	=	124.5	C_s	=	**0.0542**	**Grs/ SCF.**
	$V_{m(std)}$	=	35.442				

17. **Mass Emission Rate, Lbs / Hr, (Em).**

$$C_s \times Q_{d(std)} \times 60 / 7000$$

Example.	$Q_{d(std)}$	=	30827	Em	=	**14.32**	**Lbs/ Hr**

18. **Particulate Concentration, grains per Standard Cubic Foot, Corrected to 10% O2($C_{s,10\%}$).**

$$C_{s,10\%} = C_s \times (20.9 - 10)/(20.9 - \%O2)$$

Example.	C_s	=	0.0542	$C_{s,\ 10\%}$	=	**0.0358**	**Grs/ SCF.**
	%O2	=	4.40				**at 10% O2**

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Example Calculations, PM Test Run 1

Facility	Georgia-Pacific Consumer Operations, LLC	**Source**	No. 4 Lime Kiln
Location	Palatka, Florida	**Date**	April 13, 2010

Constants

K	=	0.005 English	K_p	=	85.49 Velocity equation constant
K_1	=	17.64 °R/in. Hg	T_{std}	=	528 °R
K_2	=	0.04706 ft^3/ml	P_{std}	=	29.92 inches Hg
K_3	=	0.0154 gr/mg	p_W	=	0.9982 g/ml

Variables

A	=	Stack Area (ft^2)	Q_s	=	Actual Stack Gas Flow Rate, ACFM
A_n	=	Nozzle Area (ft^2)	Q_d	=	Actual Stack Gas Flow Rate, ACFMD
B_{ws}	=	Moisture in stack gas, volume fraction	$Q_{s(std)}$	=	Stack Gas Flow Rate Wet, SCFMW
B_{wd}	=	Dry Stack Gas, volume fraction	$Q_{d(std)}$	=	Stack Gas Flow Rate, SCFMD
C_p	=	Pitot Correction Factor	$T_{s(abs)}$	=	Stack Temp (degrees R)
C_s	=	Grains per DSCF	T_m	=	Meter Temp (degrees R)
$C_{s,10\%}$	=	Grains per DCSF Corrected to 10% O2	v_s	=	Average Stack Velocity, FPM
D_o	=	Equivilant Diameter (inches)	V_{lc}	=	Condensate Volume (ml)
E_m	=	Mass Emission Rate, Lb/hr	V_m	=	Volume Metered (ft^3)
I	=	Percent Isokinetic	$V_{m(std)}$	=	Gas Volume Sampled, STPD
m_s	=	Prefilter Weight (grams)	$V_{w(std)}$	=	Volume Water Vapor, SCF
m_n	=	Total Particulate (grams)	V_t	=	Total Volume Collected, SCF
M_d	=	Molecular Weight of Stack Gas (Dry Basis)	Y	=	Meter Correction
M_s	=	Molecular Weight of Stack Gas (Stack conditions)	ΔH_{avg}	=	Delta H (inches H_2O)
n	=	Number of Points	Δp_{avg}	=	Avg of SQRT of V.H.
P_{bar}	=	Barometric Pressure (inches Hg)	Θ	=	Total Time (minutes)
P_g	=	Static Pressure	P_s	=	Stack Pressure (inches Hg)
TB_{ws}	=	Theoretical Moisture in Stack at Saturation, Volume Fraction			

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Volumetric Flow Calculations Worksheet

Data Request Entry Area	PM Run 1
Facility	Georgia-Pacific Consumer Operations, LLC
Location	Palatka, Florida
Source	No. 4 Lime Kiln
Date	04/13/10
Run Number	1
Start Time	8:35
Finish Time	9:37
Weather	Scattered
Total Time (minutes) (Θ)	60.0
Number of Points (n)	12
Barometric Pressure (inches Hg) (P_{bar})	30.16
Static Pressure (inches H_2O) (P_g)	-0.44
Stack Diameter (inches) (D)	54.00
Nozzle Diameter (inches) (D_n)	0.244
Meter Y Factor (Y)	0.996
Pitot Factor (C_p)	0.84
Final Meter Reading (ft^3)	784.128
Initial Meter Reading (ft^3)	748.228
Condensate (grams or ml)	338
Silica Gel Weight (grams)	9.8
Carbon Dioxide (%)	23.0
Oxygen (%)	4.4
Carbon Monoxide (%)	0.0
Nitrogen (%)	72.6
Filter Weight (grams)	0.1213
Prefilter Weight (grams)	0.0032
Isokinetic Rate Factor	1.40

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Field Data Points - PM Run 1 | Georgia-Pacific Consumer Operations, LLC | **No. 4 Lime Kiln**

Port	Traverse Point	Velocity Head (Inches H_2O)	Meter Orifice (inches H_2O)	Stack Temperature (°F)	Meter Inlet Temperature (°F)	Meter Outlet Temperature (°F)	Square Root of Velocity Head
1	1	0.61	0.85	162	75	74	0.78
	2	0.72	1.0	162	75	75	0.85
	3	0.77	1.1	162	79	74	0.88
	4	0.85	1.2	163	81	74	0.92
	5	0.73	1.0	162	82	75	0.85
	6	0.58	0.81	163	83	75	0.76
2	1	0.64	0.90	161	82	75	0.80
	2	0.66	0.92	162	83	75	0.81
	3	0.83	1.2	162	84	76	0.91
	4	0.88	1.2	162	85	76	0.94
	5	1.1	1.5	161	84	76	1.05
	6	1.2	1.7	161	83	76	1.10

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

PM Summary Run 1

Facility	Georgia-Pacific Consumer Operations, LLC	Run Number	1
Location	Palatka, Florida	Start Time	8:35
Stack	No. 4 Lime Kiln	Finish Time	9:37
Run Date	4/13/2010	Weather	Scattered

(Θ) Total Time (minutes)	60.0	Impinger Condensate (g or ml)	338.0
(P_{bar}) Barometric Pressure (inches Hg)	30.16	Silica Gel Condensate (g)	9.8
(D) Stack Diameter (inches)	54.00	(V_{lc}) Condensate Volume (ml)	347.8
(A) Stack Area (ft^2)	15.904	Carbon Dioxide (%)	23.0
(A_n) Nozzle Area (ft^2)	0.0003247	Oxygen (%)	4.4
(n) Number of Points	12	Carbon Monoxide (%)	0.0
(Δp_{avg}) Avg of SQRT of V.H.	0.8876	Nitrogen (%)	72.6
(Y) Meter Correction	0.996	(V_m) Volume Metered (ft^3)	35.900
Nozzle Diameter (inches)	0.244	($\Delta H_{@}$) Delta H (inches H_2O)	1.1158
(Cp) Pitot Correction Factor	0.84	(P_g) Static Pressure (inches H_2O)	-0.44
Filter Weight (grams)	0.1213	(P_s)Stack Pressure (inches Hg)	30.13
(m_s) Prefilter Weight (grams)	0.0032	($T_{s(abs)}$) Stack Temp (°R)	621.9
(m_n) Total Particulate (grams)	0.1245	(T_m) Meter Temp (°R)	538.2

($V_{w(std)}$) Volume Water Vapor, SCF	16.371
($V_{m(std)}$) Gas Volume Sampled, STPD	35.442
Total Volume, STP	51.813
(B_{ws}) Moisture in stack gas, volume fraction	0.316
(TB_{ws}) Theoretical Moisture in stack gas, volume fraction	0.334
(B_{wd}) Dry Stack Gas, volume fraction	0.684
(M_d) Molecular Weight of Stack Gas (Dry Basis)	31.86
(M_s) Molecular Weight of Stack Gas (Stack conditions)	27.48
(G_s) Specific gravity of Stack Gas Relative to Air	0.948
Excess Air (%)	29.5
(v_s) Average Stack Velocity, FPM	3314.6
(Q_s) Actual Stack Gas Flow Rate, ACFM	52717
(Q_d) Actual Stack Gas Flow Rate, ACFMD	36060
($Q_{d(std)}$) Stack Gas Flow Rate, SCFMD	30827
($Q_{s(std)}$) Stack Gas Flow Rate Wet, SCFMW	45067
(I) Percent Isokinetic	94

Stack Emissions:	(C_s) Grains per DSCF	0.0542
	($C_{s,\ 10\%}$) Grains per DSCF Corrected to 10% Oxygen	0.0358
	(Em) Pounds per Hour	14.32

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Volumetric Flow Calculations Worksheet

Data Request Entry Area	PM Run 2
Facility	Georgia-Pacific Consumer Operations, LLC
Location	Palatka, Florida
Source	No. 4 Lime Kiln
Date	04/13/10
Run Number	2
Start Time	12:08
Finish Time	13:10
Weather	Scattered
Total Time (minutes) (Θ)	60.0
Number of Points (n)	12
Barometric Pressure (inches Hg) (P_{bar})	30.20
Static Pressure (inches H_2O) (P_g)	-0.45
Stack Diameter (inches) (D)	54.00
Nozzle Diameter (inches) (D_n)	0.244
Meter Y Factor (Y)	0.996
Pitot Factor (C_p)	0.84
Final Meter Reading (ft^3)	819.986
Initial Meter Reading (ft^3)	784.755
Condensate (grams or ml)	330
Silica Gel Weight (grams)	9.0
Carbon Dioxide (%)	22.6
Oxygen (%)	4.3
Carbon Monoxide (%)	0.0
Nitrogen (%)	73.1
Filter Weight (grams)	0.1309
Prefilter Weight (grams)	0.0036
Isokinetic Rate Factor	1.40

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Field Data Points - PM Run 2 | Georgia-Pacific Consumer Operations, LLC | **No. 4 Lime Kiln**

Port	Traverse Point	Velocity Head (inches H_2O)	Meter Orifice (inches H_2O)	Stack Temperature (°F)	Meter Inlet Temperature (°F)	Meter Outlet Temperature (°F)	Square Root of Velocity Head
1	1	0.64	0.90	160	75	75	0.80
	2	0.65	0.91	160	76	76	0.81
	3	0.77	1.1	160	78	75	0.88
	4	1.0	1.4	160	60	75	1.00
	5	1.0	1.4	161	80	75	1.00
	6	1.1	1.5	161	81	75	1.05
2	1	0.65	0.91	160	79	76	0.81
	2	0.69	0.97	160	80	76	0.83
	3	0.73	1.0	160	81	76	0.85
	4	0.71	0.99	161	82	76	0.84
	5	0.60	0.84	160	83	76	0.77
	6	0.56	0.78	162	83	76	0.75

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

PM Summary Run 2

Facility	Georgia-Pacific Consumer Operations, LLC	Run Number	2
Location	Palatka, Florida	Start Time	12:08
Stack	No. 4 Lime Kiln	Finish Time	13:10
Run Date	4/13/2010	Weather	Scattered

(Θ) Total Time (minutes)	60.0	Impinger Condensate (g or ml)	330.0
(P_{bar}) Barometric Pressure (inches Hg)	30.20	Silica Gel Condensate (g)	9.0
(D) Stack Diameter (inches)	54.00	(V_{lc}) Condensate Volume (ml)	339.0
(A) Stack Area (ft^2)	15.904	Carbon Dioxide (%)	22.6
(A_n) Nozzle Area (ft^2)	0.0003247	Oxygen (%)	4.3
(n) Number of Points	12	Carbon Monoxide (%)	0.0
(Δp_{avg}) Avg of SQRT of V.H.	0.8658	Nitrogen (%)	73.1
(Y) Meter Correction	0.996	(V_m) Volume Metered (ft^3)	35.231
Nozzle Diameter (inches)	0.244	(ΔH_{avg}) Delta H (inches H_2O)	1.0583
(Cp) Pitot Correction Factor	0.84	(P_g) Static Pressure (inches H_2O)	-0.45
Filter Weight (grams)	0.1309	(P_s)Stack Pressure (inches Hg)	30.17
(m_a) Prefilter Weight (grams)	0.0036	($T_{s(abs)}$) Stack Temp (°R)	620.4
(m_n) Total Particulate (grams)	0.1345	(T_m) Meter Temp (°R)	537.7

($V_{w(std)}$) Volume Water Vapor, SCF	15.957
($V_{m(std)}$) Gas Volume Sampled, STPD	34.855
Total Volume, STP	50.811
(B_{ws}) Moisture in stack gas, volume fraction	0.314
(TB_{ws}) Theoretical Moisture in stack gas, volume fraction	0.322
(B_{wd}) Dry Stack Gas, volume fraction	0.686
(M_d) Molecular Weight of Stack Gas (Dry Basis)	31.79
(M_s) Molecular Weight of Stack Gas (Stack conditions)	27.46
(G_s) Specific gravity of Stack Gas Relative to Air	0.947
Excess Air (%)	28.4
(v_s) Average Stack Velocity, FPM	3228.5
(Q_s) Actual Stack Gas Flow Rate, ACFM	51348
(Q_d) Actual Stack Gas Flow Rate, ACFMD	35222
($Q_{d(std)}$) Stack Gas Flow Rate, SCFMD	30222
($Q_{s(std)}$) Stack Gas Flow Rate Wet, SCFMW	44059
(I) Percent Isokinetic	94

Stack Emissions:	(C_s) Grains per DSCF	0.0595
	($C_{s,10\%}$) Grains per DSCF Corrected to 10% Oxygen	0.0391
	(Em) Pounds per Hour	15.42

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Volumetric Flow Calculations Worksheet

Data Request Entry Area	PM Run 3
Facility	Georgia-Pacific Consumer Operations, LLC
Location	Palatka, Florida
Source	No. 4 Lime Kiln
Date	04/13/10
Run Number	3
Start Time	14:10
Finish Time	15:12
Weather	Scattered
Total Time (minutes) (Θ)	60.0
Number of Points (n)	12
Barometric Pressure (inches Hg) (P_{bar})	30.20
Static Pressure (inches H_2O) (P_g)	-0.52
Stack Diameter (inches) (D)	54.00
Nozzle Diameter (inches) (D_n)	0.244
Meter Y Factor (Y)	0.996
Pitot Factor (C_p)	0.84
Final Meter Reading (ft^3)	856.260
Initial Meter Reading (ft^3)	820.501
Condensate (grams or ml)	336
Silica Gel Weight (grams)	9.6
Carbon Dioxide (%)	21.0
Oxygen (%)	5.3
Carbon Monoxide (%)	0.0
Nitrogen (%)	73.7
Filter Weight (grams)	0.1243
Prefilter Weight (grams)	0.0030
Isokinetic Rate Factor	1.40

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

Field Data Points - PM Run 3 | **Georgia-Pacific Consumer Operations, LLC** | **No. 4 Lime Kiln**

Port	Traverse Point	Velocity Head (inches H_2O)	Meter Orifice (inches H_2O)	Stack Temperature (°F)	Meter Inlet Temperature (°F)	Meter Outlet Temperature (°F)	Square Root of Velocity Head
1	1	0.68	0.95	161	77	76	0.82
	2	0.69	0.97	160	77	76	0.83
	3	0.82	1.1	160	80	76	0.91
	4	0.91	1.3	159	81	76	0.95
	5	0.79	1.1	160	82	76	0.89
	6	0.60	0.84	160	83	76	0.77
2	1	0.71	0.99	159	81	75	0.84
	2	0.73	1.0	160	81	76	0.85
	3	0.78	1.1	161	82	76	0.88
	4	0.84	1.2	162	83	76	0.92
	5	1.0	1.4	161	84	76	1.00
	6	1.0	1.4	162	82	76	1.00

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated - Rev 0/1-31-08

PM Summary Run 3

Facility	Georgia-Pacific Consumer Operations, LLC	Run Number	3
Location	Palatka, Florida	Start Time	14:10
Stack	No. 4 Lime Kiln	Finish Time	15:12
Run Date	4/13/2010	Weather	Scattered

(Θ) Total Time (minutes)	60.0	Impinger Condensate (g or ml)	336.0
(P_{bar}) Barometric Pressure (Inches Hg)	30.20	Silica Gel Condensate (g)	9.6
(D) Stack Diameter (inches)	54.00	(V_{lc}) Condensate Volume (ml)	345.6
(A) Stack Area (ft^2)	15.904	Carbon Dioxide (%)	21.0
(A_n) Nozzle Area (ft^2)	0.0003247	Oxygen (%)	5.3
(n) Number of Points	12	Carbon Monoxide (%)	0.0
(Δp_{avg}) Avg of SQRT of V.H.	0.8896	Nitrogen (%)	73.7
(Y) Meter Correction	0.996	(V_m) Volume Metered (ft^3)	35.759
Nozzle Diameter (inches)	0.244	(ΔH_{avg}) Delta H (inches H_2O)	1.1125
(Cp) Pitot Correction Factor	0.84	(P_g) Static Pressure (inches H_2O)	-0.52
Filter Weight (grams)	0.1243	(P_s)Stack Pressure (inches Hg)	30.16
(m_s) Prefilter Weight (grams)	0.0030	($T_{s(abs)}$) Stack Temp (°R)	620.4
(m_n) Total Particulate (grams)	0.1273	(T_m) Meter Temp (°R)	538.5

($V_{w(std)}$) Volume Water Vapor, SCF	16.267
($V_{m(std)}$) Gas Volume Sampled, STPD	35.330
Total Volume, STP	51.597
(B_{ws}) Moisture in stack gas, volume fraction	0.315
(TB_{ws}) Theoretical Moisture in stack gas, volume fraction	0.322
(B_{wd}) Dry Stack Gas, volume fraction	0.685
(M_d) Molecular Weight of Stack Gas (Dry Basis)	31.57
(M_s) Molecular Weight of Stack Gas (Stack conditions)	27.29
(G_s) Specific gravity of Stack Gas Relative to Air	0.941
Excess Air (%)	37.1
(v_s) Average Stack Velocity, FPM	3327.5
(Q_s) Actual Stack Gas Flow Rate, ACFM	52921
(Q_d) Actual Stack Gas Flow Rate, ACFMD	36236
($Q_{d(std)}$) Stack Gas Flow Rate, SCFMD	31088
($Q_{s(std)}$) Stack Gas Flow Rate Wet, SCFMW	45402
(I) Percent Isokinetic	93

Stack Emissions:	(C_s) Grains per DSCF	0.0556
	($C_{s,\ 10\%}$) Grains per DSCF Corrected to 10% Oxygen	0.0388
	(Em) Pounds per Hour	14.81

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AASI USEPA Method 5 24 Point Template w/10% O2 Correction,saturated Rev 0/1.31.08

Example Calculations, Saturation Moisture, Run 1

Facility	Georgia-Pacific Consumer Operations, LLC	**Source**	No. 4 Lime Kiln
Location	Palatka, Florida	**Date**	April 13, 2010

1. **Stack Pressure (P_s)**

$$P_s = P_{bar} + (P_g / 13.6)$$

Example. P_{bar} = 30.16 P_s = **30.13** in. Hg.
P_g = -0.44

2. **e @ Saturation**

$$(0.00000608764 \times W_b^3) - (0.0010043 \times W_b^2) + (0.0756026 \times W_b) - 1.6933$$

Example. W_b = 161.9 e @ = **10.060**

3. **K**

$$((Ps - e@) \times (Db - Wb)) / (2800 - (1.3 \times Wb))$$

Example. e @ = 10.060 K = **0.000**
P_s = 30.13
Db = 161.9
Wb = 161.9

4. **C**

$$e@ - K$$

Example. e @ = 10.060 C = **10.060** SCF
K = 0.000

5. **Moisture in stack gas, volume fraction (B_{ws})**

$$(C / Ps)$$

Example. C = 10.060 B_{ws} = **0.334**
Ps = 30.128

e @	=	Saturation	P_{bar}	=	Barometric Pressure (inches Hg)
B_{ws}	=	Moisture in stack gas, volume fraction	P_g	=	Static Pressure
D_b	=	Dry Bulb Temperature	P_s	=	Stack Pressure (inches Hg)
K	=	Moisture in stack gas, volume fraction	W_b	=	Wet Bulb Temperature

Gas Stream Saturation Calculations

Run	*Wb* Wet Bulb (° F)	*Db* Dry Bulb (° F)	*Ps* Stack Pres. ("Hg)	e @ saturation	% Moisture at saturation	K	C		
R-1	161.9	161.9	30.13	10.060	33.4	0.0000	10.0600		
R-2	160.4	160.4	30.17	9.721	32.2	0.0000	9.7206		
R-3	160.4	160.4	30.16	9.721	32.2	0.0000	9.7206		

Note: In assuming saturation conditions, wet bulb temperature is equal to dry bulb temperature

SOURCE SAMPLING FIELD DATA SHEET

AASI Ambient Air Services, Inc.
Environmental Consulting and Engineering
106 Ambient Airway
Starke, FL 32091
Phone (904) 964-8440
www.ambientairservices.com

Facility	Georgia Pacific Palatka					Run No.	1				
Source	No.4 Limekiln					Date	4/13/10				
Weather	Clear 89F Scattered					Filter Number	4460				
Testers	DP,CO			Test(s)	M5/8	Barometric Pressure	30.16				
Equipment Identification	Pitot	5A	Probe	5A	Heater Box	4	Meter Box	10	Cold box		M3
Thermocouple Identification	Stack	TC-5A	Impinger	TC-1C	Heater Box	TC-2	Meter In	M10-1	Meter Out		M-16
Sampling	Total min (Θ)		60	Total Points (n)		12			Min/Pt	5	
Profile	Stack Diameter (in) (D)		54	Downstream Dia.		27			Upstream Dia.	>2	
Nozzle Diameter (avg) (D_n)	0.244	Nozzle Diameter Calibration Checks		1	0.244	2	0.244	3	0.244		
Isokinetic Factor Calculation	Pre T_s	160	Pre T_m		Pre Dry Stack Gas (B_{wd})	0.65	Meter (ΔHa)	1.553	Meter (Y)	0.996	
	$a = (D_n^2 X B_{wd})^2$		$b = (1.6+B_{wd})T_s$		$c = T_m X \Delta H_a$		F=1570(aXc)/b		Isokinetic Rate Factor		
	-		-		-		-		1.4		
Start Time	835	Final Meter Reading (ft3)		784.128	Orsat/Fyrite/ Analyzer	O_2(%)	4.4	Comments:			
Finish Time	937	Initial Meter Reading (ft3)		748.228		CO_2(%)	23.0				
Pre Test Leak Check		Post Test Leak Check		Static Pressure		Pilot Leak Check		Volume H_2O Collected	338		ml
0.018 cfm@15"Hg		0.012 cfm@ 16 "Hg		- 0.44 "H_2O		0/0 at 3"		Silicia Gel Weight	9.8		gr

Port and Sample Point	Clock Time (min)	Gas Meter Reading (cfm)	Stack Velocity (in H_2O)	Orifice Pressure Drop (in H_2O)	Vacuum (in H_g)	Stack Gas Temp (°F)	Filter Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Meter Temp (°F)	
1-1	0	748.228	0.61	0.85	7	162	256	40	75	74	
2	5	751.0	0.72	1.0	7	162	255	38	75	75	
3	10	754.0	0.77	1.1	8	162	258	38	78	74	
4	15	756.9	0.85	1.2	8	163	254	40	81	74	
5	20	760.0	0.73	1.0	8	162	251	42	82	75	
6	25	762.1	0.58	0.81	8	163	248	42	83	75	
2-1	30	765.542	0.64	0.90	7	161	259	44	82	75	Change port 0905
2	35	768.3	0.66	0.92	8	162	254	44	83	75	Rec 0907
3	40	771.2	0.83	1.2	10	162	255	44	84	76	
4	45	774.1	0.88	1.2	11	162	255	45	85	76	
5	50	777.2	1.1	1.5	13	161	253	47	84	76	
6	55	780.6	1.2	1.7	15	161	254	48	83	76	
	60	784.128									

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SOURCE SAMPLING FIELD DATA SHEET

AASI Ambient Air Services, Inc. Environmental Consulting and Engineering
106 Ambient Airway
Starke, FL 32091
Phone (904) 964-8440
www.ambientairservices.com

Facility	Georgia - Pacific Palatka					Run No.	2				
Source	No.4 Lime Kiln					Date	4/13/10				
Weather	Scattered					Filter Number	4475				
Testers	DP/LO		Test(s)	5/8		Barometric Pressure	30.20				
Equipment Identification	Pilot	5A	Probe	5A	Heater Box	4	Meter Box	16	Cold box	3	
Thermocouple Identification	Stack	TC-5A	Impinger	TC-16	Heater Box	TC-I	Meter In	M10-1	Meter Out	M-10	
Sampling	Total min (Θ)	60	Total Points (n)	12			Min/Pt	5			
Profile	Stack Diameter (in) (D)	54	Downstream Dia.	>7			Upstream Dia.	>2			
Nozzle Diameter (avg) (D_n)	0.244	Nozzle Diameter Calibration Checks		1	—	2	—	3	—		
Isokinetic Factor Calculation	Pre T_s	—	Pre T_m	—	Pre Dry Stack Gas (B_{wd})	—	Meter (ΔHa)	1.553	Meter (Y)	0.976	
	$a = (D_n^2 X B_{wd})^2$		$b = (1.6+B_{wd})T_s$		$c = T_m X \Delta H_a$		$F = 1570(aXc)/b$		Isokinetic Rate Factor		
	—		—		—		—		1.4		
Start Time	1208	Final Meter Reading (ft3)	819.986		Orsat/Eyrite/ Analyzer		O_2 (%)	4.3	Comments:		
Finish Time	1310	Initial Meter Reading (ft3)	784.755				CO_2 (%)	22.6			
Pre Test Leak Check		Post Test Leak Check		Static Pressure		Pitot Leak Check		Volume H_2O Collected	330	ml	
0.008 cfm@ 15 "Hg		0.012 cfm@ 21 "Hg		-0.45 "H_2O		0/0 at 3"		Silicia Gel Weight	9.0	gr	

Port and Sample Point	Clock Time (min)	Gas Meter Reading (cfm)	Stack Velocity (in H_2O)	Orifice Pressure Drop (in H_2O)	Vacuum (in H_g)	Stack Gas Temp (°F)	Filter Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Meter Temp (°F)	
1-1	0	784.755	0.64	0.90	8	160	264	42	75	75	
2	5	787.6	0.65	0.91	7	160	269	42	76	76	
3	10	790.3	0.77	1.1	8	160	248	42	78	75	
4	15	793.1	1.0	1.4	10	160	262	42	80	75	
5	20	796.7	1.0	1.4	11	161	257	43	80	75	
6	25	800.0	1.1	1.5	12	161	259	44	81	75	Change ports 1238
2-1	30	803.384	0.65	0.91	9	160	254	45	79	76	Resume 1240
2	35	806.1	0.69	0.97	9	160	261	45	80	76	
3	40	808.9	0.73	1.0	10	160	257	45	81	76	
4	45	811.6	0.71	0.99	10	161	261	45	82	76	
5	50	814.7	0.60	0.84	10	160	257	46	83	76	
6	55	817.3	0.56	0.78	10	162	252	46	83	76	
	60	819.986									

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SOURCE SAMPLING FIELD DATA SHEET

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106 Ambient Airway
Starke, FL 32091
Phone (904) 964-8440
www.ambientairservices.com

Facility	Georgia - Pacific Palatka					Run No.	3				
Source	NO.4 Lime Kiln					Date	4/13/10				
Weather	Scattered					Filter Number	4481				
Testers	DP,CO			Test(s)	5/8	Barometric Pressure	30.20				
Equipment Identification	Pitot	5A	Probe	5A	Heater Box	4	Meter Box	10	Cold box	3	
Thermocouple Identification	Stack	TC-5A	Impinger	1C	Heater Box	I	Meter In	M10-1	Meter Out	M-10	
Sampling	Total min (Θ)	60	Total Points (n)	12			Min/Pt	5			
Profile	Stack Diameter (in) (D)	54	Downstream Dia.	>7			Upstream Dia.	>2			
Nozzle Diameter (avg) (D_n)	0.244	Nozzle Diameter Calibration Checks		1	-	2	-	3	-		
Isokinetic Factor Calculation	Pre T_s	-	Pre T_m	-	Pre Dry Stack Gas (B_{wd})	-	Meter (ΔHa)	-	Meter (Y)	-	
	$a = (D_n^2 X B_{wd})^2$		$b = (1.6+B_{wd})T_s$		$c = T_m X \Delta H_a$		$F = 1570(aXc)/b$		Isokinetic Rate Factor		
	-		-		-		-		1.4		
Start Time	1410	Final Meter Reading (ft3)	856.260	Orsat/Fyrite/Analyzer		O_2 (%)	5.3	Comments:			
Finish Time	1512	Initial Meter Reading (ft3)	820.501			CO_2 (%)	21.0				
Pre Test Leak Check		Post Test Leak Check		Static Pressure		Pitot Leak Check		Volume H_2O Collected	336	ml	
0.010	cfm@15"Hg	0.009	cfm@ 18 "Hg	-0.52	"H_2O	0/0	at 3"	Silicia Gel Weight	9.6	gr	

Port and Sample Point	Clock Time (min) (23)	Gas Meter Reading (cfm)	Stack Velocity (In H_2O)	Orifice Pressure Drop (in H_2O)	Vacuum (in H_g)	Stack Gas Temp (°F)	Filter Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Meter Temp (°F)	
1-1	0	820.501	0.68	0.95	7	161	271	47	77	76	
2	5	823.3	0.69	0.97	7	160	253	44	77	76	
3	10	826.2	0.82	1.1	8	160	258	43	80	76	
4	15	829.2	0.91	1.3	9	159	258	43	81	76	
5	20	832.3	0.79	1.1	8	160	255	44	82	76	
6	25	835.4	0.60	0.84	7	160	258	45	83	76	Ch. ports 1440
2-1	30	838.007	0.71	0.99	8	159	260	46	81	75	Res 1442
2	35	840.8	0.73	1.0	9	160	253	45	81	76	
3	40	843.7	0.78	1.1	9	161	253	46	82	76	
4	45	846.6	0.84	1.2	10	162	254	46	83	76	
5	50	849.6	1.0	1.4	12	161	259	47	84	76	
6	55	853.0	1.0	1.4	13	162	255	48	82	76	
	60	856.260									

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AMBIENT AIR SERVICES, INC.
LABORATORY DATA SHEET

PARTICULATE WEIGHT DETERMINATION

PLANT & LOCATION: Georgia Pacific Palatka, FL

STACK: #4 lime Kiln DATE R 4/13/10 P 4/15/10

	RUN 1	RUN 2	RUN 3	RUN 4	INITIALS
FILTERS:					
Filter No.	4460	4475	4481		4/16/10 CH
Filter Final Wt. (g)	0.4648	0.4743	0.4638		↓ ↓
Filter Tare Wt. (g)	0.3435	0.3434	0.3395		↓ ↓
Net Gain (gm)	0.1213	0.1309	0.1243		↓ ↓
PREFILTER:					
Sample No.	E765	E773	E771		4/15/10 CH
Sample Volume	145 ml	140 ml	145 ml		↓ ↓
Aliquot					
Factor					
Final Wt.	112.3560	112.7581	106.6165		4/16/10 CH
Tare Wt.	112.3528	112.7545	106.6135		↓ ↓
Net Gain	0.0032	0.0036	0.0030		↓ ↓
Net Gain x Factor = Total (gm)					
Blank Correction Factor					
Particulate Wt. (grams)					
SOLVENT BLANK:	E780				4/15/10 CH
Solvent	H^2O - DI				↓ ↓
Solvent Volume, ml	100 ml				↓ ↓
Beaker Final Wt., grams	98.0069				4/16/10 CH
Beaker Tare Wt., grams	98.0069				↓ ↓
Net Gain, grams	0.0000				↓ ↓
Net Gain/100 ml solvent (gram)					
SILCA GEL:					
Sample No.	1	2	3		4/15/10 CH
Final Wt., grams	234.9	240.5	234.7		↓ ↓
Tare Wt., grams	225.1	231.5	225.1		↓ ↓
Net Gain, grams	9.8	9.0	9.6		↓ ↓
EXTRACTABLE MATTER:					
Sample No.					
Final Wt., grams					
Tare Wt., grams					
Net Gain, grams					

AASI.02

Balance Checks
0.500 gm 0.5000 5.000 gm 5.0000 50.000 gm N/A 2.000 gm 2.0000 10.000 gm 10.0000 100.000 gm 100.0000

I certify that the information contained herin is correct, weights are correct and balances used are in current calibration.

Signature Coleen S. Johnson Date 4/16/10

Quality Assurance Signature David Shuttler Date 4/16/10

802

Ambient Air Services, Inc
106 Ambient Airway Starke, FL 32091 (904) 964-8440 FAX: (904) 964-6675

Analysis Request & Chain-of-Custody Record

Project Name: GP Palatka — Location: Palatka, Fl

Laboratory Name: AASI
Address: 106 Ambient Air Way Starke, Fl 32091
Laboratory Contact: David Pate / Colleen Hartman
Project # 504 - Lime Kiln

Samplers: DP/CO

Page 1 of 2
RUSH!
Standard X
Date Report Desired:

Sample ID	Sample Date	Source	Run	Method	Type	Matrix	Number of Containers	Required Analysis: Gravimetric	Required Analysis: DI Titration	Remarks
H_2O_2 -1	4/13/10	No.4 Lime	1	8	SO_2	3% H_2O_2	2		X	↑ Analysis
H_2O_2 -2	↓	Kiln	2	↓	↓	↓	2		X	Performed by
H_2O_2 -3		↓	3				2		X	DTP
H_2O_2 - Blank			Blank	↓	↓	↓	1		X	↓
4460			1	5	PM	901 # Filter	1	X		
4475			2	↓	↓	↓	1	X		
4481			3				1	X		
PW-1			1			Water	1	X		
PW-2			2			↓	1	X		
PW-3	↓	↓	3	↓	↓	↓	1	X		

Relinquished by:	Printed Name: David Pate	Time 0900	Received by:	Printed Name: Colleen Hartman
	Signature: David J Pate	Date 4/15/10		Signature: Colleen Hartman
	Affiliation: AASI			Affiliation: AASI
Relinquished by:	Printed Name:	Time	Received by:	Printed Name:
	Signature:	Date		Signature:
	Affiliation:			Affiliation:

For Lab Use Only		
Sample Integrity: (Note here any damage or loss during transport)	Lab results issued to: By: When:	Remarks:
	Disposition of samples to others:	
	Where stored:	

Revision 3 Apr 17, 2006

Ambient Air Services, Inc
106 Ambient Airway Starke, FL 32091 (904) 964-8440 FAX: (904) 964-6575

Analysis Request & Chain-of-Custody Record

Project Name: GP Palatka Location: Palatka, Fl

Laboratory Name: AASI
Address: 106 Ambient Air Way
Starke, Fl 32091
Laboratory Contact: David Pate / Colleen Hartman
Project # 504 - Lime Kiln

Samplers: DP, CO

Page 2 of 2
RUSH!
Standard X
Date Report Desired:

Sample ID	Sample Date	Source	Run	Method	Type	Matrix	Number of Containers	Required Analysis: Gravimetric	Remarks
S-1	4/13/10	NO.4 Lime	1	5	Wt. Gain	Silica Gel	1	X	
S-2	↓	Kiln	2	↓	↓	↓	1	X	
S-3	↓	↓	3	↓	↓	↓	1	X	
PW-Blank	↓	↓	Blank	↓	PM	Water	1	X	

Relinquished by:	Printed Name: David Pate	Time 0900	Received by:	Printed Name: Colleen Hartman	Time 0800
	Signature: David Pate	Date 4/15/10		Signature: Colleen S. Hartman	Date 4/15/10
	Affiliation: AASI			Affiliation: AASI	
Relinquished by:	Printed Name:	Time	Received by:	Printed Name:	Time
	Signature:	Date		Signature:	Date
	Affiliation:			Affiliation:	

For Lab Use Only

Sample Integrity:
(Note here any damage or loss during transport)

Lab results issued to:
By: When:
Disposition of samples to others:
Where stored:

Remarks:

Revision 3 Apr 17, 2006

Ambient Air Services, Inc.
Environmental Consultants
106 Ambient Air Way
Starke, FL. 32091
(904) 964-8440

Sulfur Dioxide Titrations

Facility:	Georgia-Pacific Consumer Operations, LLC
Location:	Palatka, Florida
Source:	No. 4 Lime Kiln
Date:	4/15/2010
Run:	1

Where:

				Titration #1	Titration #2	Titration #3	Average
N	=	Normality of titrant		0.0170	0.0170		0.0170
Vt	=	Volume of titrant, ml.		≤0.05	≤0.05		≤0.05
Vtb	=	Volume of titrant for blank, ml.		0	0		0
Vsam	=	Total volume of sample, ml.		1000	1000		1000
Va	=	Volume of aliquot		10	10		10

Run:	2

Where:

				Titration #1	Titration #2	Titration #3	Average
N	=	Normality of titrant		0.0170	0.0170		0.0170
Vt	=	Volume of titrant, ml.		<0.05	<0.05		<0.05
Vtb	=	Volume of titrant for blank, ml.		0	0		0
Vsam	=	Total volume of sample, ml.		1000	1000		1000
Va	=	Volume of aliquot		10	10		10

Run:	3

Where:

				Titration #1	Titration #2	Titration #3	Average
N	=	Normality of titrant		0.0170	0.0170		0.0170
Vt	=	Volume of titrant, ml.		≤0.05	<0.05		<0.05
Vtb	=	Volume of titrant for blank, ml.		0	0		0
Vsam	=	Total volume of sample, ml.		1000	1000		1000
Va	=	Volume of aliquot		10	10		10

Analyst: David J Patel

Ambient Air Services, Inc.
Environmental Consultants
106 Ambient Air Way
Starke, FL. 32091
(904) 964-8440

Sulfur Dioxide Calculations - Run 1

Facility:	Georgia-Pacific Consumer Operations, LLC
Location:	Palatka, Florida
Source:	No. 4 Lime Kiln
Date:	4/13/2010
Run:	1

Concentration SO2, lb/dscf = $\frac{7.061 \times 0.000010 \times N\ (Vt - Vtb)\ (\ Vsam / Va\ )}{\text{Volume Sample, dry standard cubic ft.}}$

Where:	**N**	=	Normality of titrant	0.0114
	Vt	=	Volume of titrant, ml.	< 0.05
	Vtb	=	Volume of titrant for blank, ml.	0
	Vsam	=	Total volume of sample, ml.	1000
	Va	=	Volume of aliquot	10
	Q	=	Stack Gas Flowrate (SCFMD)	30827

Volume Sample Dry standard cubic ft. (dscf)	35.442
SO2, lb/dscf	< 1.1356E-07
SO2, parts per million	< 0.68
	lb/dscf x 3.851e8 / 64
SO2, pounds per hour	< 0.21
	lb/dscf x Q x 60

Ambient Air Services, Inc.
Environmental Consultants
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(904) 964-8440

Sulfur Dioxide Calculations - Run 2

Facility:	*Georgia-Pacific Consumer Operations, LLC*
Location:	Palatka, Florida
Source:	No. 4 Lime Kiln
Date:	4/13/2010
Run:	2

Concentration SO2, lb/dscf = $\dfrac{7.061 \times 0.000010 \times N\ (Vt - Vtb)\ (\ Vsam / Va\ )}{\text{Volume Sample, dry standard cubic ft.}}$

Where:	**N**	=	Normality of titrant	0.0114
	Vt	=	Volume of titrant, ml.	< 0.05
	Vtb	=	Volume of titrant for blank, ml.	0
	Vsam	=	Total volume of sample, ml.	1000
	Va	=	Volume of aliquot	10
	Q	=	Stack Gas Flowrate (SCFMD)	30222

Volume Sample Dry standard cubic ft. (dscf)	34.855
SO2, lb/dscf	< 1.1547E-07
SO2, parts per million	< 0.69
	lb/dscf x 3.851e8 / 64
SO2, pounds per hour	< 0.21
	lb/dscf x Q x 60

Ambient Air Services, Inc.
Environmental Consultants
106 Ambient Air Way
Starke, FL. 32091
(904) 964-8440

Sulfur Dioxide Calculations - Run 3

Facility:	Georgia-Pacific Consumer Operations, LLC
Location:	Palatka, Florida
Source:	No. 4 Lime Kiln
Date:	4/13/2010
Run:	3

Concentration SO2, lb/dscf = $\dfrac{7.061 \times 0.000010 \times N\,(Vt - Vtb)\,(\,Vsam / Va\,)}{\text{Volume Sample, dry standard cubic ft.}}$

Where:	**N**	=	Normality of titrant	0.0114
	Vt	=	Volume of titrant, ml.	< 0.05
	Vtb	=	Volume of titrant for blank, ml.	0
	Vsam	=	Total volume of sample, ml.	1000
	Va	=	Volume of aliquot	10
	Q	=	Stack Gas Flowrate (SCFMD)	31088

Volume Sample Dry standard cubic ft. (dscf)	35.330
SO2, lb/dscf	< 1.1392E-07
SO2, parts per million	< 0.69
	lb/dscf x 3.851e8 / 64
SO2, pounds per hour	< 0.21
	lb/dscf x Q x 60

Barium Perchlorate Standardization Form

Date: 4/15/2010
Analyst: DJP

Sulfuric Acid Standard Information

Vendor: JT Baker
Concentration: 0.02 Normality
Lot Number E51504
Received: 4/29/2008

Amount Acid Added (ml): 10

Titration 1:		Titration 2:	
Start (ml):	0.00	Start (ml):	17.55
End (ml) :	17.55	End (ml):	35.20
Difference	17.55	Difference	17.65

Average Barium Perchlorate Added (ml): 17.60

Calculated Barium Standard Calculation: 0.0114 (Normality)

AASI
Ambient Air Services, Inc.
Environmental Consulting and Engineering

AMBIENT AIR SERVICES METHOD 5 PRE-TEST CONSOLE CALIBRATION
USING CALIBRATED CRITICAL ORIFICES
5-POINT ENGLISH UNITS

Meter Console Information	
Console Model	10
Console Serial Number	ASSI 10
DGM Model Number	R 275
DGM Serial Number	1339540

Calibration Conditions			
Date	Time	16-Jun-09	15:40
Barometric Pressure		29.8	in Hg
Theoretical Critical Vacuum[1]		14.0	in Hg
Calibration Technician		RG	

Factors/Conversions		
Std Temp	528	°R
Std Press	29.92	in Hg
K_4	17.647	cR/in Hg

[1]For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.

[2]The Critical Orifice Coefficient, K', must be entered in English units, ($R^{3/2}R^{1/2}$)/(in.Hg*min).

Calibration Data										
Run Time	Metering Console					Critical Orifice				
Elapsed	DGM Orifice ΔH	Volume Initial	Volume Final	Outlet Temp Initial	Outlet Temp Final	Serial Number	Coefficient	Amb Temp Initial	Amb Temp Final	Actual Vacuum
(θ)	($H_{@}$)	(V_{mi})	(V_{mf})	(t_{mi})	(t_{mf})		K'	(t_{amb})	(t_{amb})	
min	in H_2O	cubic feet	cubic feet	°F	°F		see above2	°F	°F	in Hg
24	0.2	109.555	117.035	93	95	40	0.2323	93	93	25
18	0.5	117.036	125.564	95	98	48	0.3475	93	94	23
16	1.0	125.564	135.305	99	102	55	0.4504	94	94	22
13	1.7	135.305	145.749	102	107	63	0.5915	94	93	20
8	3.2	145.749	154.481	107	113	73	0.8105	93	93	15

Results							
Standardized Data				Dry Gas Meter			
				Calibration Factor		Flowrate	ΔH@
Dry Gas Meter		Critical Orifice		Value	Variation	Std & Corr	0.75 SCFM	Variation
(V_{mstd})	(Q_{mstd})	(Vcr_{std})	(Q_{cstd})	(Y)	[ΔY]	($Q_{mstd@corr}$)	(ΔH@)	(ΔH@)
cubic feet	cfm	cubic feet	cfm		Note	cfm	in H2O	
7.150	0.298	7.059	0.294	0.987	-0.009	0.294	1.484	-0.069
8.000	0.444	7.910	0.439	0.989	-0.007	0.439	1.489	-0.064
9.146	0.572	9.109	0.569	0.996	0.000	0.569	1.586	0.033
9.754	0.750	9.724	0.748	0.997	0.001	0.748	1.604	0.051
8.105	1.013	8.204	1.025	1.012	0.016	1.025	1.603	0.050
				0.996	Y Average		1.553	ΔH@ Average

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Methods, CFR 40 Part 60; using the Precision Wet Test Meter # 11AE6, which in turn was calibrated using the American Bell Prover # 3785, certificate # F107, which is traceable to the National Bureau of Standards (N.I.S.T.) and in accordance with AAS' Shop SOP 3.3.8.

Technician Sign: _____ Date: 06-16-09 QA Signature: _____ Date: 6/18/09

AASI
Ambient Air Services, Inc.
Environmental Consulting and Engineering

AMBIENT AIR SERVICES METHOD 5 POST-TEST CONSOLE CALIBRATION
USING CALIBRATED CRITICAL ORIFICES
3-POINT ENGLISH UNITS

Meter Console Information	
Console Number	10
Pre-test "Y" value	0.995
DGM Model Number	R 275
DGM Serial Number	1539640

Calibration Conditions			
Date	Time	14-Apr-10	11:30
Barometric Pressure		30.11	in Hg
Theoretical Critical Vacuum[1]		14.2	in Hg
Calibration Technician	RAG	Project	GP Palatka

Factors/Conversions		
Std Temp	528	°R
Std Press	29.92	in Hg
K_1	17.647	oR/in Hg

[1]For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.

[2]The Critical Orifice Coefficient, K', must be entered in English units, $(ft^3*R^{1/2})/(in.Hg*min)$.

Calibration Data

Run Time	Metering Console					Critical Orifice				
Elapsed	DGM Orifice ΔH	Volume Initial	Volume Final	Outlet Temp Initial	Outlet Temp Final	Serial Number	Coefficient	Amb Temp Initial	Amb Temp Final	Actual Vacuum
(θ)	(P_m)	(V_{mi})	(V_{mf})	(t_{mi})	(t_{mf})	?	K'	(t_{amb})	(t_{amb})	
min	in H_2O	cubic feet	cubic feet	°F	°F		see above2	°F	°F	in Hg
11	1.0	910.230	916.875	71	75	55	0.4793	70	70	17
12	1.0	916.875	924.129	75	77	55	0.4793	70	70	17
12	1.0	924.129	931.330	77	78	55	0.4793	70	70	17

Results

Standardized Data				Dry Gas Meter				
				Calibration Factor		Flowrate	ΔH@	
Dry Gas Meter		Critical Orifice		Value	Variation	Std & Corr	0.75 SCFM	Variation
($V_{m(std)}$)	($Q_{m(std)}$)	($Vol_{(std)}$)	($Q_{(std)}$)	(Y)	(ΔY)	($Q_{m(std)corr}$)	(ΔH@)	(ΔΔH@)
cubic feet	cfm	cubic feet	cfm		Note 1	cfm	in H2O	
6.641	0.604	6.896	0.627	1.038	-0.005	0.627	1.435	0.007
7.269	0.601	7.522	0.627	1.044	0.001	0.627	1.427	-0.001
7.186	0.599	7.522	0.627	1.047	0.004	0.627	1.423	-0.005
				1.043	Y Average (Note 2)		1.428	ΔH@ Average

Yc Calibration

Elasped Time (> 10 min)	10	DGM Beginning	932.269	DGM End	939.667	Outlet Meter Temp Beginning	81	Outlet Meter Temp End	94	Yc	1.021

Note 1: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

Note 2: For Calibration Factor Y, the resulting average difference shall not more than + or - 5% of the Pre-test Y value.

I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Methods, CFR 40 Part 60, using the Precision Wet Test Meter # 11AE6, which in turn was calibrated using the American Bell Prover # 3785, certificate # F107, which is traceable to the National Bureau of Standards (N.I.S.T.) and in accordance with AASI Shop SOP 3.3.8.

Technician Sign: _____ Date: 04-14-10 QA Signature: David Shelton Date: 4/15/10

Shop SOP 2-2
Rev 2, 070803
Form 2-2-2

BEST AVAILABLE COPY

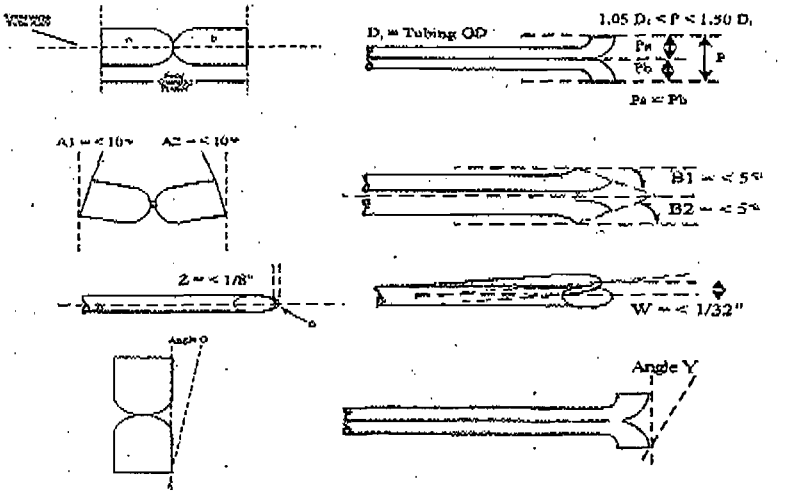
Ambient Air Services, Inc.
106 Ambient Airway
Starke, Florida 32091

PITOT TUBE POST TEST CALIBRATION FORM

Pitot ID	P 5-A			
Technician	RAG			
Project	GP Palatka – No 4 Lime kiln			
Date:	4/14/2010			
Pitot Assembly Level	Yes	X	No	
Pitot tube opening damaged or out-of-round	Yes		No	X
If damage is noted, comment below				

Pitot Measurements

Pitot tube outside diameter					D_t	0.375			
a1	0				a2	1			
b1	1				b2	2			
Pa	0.517				Pb	0.518			
P	1.035			Max	1.125		Min	0.7875	
Angle Y	1	Degrees	sin	0.017	Angle O	0	Degrees	sin	0.000
z = P sin Y	0.018	Inches			w = P sin O	0.000	Inches		
z = < 1/8 inch					w = < 1/32 inch				



I certify that the measurements contained within this form was conducted correctly and within the guidelines of EPA Method 2.

Technician Signature: RAG Date: 4/14/2010

Quality Assurance Signature: David Shelton Date: 4/15/10

Shop SOP
Rev 2, 070808
Form 2.2.3

Ambient Air Services, Inc.
106 Ambient Airway
Starke, Florida 32091

THERMOCOUPLE CALIBRATION

Date	4/14/2010	Time	8:30	Standard Thermometer	Type	MS in Glass	Manf.	BCR					
Ambient Temperature	65	Source	MS in Glass		Serial Number		208252						
Barometric Pressure	30.11	Source	Garvin 0433	Pyrometer	Manuf.	Jenco	Meter Box	10					
Technician	RAG	Project	GP Palatka		Model	768	Ser. #	JC23587					

Temperature Source (A)		Ambient H2O			Ice H2O			Boiling H2O			Heated Oil		
Reference Thermometer	Actual Reading	65			32			212					
	Corrected Temp.	525			492			672			460		
Calibrated Thermocouple		Indicated Temp.	Difference (B)	Percent Diff. (C)	Indicated Temp.	Difference (B)	Percent Diff. (C)	Indicated Temp.	Difference (B)	Percent Diff. (C)	Indicated Temp.	Difference (B)	Percent Diff. (C)
Ser. #	Location												
TC 5A	Stack	64	-1	-0.2%	32	0	0.0%	210	-2	-0.3%			
TC I	Filter	63	-2		30	-2		215	3				
TC K	Impinger	63	-2		31	-1		213	1				
M10-1	Meter In	64	-1		30	-2		214	2				
M 10	Meter Out	64	-1		31	-1		214	2				

Comments:

No. 4 Lime Kiln

Technician Signature RAG Date 4/14/2010

Quality Assurance Signature Date 4/15/10

Calibration Tolerences: Stack = 1.5% of value ° R; Filter = ±5.4° F; Impinger = ±2° F; Meter = ±5.4° F

(A) Type of calibration system used. (B) Reference - Indicated = Difference (C) ((Ref temp ° F + 460) - (Indicated temp ° F + 460)) / (Ref temp ° F + 460)

Shop SOP
Rev 2 070808
Form 2.2.2

APPENDIX B

**VOLATILE ORGANIC COMPOUNDS (VOC),
OXIDES OF NITROGEN (NO_x),
CARBON MONOXIDE (CO),
OXYGEN (O_2),
CARBON DIOXIDE (CO_2)**

-Equipment List
-Gas Calibration Data
-Data Printout and Test Log
-NO_x Converter Efficiency Check
-Example Calculations
-Calibration Gas Certificates

NO_x	99.8	ppm
	213.2	ppm
CO	44.7	ppm
	103.2	ppm
VOC	15.2	ppm (propane)
	30.3	ppm (propane)
	57.1	ppm (propane)
O_2	5.03	%
	11.1	%
CO_2	11.06	%
	21.6	%

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010
Gas Calibration Data

Excess Flow (lpm) (during calibration checks)	2	**Calibration Gas Flow** (lpm)	8
Excess Flow (lpm) (during sampling)	2		
System Response Time (min:sec)	4	**Converter Efficiency** (if applicable)	99.3

Oxygen (O_2)

Instrument Information	Manuf.	Servomex		Model	1440				Serial #	01440C1STD/2855		
CALIBRATION GAS VALUE (C_v)	INITIAL CALIBRATION (C_{ai})	ANALYZER CALIBRATION ERROR, (ACE)	PRE RUN 1 (BIAS, C_s)	POST RUN 1 (C_s)	POST RUN 2 (C_s)	POST RUN 3 (C_s)						
0.00	-0.13	-1.17	-0.03	-0.09	-0.11	-0.13						
5.03	5.00	-0.27	5.00	4.94	4.96	4.93						
11.10	11.05	-0.36	N/A	N/A	N/A	N/A						
SPAN (CS)	11.10											
C_O (Avg of initial and final SB)				-0.06	-0.10	-0.12						
C_M (Avg of initial and final SB)				4.97	4.95	4.95						
C_{MA} (Certified upscale gas value)				5.03	5.03	5.03						
SB (System bias % of span)			0.90	0.36	0.18	0.00						
SB (System bias % of span)			0.00	-0.54	-0.36	-0.63						
D (Drift assessment, % of span)			N/A	-0.54	-0.18	-0.18						
D (Drift assessment, % of span)			N/A	-0.54	0.18	-0.27						

Carbon Dioxide (CO_2)

Instrument Information	Manuf.	Servomex		Model	1440				Serial #	01440C1CO2/2860		
CALIBRATION GAS VALUE (C_v)	INITIAL CALIBRATION (C_{ai})	ANALYZER CALIBRATION ERROR, (ACE)	PRE RUN 1 (BIAS, C_s)	POST RUN 1 (C_s)	POST RUN 2 (C_s)	POST RUN 3 (C_s)						
0.00	0.05	0.23	0.06	0.11	0.16	0.19						
21.60	21.91	1.44	21.50	21.53	21.61	21.50						
11.05	11.05	-0.05	N/A	N/A	N/A	N/A						
SPAN (CS)	21.60											
C_O (Avg of initial and final SB)				0.09	0.14	0.18						
C_M (Avg of initial and final SB)				21.52	21.57	21.56						
C_{MA} (Certified upscale gas value)				21.60	21.60	21.60						
SB (System bias % of span)			0.05	0.28	0.51	0.65						
SB (System bias % of span)			-1.90	-1.76	-1.39	-1.90						
D (Drift assessment, % of span)			N/A	0.23	0.23	0.14						
D (Drift assessment, % of span)			N/A	0.14	0.37	-0.51						

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Equipment List

Oxides of Nitrogen Instrument:	**Manufacturer -** Thermo Environmental Instruments **Serial Number -** 818930811 **NOx Range -** zero to 213.2 ppm	**Model -**	42IHL
Carbon Monoxide Instrument:	**Manufacturer -** Thermo Environmental Instruments **Serial Number -** 23911-213 **CO Range -** zero to 103.2 ppm	**Model -**	48
Volatile Organic Carbon Instrument:	**Manufacturer -** VIG Instruments **Serial Number -** 1620304 **VOC Range -** zero to 65.0 ppm	**Model -**	210
Oxygen Instrument:	**Manufacturer -** Servomex **Serial Number -** 01440C1STD/2855 **O2 Range -** zero to 11.10 ppm	**Model -**	1440
Carbon Dioxide Instrument:	**Manufacturer -** Servomex **Serial Number -** 01440C1CO2/2860 **CO2 Range -** zero to 21.6 ppm	**Model -**	1440

Calibration Gas Standards		Concentration	Manufacturer	Cylinder Number	PSI
Zero	Zero	0.0	NA		n/a
Mid	NO_x	99.8	Liquid Technology	EB-0015892	1300
High	NO_x	213.2	Liquid Technology	EB-0020383	1200
Mid	CO	44.7	Liquid Technology	CC166357	1700
High	CO	103.2	Liquid Technology	EC-0015892	1300
Low	VOC	15.2	Liquid Technology	CC166370	1700
Mid	VOC	30.3	Liquid Technology	CC158999	1400
High	VOC	57.1	Liquid Technology	CC115889	1800
Mid	O2	5.03	Liquid Technology	CC251912	1400
High	O2	11.10	Liquid Technology	CC92928	1200
Mid	CO2	11.06	Liquid Technology	CC92928	1200
High	CO2	21.6	Liquid Technology	EB-0015962	1400

Description of Sampling System :
Nox, O2, CO2, TRS - 6' 3/8 Heated Teflon probe to Tee to H_2O condenser to 200 feet 3/8 Teflon sample line to SS pump to instruments - Knockout contains citrate buffer for selective removal of SO2 prior to TRS Analysis. VOC, CO - 6' 3/8 Heated SS probe to tee to 150 feet 3/8 Heated Teflon Sample Line to SS Pump - H2O Condenser inserted between pump and CO instrument

Test Participants :
Testing - David Pate, Clay O'Neal - Ambient Air Services, Inc.
Ron Reynolds - GP

Other Comments :

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gas Calibration Data

Excess Flow (lpm) (during calibration checks)	2	**Calibration Gas Flow** (lpm)	8
Excess Flow (lpm) (during sampling)	2		
System Response Time (min:sec)	4	**Converter Efficiency** (if applicable)	99.3

Oxides of Nitrogen (NO_x)

Instrument Information	Manuf.	Thermo Environmental		Model	42iHL				Serial #	818930811		
CALIBRATION GAS VALUE (C_v)	INITIAL CALIBRATION (C_{dir})	ANALYZER CALIBRATION ERROR, (ACE)	PRE RUN 1 (BIAS, C_o)	POST RUN 1 (C_s)	POST RUN 2 (C_s)	POST RUN 3 (C_s)						
0.0	0.4	0.2	1.0	1.4	1.8	1.4						
99.8	98.3	-0.7	94.9	94.8	94.4	94.0						
213.2	214.1	0.4	N/A	N/A	N/A	N/A						
SPAN (CS)	213.2											
C_O (Avg of initial and final SB)				1.2	1.6	1.6						
C_M (Avg of initial and final SB)				94.8	94.6	94.2						
C_{MA} (Certified upscale gas value)				99.8	99.8	99.8						
SB (System bias % of span)			0.3	0.5	0.6	0.5						
SB (System bias % of span)			-1.6	-1.6	-1.8	-2.0						
D (Drift assessment, % of span)			N/A	0.2	0.2	-0.2						
D (Drift assessment, % of span)			N/A	-0.1	-0.2	-0.2						

Carbon Monoxide (CO)

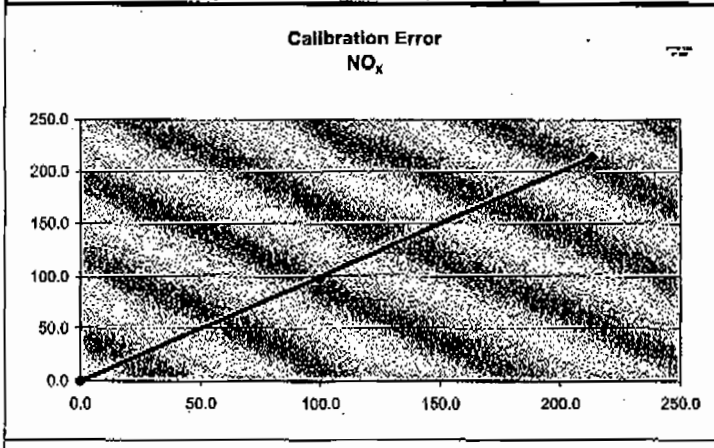
Instrument Information	Manuf.	Thermo Environmental		Model	48				Serial #	23911-213		
CALIBRATION GAS VALUE (C_v)	INITIAL CALIBRATION (C_{dir})	ANALYZER CALIBRATION ERROR, (ACE)	PRE RUN 1 (BIAS, C_o)	POST RUN 1 (C_s)	POST RUN 2 (C_s)	POST RUN 3 (C_s)						
0.0	1.3	1.2	3.6	4.6	4.2	5.3						
44.7	46.1	1.3	41.8	43.3	44.8	43.5						
103.2	102.0	-1.2	N/A	N/A	N/A	N/A						
SPAN (CS)	103.2											
C_O (Avg of initial and final SB)				4.2	4.5	4.7						
C_M (Avg of initial and final SB)				42.5	44.0	44.1						
C_{MA} (Certified upscale gas value)				44.7	44.7	44.7						
SB (System bias % of span)			2.3	3.4	2.6	3.9						
SB (System bias % of span)			-4.1	-2.7	-1.3	-2.5						
D (Drift assessment, % of span)			N/A	1.2	-0.6	1.1						
D (Drift assessment, % of span)			N/A	1.4	1.5	-1.3						

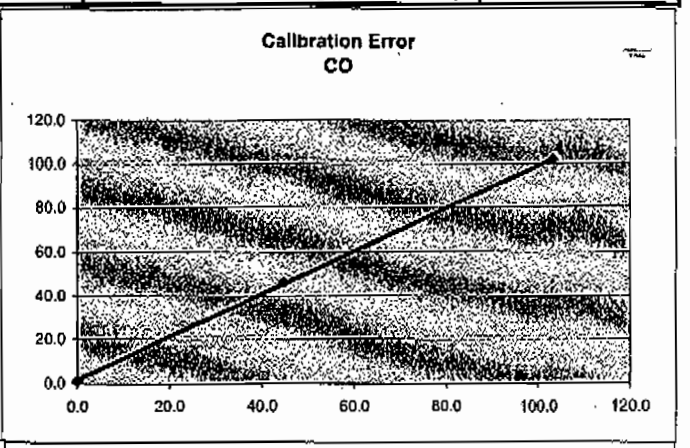
Volatile Organic Compounds (VOC)

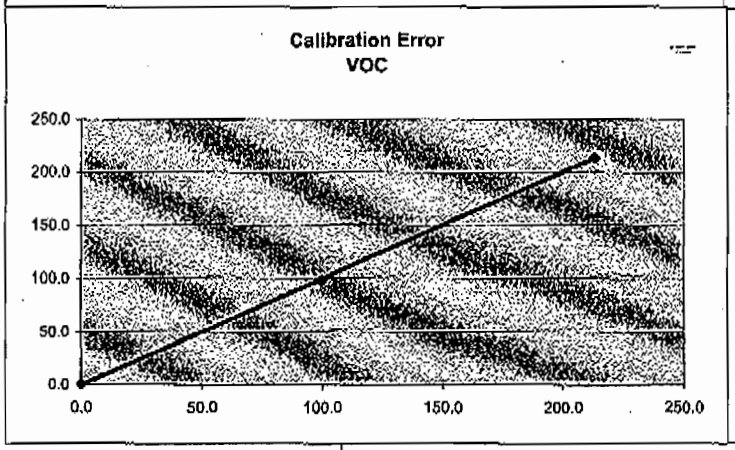
Instrument Information	Manuf.	VIG Instruments		Model	210				Serial #	1620304		
CALIBRATION GAS VALUE (Cv)	INITIAL CALIBRATION (Cdir)	CALIBRATION ERROR, % VALUE	PRE RUN 1 (BIAS, Cs)	POST RUN 1 (Cs)	POST RUN 2 (Cs)	POST RUN 3 (Cs)						
0.0	0.1	0.1	0.1	-0.3	-0.3	-0.3						
30.3	30.2	-0.3	30.2	30.6	31.1	31.5						
15.2	14.8	-2.7	N/A	N/A	N/A	N/A						
57.1	57.7	1.1	N/A	N/A	N/A	N/A						
RANGE	65.0											
C_O (Avg of initial and final SB)				-0.1	-0.3	-0.3						
C_M (Avg of initial and final SB)				30.3	30.8	31.3						
C_{MA} (Certified upscale gas value)				30.3	30.3	30.3						
C_{do} (Calibration drift % of span)			N/A	-0.6	-0.6	-0.6						
C_{dme} (Calibration drift % of span)			N/A	0.4	1.3	2.0						

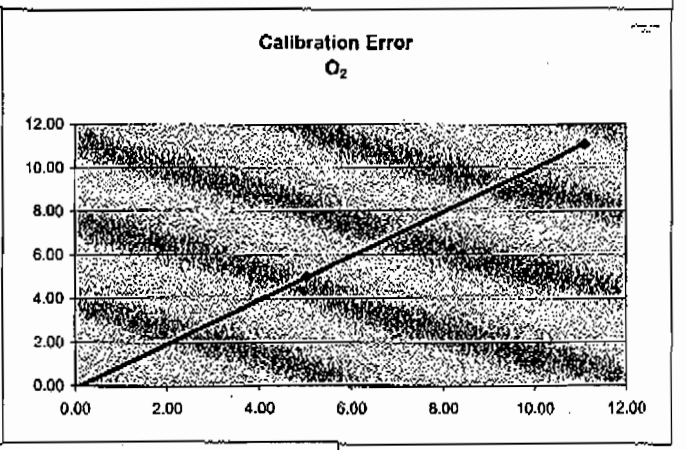
Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010
Gas Calibration Data

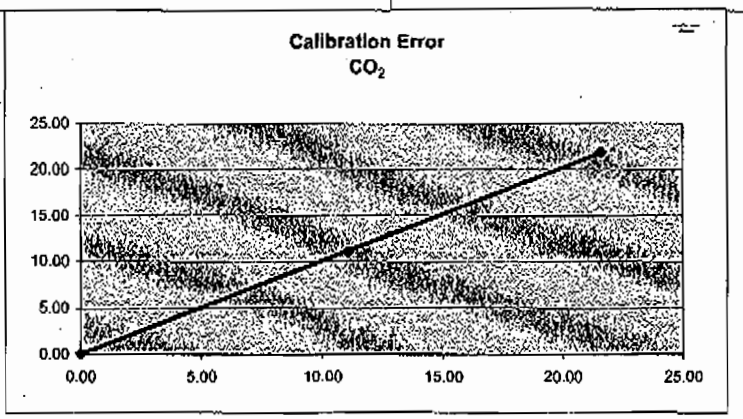
Excess Flow (lpm) (during calibration checks)	2	**Calibration Gas Flow** (lpm)	8
Excess Flow (lpm) (during sampling)	2		
System Response Time (min:sec)	4	**Converter Efficiency** (if applicable)	99.3











Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data						Drift Correct Data													Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 7:16	0.5	2.2	0.9	20.41	0.06																				
4/13/2010 7:16	0.5	2.1	0.7	20.44	0.08																				
4/13/2010 7:17	0.5	2.2	0.8	20.45	0.06																				
4/13/2010 7:18	0.5	2.3	0.8	20.46	0.06																				
4/13/2010 7:19	0.5	2.2	0.9	20.49	0.06																				
4/13/2010 7:20	0.5	2.1	0.8	20.51	0.06																				
4/13/2010 7:21	0.5	2.2	0.5	20.46	0.06																				
4/13/2010 7:22	0.5	2.2	0.8	20.45	0.06																				
4/13/2010 7:23	0.5	2.2	0.6	12.90	8.59																				
4/13/2010 7:24	0.5	2.3	0.8	-0.10	21.69																				
4/13/2010 7:25	0.5	2.3	0.6	-0.13	21.91	21.6 CO2, 0 O2, 0 Nox Direct																			
4/13/2010 7:26	0.3	2.2	0.7	-0.14	21.91	21.6 CO2, 0 O2, 0 Nox Direct																			
	0.4			-0.13	21.91	21.6 CO2, 0 O2, 0 Nox Direct Average																			
4/13/2010 7:27	0.3	2.2	0.8	0.14	21.69																				
4/13/2010 7:28	0.5	2.3	0.9	10.93	10.93																				
4/13/2010 7:29	0.3	2.2	0.9	11.05	11.05	11.1 O2, 11.06 CO2 Direct																			
4/13/2010 7:30	0.3	2.2	1.0	11.05	11.05	11.1 O2, 11.06 CO2 Direct																			
				11.05	11.05	11.1 O2, 11.06 CO2 Direct Average																			
4/13/2010 7:31	49.3	2.2	1.0	1.24	1.28																				
4/13/2010 7:32	198.3	2.2	1.1	-0.08	0.05																				
4/13/2010 7:33	213.8	2.2	1.1	-0.09	0.05	213.2 Nox Direct																			
4/13/2010 7:34	214.5	2.1	1.1	-0.09	0.05	213.2 Nox Direct																			
	214.1					213.2 Nox Direct Average																			
4/13/2010 7:35	169.5	2.2	2.3	3.81	0.06																				
4/13/2010 7:36	1.8	2.2	4.2	5.00	0.05	5.03 O2, 0 CO2 Direct																			
4/13/2010 7:37	0.8	2.2	2.2	5.00	0.05	5.03 O2, 0 CO2 Direct																			
				5.00	0.05	5.03 O2, 0 CO2 Direct Average																			
4/13/2010 7:38	0.8	2.3	1.6	3.09	4.39																				
4/13/2010 7:39	89.0	2.2	1.5	-0.14	11.19																				
4/13/2010 7:40	98.0	2.3	1.4	-0.14	11.20																				
4/13/2010 7:41	98.3	2.3	1.4	-0.14	11.21	99.8 Nox Direct																			
4/13/2010 7:42	98.3	2.3	11.2	-0.14	11.21	99.8 Nox Direct																			
	98.3					99.8 Nox Direct Average																			
4/13/2010 7:43	96.0	2.9	10.5	7.63	5.05																				
4/13/2010 7:44	38.5	3.0	5.4	14.23	0.09																				
4/13/2010 7:45	92.5	1.3	4.4	14.03	0.09	0 CO Direct																			
4/13/2010 7:46	93.5	1.2	4.3	14.03	0.09	0 CO Direct																			
		1.3				0 CO Direct Average																			
4/13/2010 7:47	93.5	21.2	4.2	14.05	0.09																				
4/13/2010 7:48	93.3	85.9	4.3	14.10	0.09																				
4/13/2010 7:49	93.3	101.8	4.1	14.13	0.09	103.2 CO Direct																			
4/13/2010 7:50	93.0	102.2	8.5	14.34	0.09	103.2 CO Direct																			
		102.0				103.2 CO Direct Average																			
4/13/2010 7:51	77.5	77.2	10.0	16.28	0.03																				
4/13/2010 7:52	41.3	45.3	4.8	18.61	0.03																				
4/13/2010 7:53	16.5	45.0	3.5	19.80	0.03	44.7 CO Direct																			
4/13/2010 7:54	5.8	46.5	3.5	20.21	0.03	44.7 CO Direct																			
		46.1				44.7 CO Direct Average																			

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data					
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS
4/13/2010 7:55	2.8	28.2	3.3	20.75	0.09	
4/13/2010 7:56	4.0	2.5	3.0	6.23	13.70	
4/13/2010 7:57	1.5	2.5	2.9	0.01	21.44	
4/13/2010 7:58	1.0	2.5	2.8	-0.03	21.49	21.6 CO2, 0 O2, 0 Nox Bias
4/13/2010 7:59	1.0	2.4	2.8	-0.04	21.51	21.6 CO2, 0 O2, 0 Nox Bias
	1.0			-0.03	21.50	21.6 CO2, 0 O2, 0 Nox Bias Average
4/13/2010 8:00	0.8	2.3	2.7	2.94	8.63	
4/13/2010 8:01	0.8	2.4	2.8	5.00	0.10	
4/13/2010 8:02	0.8	2.3	2.6	5.00	0.03	
4/13/2010 8:03	0.8	2.3	2.6	5.00	0.05	5.03 O2, 0 CO2 Bias
4/13/2010 8:04	0.8	2.3	2.6	5.00	0.05	5.03 O2, 0 CO2 Bias
				5.00	0.05	5.03 O2, 0 CO2 Bias Average
4/13/2010 8:05	18.8	2.3	2.8	1.39	7.73	
4/13/2010 8:06	94.0	2.3	2.5	-0.04	10.91	
4/13/2010 8:07	94.5	2.3	2.5	-0.04	10.93	93.8 Nox Bias
4/13/2010 8:08	95.3	2.3	2.5	-0.04	10.94	93.8 Nox Bias
	94.9					93.8 Nox Bias Average
4/13/2010 8:09	88.8	3.4	5.1	11.96	4.51	
4/13/2010 8:10	4.3	28.1	1.1	20.84	0.03	
4/13/2010 8:11	1.0	40.5	0.9	20.81	0.03	
4/13/2010 8:12	0.8	41.7	0.1	20.80	0.03	44.7 CO, 0 VOC Bias
4/13/2010 8:13	0.8	41.9	0.1	20.79	0.03	44.7 CO, 0 VOC Bias
		41.8	0.1			44.7 CO, 0 VOC Bias Average
4/13/2010 8:14	0.8	36.5	40.6	20.84	0.03	
4/13/2010 8:15	0.8	5.8	57.7	20.90	0.03	57.1 VOC Bias
4/13/2010 8:16	0.5	3.5	57.7	20.91	0.03	57.1 VOC Bias
			57.7			57.1 VOC Bias Average
4/13/2010 8:17	0.5	3.6	39.9	20.90	0.03	
4/13/2010 8:18	0.5	3.7	31.5	20.91	0.03	
4/13/2010 8:19	0.5	3.6	30.3	20.88	0.03	30.3 VOC, 0 CO Bias
4/13/2010 8:20	0.5	3.6	30.2	20.98	0.03	30.3 VOC, 0 CO Bias
		3.6	30.2		0.03	30.3 VOC, 0 CO Bias Average
4/13/2010 8:21	0.5	3.6	18.7	20.88	0.03	
4/13/2010 8:22	0.5	3.5	14.8	20.89	0.03	15.2 VOC Bias
4/13/2010 8:23	0.5	3.5	14.7	18.49	3.69	15.2 VOC Bias
			14.8			15.2 VOC Bias Average
4/13/2010 8:24	56.0	4.7	10.8	5.29	21.86	
4/13/2010 8:25	89.8	19.9	6.9	4.91	22.25	
4/13/2010 8:26	89.0	23.8	7.1	4.82	22.25	
4/13/2010 8:27	88.3	23.7	7.2	4.70	22.41	
4/13/2010 8:28	87.3	23.9	7.0	4.59	22.56	
4/13/2010 8:29	87.3	24.1	6.9	4.49	22.69	
4/13/2010 8:30	86.5	24.5	6.9	4.34	22.85	
4/13/2010 8:31	84.8	25.1	7.0	4.33	22.88	
4/13/2010 8:32	84.3	26.4	7.1	4.23	23.04	
4/13/2010 8:33	83.5	25.5	6.9	4.24	23.01	
4/13/2010 8:34	83.5	25.7	6.9	4.39	22.80	
4/13/2010 8:35	83.3	25.9	7.0	4.35	22.86	Run 1

	Drift Correct Data															Corrected Data				
TimeStamp	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 8:35	1.79	94.82	93.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.5	25.3	7.1	4.4	23.0

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070035-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data						Drift Correct Data													Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 8:38	82.8	26.0	7.1	4.41	22.79	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	86.8	25.4	7.2	4.5	22.9
4/13/2010 8:37	82.5	25.7	7.2	4.34	22.80	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	86.7	25.1	7.3	4.4	23.0
4/13/2010 8:38	82.0	25.4	7.2	4.33	22.90	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	86.1	24.7	7.3	4.4	23.0
4/13/2010 8:39	82.0	25.6	7.1	4.35	22.83	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	86.1	25.0	7.2	4.4	22.9
4/13/2010 8:40	81.3	25.5	7.0	4.31	22.86	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	85.3	24.8	7.1	4.4	23.0
4/13/2010 8:41	82.0	26.1	7.1	4.43	22.71	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	86.1	25.5	7.2	4.5	22.8
4/13/2010 8:42	83.0	25.8	7.2	4.45	22.69	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	87.2	25.0	7.3	4.5	22.8
4/13/2010 8:43	83.0	25.1	7.2	4.40	22.71	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	87.2	24.4	7.3	4.5	22.8
4/13/2010 8:44	83.3	24.5	7.0	4.41	22.66	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.5	23.7	7.1	4.5	22.8
4/13/2010 8:45	83.8	24.5	7.2	4.50	22.55	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	88.0	23.7	7.3	4.6	22.8
4/13/2010 8:46	83.0	25.1	7.3	4.39	22.70	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.2	24.4	7.4	4.4	22.8
4/13/2010 8:47	83.0	25.4	7.5	4.33	22.81	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.2	25.9	7.8	4.4	22.9
4/13/2010 8:48	82.5	25.8	7.8	4.25	22.90	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.7	25.2	7.9	4.3	23.0
4/13/2010 8:49	82.5	27.3	7.7	4.16	23.01	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.7	26.9	7.8	4.2	23.1
4/13/2010 8:50	82.0	26.3	7.6	4.29	22.86	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.1	25.8	7.7	4.3	23.0
4/13/2010 8:51	82.0	26.3	7.8	4.20	23.03	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.1	25.8	7.9	4.3	23.1
4/13/2010 8:52	81.5	26.8	7.8	4.16	23.06	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.6	26.7	7.9	4.2	23.2
4/13/2010 8:53	81.0	30.2	7.7	4.16	23.09	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.1	30.3	7.8	4.2	23.2
4/13/2010 8:54	81.3	29.1	7.8	4.23	22.94	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.3	29.0	7.9	4.3	23.0
4/13/2010 8:55	80.8	28.5	7.8	4.26	22.95	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	84.8	28.3	7.7	4.3	23.0
4/13/2010 8:56	81.3	28.2	7.8	4.31	22.86	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.3	28.0	7.9	4.4	23.0
4/13/2010 8:57	79.0	28.5	7.7	4.25	22.89	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	82.9	28.3	7.8	4.3	23.0
4/13/2010 8:58	79.5	28.9	7.8	4.26	22.94	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	83.5	28.8	7.9	4.3	23.0
4/13/2010 8:59	78.8	30.0	7.8	4.24	22.97	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	82.7	30.1	7.9	4.3	23.0
4/13/2010 9:00	78.0	28.8	7.8	4.29	22.84	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	81.9	28.7	7.7	4.3	22.9
4/13/2010 9:01	81.0	26.1	7.6	4.45	22.55	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.1	25.6	7.7	4.5	22.6
4/13/2010 9:02	83.0	25.1	7.7	4.33	22.65	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.2	24.4	7.8	4.4	22.7
4/13/2010 9:03	82.0	25.7	7.8	4.39	22.60	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.1	25.1	7.9	4.4	22.7
4/13/2010 9:04	82.3	25.9	7.8	4.41	22.55	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.4	25.3	7.9	4.5	22.7
4/13/2010 9:05	81.8	25.8	7.9	4.44	22.55	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.9	25.2	7.9	4.5	22.6
4/13/2010 9:06	81.8	25.8	7.5	4.39	22.59	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.9	25.2	7.6	4.4	22.7
4/13/2010 9:07	82.5	24.9	6.8	4.35	22.63	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.7	24.1	6.9	4.4	22.7
4/13/2010 9:08	84.5	25.6	6.2	4.20	22.84	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	88.9	25.0	6.3	4.3	22.9
4/13/2010 9:09	83.0	26.0	6.1	4.30	22.76	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	87.2	25.4	6.2	4.4	22.9
4/13/2010 9:10	82.8	25.3	6.0	4.33	22.73	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.9	24.6	6.1	4.4	22.8
4/13/2010 9:11	82.3	25.6	6.1	4.35	22.68	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.4	25.0	6.2	4.4	22.8
4/13/2010 9:12	81.5	25.7	5.8	4.39	22.80	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.3	25.1	5.9	4.4	22.7
4/13/2010 9:13	82.5	25.0	5.8	4.50	22.64	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.7	24.3	6.1	4.6	22.5
4/13/2010 9:14	81.0	25.5	6.1	4.35	22.59	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.1	24.8	6.2	4.4	22.7
4/13/2010 9:15	83.5	25.3	6.5	4.45	22.44	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	84.5	24.6	6.6	4.5	22.5
4/13/2010 9:16	81.8	25.2	6.9	4.38	22.55	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.9	25.7	7.0	4.4	22.6
4/13/2010 9:17	81.0	25.2	5.4	4.48	22.40	Run 2	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.1	24.5	5.4	4.5	22.5
4/13/2010 9:18	81.5	25.0	5.5	4.53	22.31	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.6	24.3	5.5	4.6	22.4
4/13/2010 9:19	82.0	25.2	5.5	4.40	22.46	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	86.1	24.5	5.6	4.5	22.5
4/13/2010 9:20	81.0	25.4	5.5	4.33	22.60	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	85.1	24.7	5.6	4.4	22.7
4/13/2010 9:21	80.8	25.7	5.7	4.11	22.91	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	84.8	25.4	5.8	4.2	23.0
4/13/2010 9:22	115.5	32.4	5.7	4.00	23.58	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	31.31	-0.06	4.97	5.03	0.09	21.52	21.61	121.6	32.9	5.8	4.1	23.7
4/13/2010 9:23	124.5	24.6	5.6	3.69	23.76	Run 1	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	31.31	-0.06	4.97	5.03	0.09	21.52	21.61	131.2	25.8	5.7	4.0	23.9

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	Uncorrected Data					
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS
4/13/2010 9:24	124.3	24.6	6.5	4.03	23.70	Run 1
4/13/2010 9:25	123.8	24.5	6.5	4.16	23.55	Run 1
4/13/2010 9:26	124.3	23.7	5.5	4.25	23.40	Run 1
4/13/2010 9:27	124.6	23.3	5.5	4.19	23.48	Run 1
4/13/2010 9:28	124.8	23.5	5.7	4.23	23.38	Run 1
4/13/2010 9:29	124.3	23.9	5.8	4.11	23.53	Run 1
4/13/2010 9:30	123.8	22.7	5.7	4.11	23.53	Run 1
4/13/2010 9:31	123.0	23.1	5.8	4.21	23.43	Run 1
4/13/2010 9:32	123.0	23.7	5.7	4.13	23.48	Run 1
4/13/2010 9:33	123.5	23.5	5.7	4.26	23.29	Run 1
4/13/2010 9:34	122.5	23.6	5.6	4.38	23.13	Run 1
	90.7	26.2	6.8	4.39	22.90	Run 1 Average
4/13/2010 9:35	122.0	23.4	5.6	4.46	22.53	
4/13/2010 9:36	122.0	22.6	5.7	4.33	23.01	
4/13/2010 9:37	121.8	22.8	5.6	4.33	22.91	
4/13/2010 9:39	122.5	23.7	5.6	4.39	22.91	
4/13/2010 9:39	121.5	23.7	10.3	4.40	22.85	
4/13/2010 9:40	122.5	25.5	5.5	6.76	19.79	
4/13/2010 9:41	49.5	21.1	2.0	20.53	0.31	
4/13/2010 9:42	1.8	11.2	0.9	20.74	0.15	
4/13/2010 9:43	1.5	7.6	0.7	20.75	0.13	
4/13/2010 9:44	1.5	6.8	2.5	16.06	4.03	
4/13/2010 9:45	7.8	5.8	5.8	0.00	21.30	
4/13/2010 9:46	1.5	2.7	14.2	-0.03	21.48	
4/13/2010 9:47	1.5	2.5	14.1	-0.03	21.53	21.6 CO2, 0 O2, 0 Nox Bias
4/13/2010 9:48	1.3	4.1	2.7	-0.10	21.54	21.6 CO2, 0 O2, 0 Nox Bias
	1.4			-0.03	21.53	21.6 CO2, 0 O2, 0 Nox Bias Average
4/13/2010 9:49	0.8	4.8	-0.2	0.63	17.36	
4/13/2010 9:50	0.8	4.7	-0.3	4.90	0.23	
4/13/2010 9:51	0.8	4.7	-0.3	4.94	0.13	5.03 O2, 0 CO2 Bias
4/13/2010 9:52	0.8	4.7	-0.3	4.94	0.10	5.03 O2, 0 CO2 Bias
				4.94	0.11	5.03 O2, 0 CO2 Bias Average
4/13/2010 9:53	0.8	4.9	-0.3	3.43	3.13	
4/13/2010 9:54	68.0	5.7	-0.3	-0.05	10.24	
4/13/2010 9:55	94.5	5.6	-0.3	-0.05	10.91	
4/13/2010 9:56	94.8	5.7	-0.3	-0.03	10.93	93.8 Nox Bias
4/13/2010 9:57	94.8	5.7	-0.2	-0.03	10.94	93.8 Nox Bias
	94.8					93.8 Nox Bias Average
4/13/2010 9:58	83.3	9.8	-0.2	13.21	3.93	
4/13/2010 9:59	2.8	40.8	-0.3	20.58	0.13	
4/13/2010 10:00	1.0	43.3	-0.3	20.63	0.10	44.7 CO, 0 VOC Bias
4/13/2010 10:01	0.8	43.2	-0.3	20.60	0.03	44.7 CO, 0 VOC Bias
		43.3	-0.3			44.7 CO, 0 VOC Bias Average
4/13/2010 10:02	0.8	42.1	10.9	20.48	0.03	
4/13/2010 10:03	0.8	11.4	25.8	20.40	0.03	
4/13/2010 10:04	0.8	4.8	30.5	20.45	0.03	30.3 VOC, 0 CO Bias
4/13/2010 10:05	0.8	4.8	30.5	20.64	0.03	30.3 VOC, 0 CO Bias
		4.8	30.5			30.3 VOC, 0 CO Bias Average

	Drift Correct Data															Corrected Data				
TimeStamp	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 9:24	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.31	-0.06	4.97	5.03	0.09	21.52	21.61	131.2	23.8	5.6	4.1	23.8
4/13/2010 9:25	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.31	-0.06	4.97	5.03	0.09	21.52	21.61	130.6	23.7	5.5	4.2	23.6
4/13/2010 9:26	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.61	131.2	22.7	5.5	4.3	23.5
4/13/2010 9:27	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.61	131.7	22.3	5.8	4.2	23.6
4/13/2010 9:28	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.61	131.7	22.5	5.8	4.3	23.5
4/13/2010 9:29	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	131.2	23.0	5.9	4.2	23.6
4/13/2010 9:30	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.06	4.97	5.03	0.09	21.52	21.60	130.6	22.7	5.8	4.2	23.6
4/13/2010 9:31	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	129.8	22.0	5.9	4.3	23.5
4/13/2010 9:32	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	129.8	22.7	5.8	4.2	23.6
4/13/2010 9:33	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	130.4	22.5	5.8	4.3	23.4
4/13/2010 9:34	1.19	94.82	99.80	4.20	42.53	44.70	-0.10	30.34	30.30	-0.05	4.97	5.03	0.09	21.52	21.60	129.3	22.6	5.7	4.4	23.2
																95.4	25.7	6.9	4.4	23.0

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	Uncorrected Data						Drift Correct Data															Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 10:06	0.8	4.7	11.0	20.58	0.03																					
4/13/2010 10:07	0.8	4.7	0.3	20.83	0.03																					
4/13/2010 10:08	1.3	11.1	5.3	15.01	7.93																					
4/13/2010 10:09	99.5	23.7	5.4	4.30	22.54																					
4/13/2010 10:10	124.0	24.1	5.5	4.28	22.56																					
4/13/2010 10:11	123.8	24.3	5.8	4.21	22.61																					
4/13/2010 10:12	123.3	23.9	5.7	4.20	22.78																					
4/13/2010 10:13	125.3	23.4	5.7	4.14	22.86																					
4/13/2010 10:14	126.0	23.7	5.9	4.23	22.75																					
4/13/2010 10:15	124.8	23.8	6.0	4.13	22.94																					
4/13/2010 10:16	126.3	24.7	6.0	4.19	22.85																					
4/13/2010 10:17	125.5	24.9	5.9	4.15	22.81																					
4/13/2010 10:18	124.8	22.4	5.9	4.24	22.76																					
4/13/2010 10:19	125.8	22.4	5.8	4.35	22.64																					
4/13/2010 10:20	123.8	22.0	5.8	4.31	22.54																					
4/13/2010 10:21	124.3	22.5	5.9	4.24	22.75																					
4/13/2010 10:22	124.8	22.9	5.8	4.24	22.71																					
4/13/2010 10:23	124.5	22.3	5.8	4.35	22.60																					
4/13/2010 10:24	123.3	22.5	5.8	4.33	22.50																					
4/13/2010 10:25	122.3	22.8	5.8	4.35	22.50																					
4/13/2010 10:26	121.5	23.2	5.7	4.35	22.46																					
4/13/2010 10:27	121.8	23.0	5.7	4.33	22.48																					
4/13/2010 10:28	120.8	23.2	5.8	4.30	22.55																					
4/13/2010 10:28	120.8	23.7	5.8	4.26	22.59																					
4/13/2010 10:30	120.8	23.8	5.7	4.24	22.61																					
4/13/2010 10:31	118.8	23.7	5.6	4.24	22.59																					
4/13/2010 10:32	119.8	23.8	5.5	4.35	22.53																					
4/13/2010 10:33	118.3	23.7	5.6	4.31	22.53																					
4/13/2010 10:34	118.3	25.0	5.6	4.25	22.51																					
4/13/2010 10:35	118.3	24.6	5.5	4.26	22.50																					
4/13/2010 10:36	113.8	24.2	5.5	4.28	22.49																					
4/13/2010 10:37	113.8	24.0	5.5	4.33	22.43																					
4/13/2010 10:38	111.5	23.7	5.5	4.38	22.33																					
4/13/2010 10:39	118.3	23.7	5.6	4.23	22.81																					
4/13/2010 10:40	126.5	24.1	5.5	4.14	22.79																					
4/13/2010 10:41	124.0	24.1	6.5	4.34	22.49																					
4/13/2010 10:42	125.5	23.2	5.5	4.30	22.48																					
4/13/2010 10:43	123.3	22.9	5.5	4.36	22.35																					
4/13/2010 10:44	125.3	22.8	5.5	4.26	22.48																					
4/13/2010 10:45	124.0	23.9	5.6	4.19	22.81																					
4/13/2010 10:46	124.5	24.3	5.6	4.15	22.69																					
4/13/2010 10:47	123.3	24.2	5.7	4.06	22.76																					
4/13/2010 10:48	119.8	24.8	5.6	4.03	22.85																					
4/13/2010 10:49	116.3	25.3	5.8	4.00	22.85																					
4/13/2010 10:50	116.0	25.3	5.5	4.10	22.69																					
4/13/2010 10:51	115.0	24.1	5.5	4.13	22.70																					
4/13/2010 10:52	116.5	24.5	5.5	4.13	22.69																					
4/13/2010 10:53	113.0	25.2	5.5	4.05	22.76																					

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	Uncorrected Data						Drift Correct Data															Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 10:54	112.5	25.2	5.5	4.06	22.76																					
4/13/2010 10:55	114.0	25.1	5.5	4.05	22.78																					
4/13/2010 10:56	111.3	25.0	5.5	4.13	22.69																					
4/13/2010 10:57	110.5	25.4	5.5	4.09	22.73																					
4/13/2010 10:58	109.5	25.3	6.5	4.11	22.69																					
4/13/2010 10:59	112.5	24.8	5.5	4.10	22.75																					
4/13/2010 11:00	111.0	25.1	5.5	4.14	22.73																					
4/13/2010 11:01	110.8	25.2	5.4	4.16	22.71																					
4/13/2010 11:02	103.8	25.1	5.5	4.23	22.65																					
4/13/2010 11:03	110.0	25.1	5.5	4.19	22.71																					
4/13/2010 11:04	103.0	25.5	6.5	4.18	22.74																					
4/13/2010 11:05	103.5	25.2	5.4	4.16	22.75																					
4/13/2010 11:06	107.3	24.8	5.3	4.28	22.59																					
4/13/2010 11:07	104.5	24.6	5.4	4.25	22.53																					
4/13/2010 11:08	106.0	24.8	5.5	4.16	22.71																					
4/13/2010 11:09	105.5	25.5	5.5	4.14	22.74																					
4/13/2010 11:10	104.3	25.4	5.5	4.20	22.64																					
4/13/2010 11:11	103.5	23.0	6.5	4.11	22.78																					
4/13/2010 11:12	102.5	21.0	5.5	4.24	22.64																					
4/13/2010 11:15	99.0	25.7	5.6	4.03	22.89																					
4/13/2010 11:16	101.8	25.0	5.8	4.30	22.65																					
4/13/2010 11:17	102.5	24.8	5.8	4.23	22.76																					
4/13/2010 11:18	105.3	25.8	5.9	3.99	23.19																					
4/13/2010 11:19	114.0	25.6	5.7	4.05	23.19																					
4/13/2010 11:20	119.0	25.2	5.8	4.08	23.21																					
4/13/2010 11:21	112.5	24.8	5.8	3.98	23.33																					
4/13/2010 11:22	111.0	25.5	5.9	3.95	23.35																					
4/13/2010 11:23	110.8	26.1	5.7	4.03	23.28																					
4/13/2010 11:24	110.5	25.2	5.6	4.10	23.14																					
4/13/2010 11:25	112.8	24.9	5.9	4.10	23.13																					
4/13/2010 11:26	111.5	25.6	5.9	3.94	23.29																					
4/13/2010 11:27	110.0	26.0	5.9	3.95	23.25																					
4/13/2010 11:28	105.3	26.2	6.0	3.94	23.24																					
4/13/2010 11:29	103.3	26.0	5.9	3.96	23.19																					
4/13/2010 11:30	103.8	25.2	5.9	3.95	23.23																					
4/13/2010 11:31	102.5	28.2	6.0	3.91	23.26																					
4/13/2010 11:32	102.0	28.0	6.0	3.80	23.38																					
4/13/2010 11:33	100.5	27.3	6.0	3.84	23.30																					
4/13/2010 11:34	93.0	27.5	5.8	3.86	23.24																					
4/13/2010 11:35	90.0	26.8	5.6	4.03	23.06																					
4/13/2010 11:36	108.8	25.5	5.8	3.95	23.11																					
4/13/2010 11:37	106.5	26.7	5.8	3.93	23.13																					
4/13/2010 11:38	105.3	27.9	5.7	4.03	23.05																					
4/13/2010 11:39	105.3	28.2	5.6	3.93	23.10																					
4/13/2010 11:40	104.0	27.1	5.8	4.05	22.99																					
4/13/2010 11:41	105.5	27.3	5.8	4.03	23.06																					
4/13/2010 11:42	103.3	27.1	5.6	4.01	23.05																					
4/13/2010 11:43	103.0	26.5	5.7	4.06	23.03																					

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	Uncorrected Data						Drift Correct Data															Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 11:44	103.5	26.3	5.8	4.18	22.85																					
4/13/2010 11:45	102.8	26.5	5.9	4.05	23.03																					
4/13/2010 11:46	103.0	27.1	5.8	4.00	22.94																					
4/13/2010 11:47	100.8	27.5	6.0	4.06	22.93																					
4/13/2010 11:48	100.3	27.6	6.0	4.01	22.94																					
4/13/2010 11:49	100.0	28.1	5.9	4.06	22.85																					
4/13/2010 11:50	99.5	27.8	5.9	4.14	22.74																					
4/13/2010 11:51	100.3	27.1	5.8	4.29	22.64																					
4/13/2010 11:52	98.5	27.3	5.8	4.16	22.66																					
4/13/2010 11:53	98.3	27.4	5.8	4.24	22.56																					
4/13/2010 11:54	98.0	27.2	5.7	4.18	22.59																					
4/13/2010 11:55	96.3	26.6	5.8	4.23	22.56																					
4/13/2010 11:56	96.0	26.4	5.9	4.24	22.51																					
4/13/2010 11:57	98.0	26.4	5.9	4.18	22.53																					
4/13/2010 11:58	100.3	26.6	5.8	4.10	22.68																					
4/13/2010 11:59	110.6	26.5	5.6	4.24	22.50																					
4/13/2010 12:00	110.6	27.1	5.8	4.30	22.51																					
4/13/2010 12:01	107.8	26.5	5.7	4.30	22.49																					
4/13/2010 12:02	110.8	25.9	5.7	4.45	22.26																					
4/13/2010 12:03	111.3	25.9	5.7	4.44	22.23																					
4/13/2010 12:04	110.5	25.4	5.5	4.39	22.29																					
4/13/2010 12:05	109.3	25.1	5.7	4.55	22.04																					
4/13/2010 12:06	109.5	25.7	5.6	4.45	22.15																					
4/13/2010 12:07	107.0	25.6	5.7	4.53	22.09																					
4/13/2010 12:08	105.3	25.6	5.7	4.58	21.99	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.3	24.1	5.9	4.7	22.0
4/13/2010 12:09	104.8	25.7	5.7	4.58	22.01	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	110.7	24.0	5.9	4.7	22.0
4/13/2010 12:10	104.5	25.5	5.8	4.59	22.08	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.05	0.14	21.57	21.60	110.7	23.8	6.0	4.8	22.1
4/13/2010 12:11	104.5	25.1	5.6	4.58	22.01	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	110.5	23.9	5.8	4.7	22.0
4/13/2010 12:12	103.5	24.6	5.7	4.59	21.98	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	112.8	22.8	5.9	4.7	22.0
4/13/2010 12:13	105.5	24.8	5.7	4.60	21.90	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.5	23.0	5.9	4.7	21.9
4/13/2010 12:14	105.3	24.6	5.7	4.53	22.01	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.3	22.8	5.9	4.6	22.0
4/13/2010 12:15	105.3	24.9	5.7	4.59	21.96	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.8	23.1	5.9	4.6	22.0
4/13/2010 12:16	105.0	25.0	5.8	4.59	21.89	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.00	0.14	21.57	21.60	111.0	23.2	6.0	4.7	21.9
4/13/2010 12:17	103.0	24.9	5.9	4.59	21.85	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.00	0.14	21.57	21.60	109.8	23.1	6.1	4.7	21.9
4/13/2010 12:18	104.0	24.7	5.9	4.46	22.01	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.00	0.14	21.57	21.60	109.9	22.9	6.1	4.6	22.0
4/13/2010 12:19	103.6	24.0	5.9	4.49	22.03	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.00	0.14	21.57	21.60	103.4	22.1	6.1	4.8	22.0
4/13/2010 12:20	103.8	24.7	5.8	4.44	22.13	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.00	0.14	21.57	21.60	103.7	22.9	6.0	4.5	22.2
4/13/2010 12:21	104.0	24.3	5.7	4.49	22.11	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.9	22.4	5.8	4.8	22.1
4/13/2010 12:22	103.5	23.6	5.8	4.54	22.06	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	109.4	21.8	5.8	4.6	22.1
4/13/2010 12:23	109.3	24.0	5.8	4.49	22.25	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.21	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.01	115.8	22.1	6.1	4.8	22.3
4/13/2010 12:24	109.8	25.5	8.0	4.28	22.50	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.61	115.0	23.8	8.2	4.4	22.5
4/13/2010 12:25	109.8	25.3	5.9	4.43	22.33	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.22	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.01	115.0	23.5	6.1	4.5	22.4
4/13/2010 12:26	103.5	25.2	5.9	4.39	22.40	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.31	-0.10	4.95	5.03	0.14	21.57	21.61	112.6	23.4	6.1	4.5	22.4
4/13/2010 12:27	107.6	25.6	5.9	4.39	22.39	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.16	21.57	21.60	113.9	23.8	6.1	4.5	22.4
4/13/2010 12:28	105.8	25.1	5.8	4.44	22.35	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.8	23.3	6.0	4.5	22.4
4/13/2010 12:29	104.0	25.2	5.9	4.44	22.34	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	109.8	23.4	6.1	4.5	22.4
4/13/2010 12:30	106.0	25.7	6.0	4.40	22.34	Run 2	1.57	94.57	99.80	4.45	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	112.1	24.6	6.2	4.5	22.4
4/13/2010 12:31	105.3	26.5	5.9	4.35	22.35	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.3	24.9	6.1	4.4	22.4

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected, Data						Drift Correct Data														Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 12:32	104.8	26.9	5.7	4.40	22.39	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	110.7	24.7	5.9	4.5	22.4
4/13/2010 12:33	105.0	25.4	5.9	4.43	22.28	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.0	23.7	6.1	4.5	22.3
4/13/2010 12:34	101.8	26.2	5.8	4.32	22.33	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	107.5	24.6	5.8	4.5	22.4
4/13/2010 12:35	101.0	24.9	5.8	4.45	22.24	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	105.7	23.1	6.0	4.5	22.3
4/13/2010 12:36	101.6	26.1	5.8	4.33	22.26	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	107.5	24.5	6.1	4.5	22.3
4/13/2010 12:37	100.3	25.7	5.8	4.31	22.38	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	105.9	24.0	6.1	4.4	22.4
4/13/2010 12:38	99.8	25.8	6.1	4.39	22.26	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	104.3	24.1	6.3	4.5	22.3
4/13/2010 12:39	105.0	25.0	5.8	4.34	22.36	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	111.0	23.2	6.0	4.4	22.4
4/13/2010 12:40	103.5	25.1	5.6	4.46	22.23	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	112.8	23.3	5.8	4.5	22.3
4/13/2010 12:41	103.5	24.6	5.7	4.44	22.21	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	112.8	22.8	5.9	4.5	22.2
4/13/2010 12:42	103.0	24.6	5.7	4.40	22.23	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	112.1	22.8	5.9	4.5	22.3
4/13/2010 12:43	104.0	24.7	5.8	4.39	22.36	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	109.5	22.9	6.0	4.4	22.4
4/13/2010 12:44	103.3	25.0	5.8	4.10	22.59	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	109.1	23.2	6.0	4.2	22.6
4/13/2010 12:45	101.5	25.2	6.0	3.94	22.80	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	107.2	23.4	6.2	4.0	22.8
4/13/2010 12:46	102.0	25.1	5.9	3.88	22.89	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	107.8	24.5	6.1	4.0	22.9
4/13/2010 12:47	100.8	25.0	5.7	4.01	22.78	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	106.4	24.3	5.9	4.1	22.8
4/13/2010 12:48	98.0	25.7	5.9	4.10	22.65	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.5	24.0	6.1	4.2	22.7
4/13/2010 12:49	97.8	25.5	5.8	4.04	22.70	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.2	23.8	6.0	4.1	22.7
4/13/2010 12:50	97.0	25.9	5.8	3.93	22.90	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	102.4	24.2	6.1	4.0	22.9
4/13/2010 12:51	96.9	30.6	6.2	3.84	22.99	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.7	29.5	6.4	3.9	23.0
4/13/2010 12:52	95.0	27.0	6.0	3.85	23.00	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.3	28.5	6.2	3.9	23.0
4/13/2010 12:53	95.0	27.5	6.0	3.88	23.01	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	103.3	28.0	6.2	3.9	23.1
4/13/2010 12:54	92.8	26.2	5.9	3.91	22.95	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	97.8	24.6	6.1	4.0	23.0
4/13/2010 12:55	92.0	25.8	5.8	3.89	22.96	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	97.0	24.1	6.1	4.0	23.0
4/13/2010 12:56	92.3	27.0	5.9	3.90	22.96	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	97.3	25.5	6.1	4.0	23.0
4/13/2010 12:57	92.0	25.8	5.8	3.98	22.89	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	97.0	24.1	6.0	4.1	22.9
4/13/2010 12:58	92.3	26.7	6.0	4.15	22.66	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	97.3	25.1	6.2	4.2	22.7
4/13/2010 12:59	90.5	26.4	5.9	4.08	22.75	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	95.4	24.8	6.1	4.2	22.8
4/13/2010 13:00	89.0	27.5	6.1	4.00	22.89	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	93.8	26.0	6.3	4.1	22.8
4/13/2010 13:01	88.5	27.8	6.1	3.85	23.11	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	93.3	26.2	6.3	3.9	23.2
4/13/2010 13:02	88.8	28.2	6.6	3.78	23.23	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	93.6	26.0	6.7	3.9	23.3
4/13/2010 13:03	89.5	82.3	8.8	3.44	23.84	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	84.4	90.3	6.7	3.5	23.9
4/13/2010 13:04	122.0	28.8	8.8	3.51	24.25	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	129.2	27.3	6.7	3.6	24.3
4/13/2010 13:05	125.3	28.4	6.4	3.26	24.56	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	132.7	27.1	6.8	3.4	24.6
4/13/2010 13:06	124.0	27.5	6.3	3.43	24.53	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	131.4	26.8	6.5	3.5	24.6
4/13/2010 13:07	122.5	27.6	6.2	3.51	24.45	Run 2	1.57	94.57	99.80	4.48	44.00	44.70	-0.29	30.76	30.30	-0.10	4.95	5.03	0.14	21.57	21.60	130.0	26.2	6.4	3.6	24.5
	102.7	28.9	5.9	4.21	22.58	Run 2 Average																103.5	25.4	6.1	4.3	22.6
4/13/2010 13:03	123.0	27.0	6.1	3.48	24.49																					
4/13/2010 13:09	122.3	27.0	5.9	3.60	24.38																					
4/13/2010 13:10	122.0	26.9	5.7	3.74	24.15																					
4/13/2010 13:11	121.8	26.9	5.8	3.76	24.05																					
4/13/2010 13:12	121.0	26.6	5.5	3.71	24.08																					
4/13/2010 13:13	120.3	25.7	5.6	3.90	23.80																					
4/13/2010 13:14	121.3	25.5	5.7	3.74	23.91																					
4/13/2010 13:15	120.5	28.2	5.7	3.54	22.95																					
4/13/2010 13:16	62.8	21.1	1.7	0.05	21.20																					
4/13/2010 13:17	2.5	6.2	0.2	-0.11	21.63																					
4/13/2010 13:18	2.0	6.2	-0.1	-0.31	21.61	21.6 CO2, 0 O2, 0 Nox Bias																				

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data						Drift Correct Data															Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 13:19	1.6	4.9	-0.2	-0.11	21.6	21.6 CO2, 0 O2, 0 Nox Bias																				
	1.8			-0.11	21.6	21.6 CO2, 0 O2, 0 Nox Bias Average																				
4/13/2010 13:20	1.3	4.9	-0.3	2.65	9.95																					
4/13/2010 13:21	1.3	4.8	-0.3	4.93	0.30																					
4/13/2010 13:22	1.0	4.7	-0.3	4.95	0.19	5.03 O2, 0 CO2 Bias																				
4/13/2010 13:23	1.0	4.6	-0.3	4.95	0.14	5.03 O2, 0 CO2 Bias																				
				4.95	0.16	5.03 O2, 0 CO2 Bias Average																				
4/13/2010 13:24	1.3	4.5	-0.3	3.19	3.69																					
4/13/2010 13:25	73.8	3.8	-0.3	-0.05	10.71																					
4/13/2010 13:26	94.3	6.0	-0.3	-0.05	10.65	99.8 Nox Bias																				
4/13/2010 13:27	94.5	6.3	1.8	-0.05	10.92	99.8 Nox Bias																				
	94.4					99.8 Nox Bias Average																				
4/13/2010 13:28	20.0	24.5	-0.1	11.19	4.85																					
4/13/2010 13:29	5.5	44.6	-0.3	20.81	0.20	44.7 CO, 0 VOC Bias																				
4/13/2010 13:30	1.3	44.9	-0.3	20.89	0.14	44.7 CO, 0 VOC Bias																				
		44.8	-0.3			44.7 CO, 0 VOC Bias Average																				
4/13/2010 13:31	0.8	40.9	21.2	20.91	0.11																					
4/13/2010 13:32	0.8	9.7	31.0	20.93	0.10																					
4/13/2010 13:33	0.8	4.2	31.0	20.94	0.09	30.3 VOC, 0 CO Bias																				
4/13/2010 13:34	0.5	4.1	31.0	20.95	0.09	30.3 VOC, 0 CO Bias																				
		4.2	31.0			30.3 VOC, 0 CO Bias Average																				
4/13/2010 13:35	0.8	4.7	13.2	20.35	0.80																					
4/13/2010 13:36	56.0	19.7	5.7	5.26	21.63																					
4/13/2010 13:37	122.3	23.0	5.5	4.51	22.51																					
4/13/2010 13:38	119.3	22.4	5.5	4.69	22.28																					
4/13/2010 13:39	119.8	21.9	5.5	4.74	22.16																					
4/13/2010 13:40	118.0	22.0	5.6	4.66	22.25																					
4/13/2010 13:41	118.8	21.3	5.6	4.70	22.15																					
4/13/2010 13:42	119.3	21.4	5.7	4.80	22.04																					
4/13/2010 13:43	118.5	21.7	5.6	4.85	21.93																					
4/13/2010 13:44	119.0	21.3	5.5	5.05	21.68																					
4/13/2010 13:45	118.8	20.9	5.8	5.06	21.61																					
4/13/2010 13:46	118.8	20.1	5.7	5.03	21.51																					
4/13/2010 13:47	117.3	20.3	5.6	5.03	21.55																					
4/13/2010 13:48	117.3	20.8	5.7	5.11	21.44																					
4/13/2010 13:49	118.5	20.7	5.7	5.04	21.49																					
4/13/2010 13:50	116.8	21.2	5.8	4.95	21.58																					
4/13/2010 13:51	115.5	21.2	5.8	4.94	21.58																					
4/13/2010 13:52	116.3	20.8	5.7	5.05	21.38																					
4/13/2010 13:53	115.0	21.0	5.8	5.03	21.35																					
4/13/2010 13:54	116.3	20.9	5.8	5.16	21.28																					
4/13/2010 13:55	113.6	21.0	5.8	5.13	21.33																					
4/13/2010 13:56	113.0	20.2	5.7	5.18	21.28																					
4/13/2010 13:57	114.0	20.0	5.8	5.21	21.24																					
4/13/2010 13:58	110.5	20.5	5.7	5.18	21.34																					
4/13/2010 13:59	112.3	21.0	5.9	5.20	21.30																					
4/13/2010 14:00	110.3	21.0	5.9	5.20	21.28																					
4/13/2010 14:01	110.0	20.8	5.5	5.19	21.31																					

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

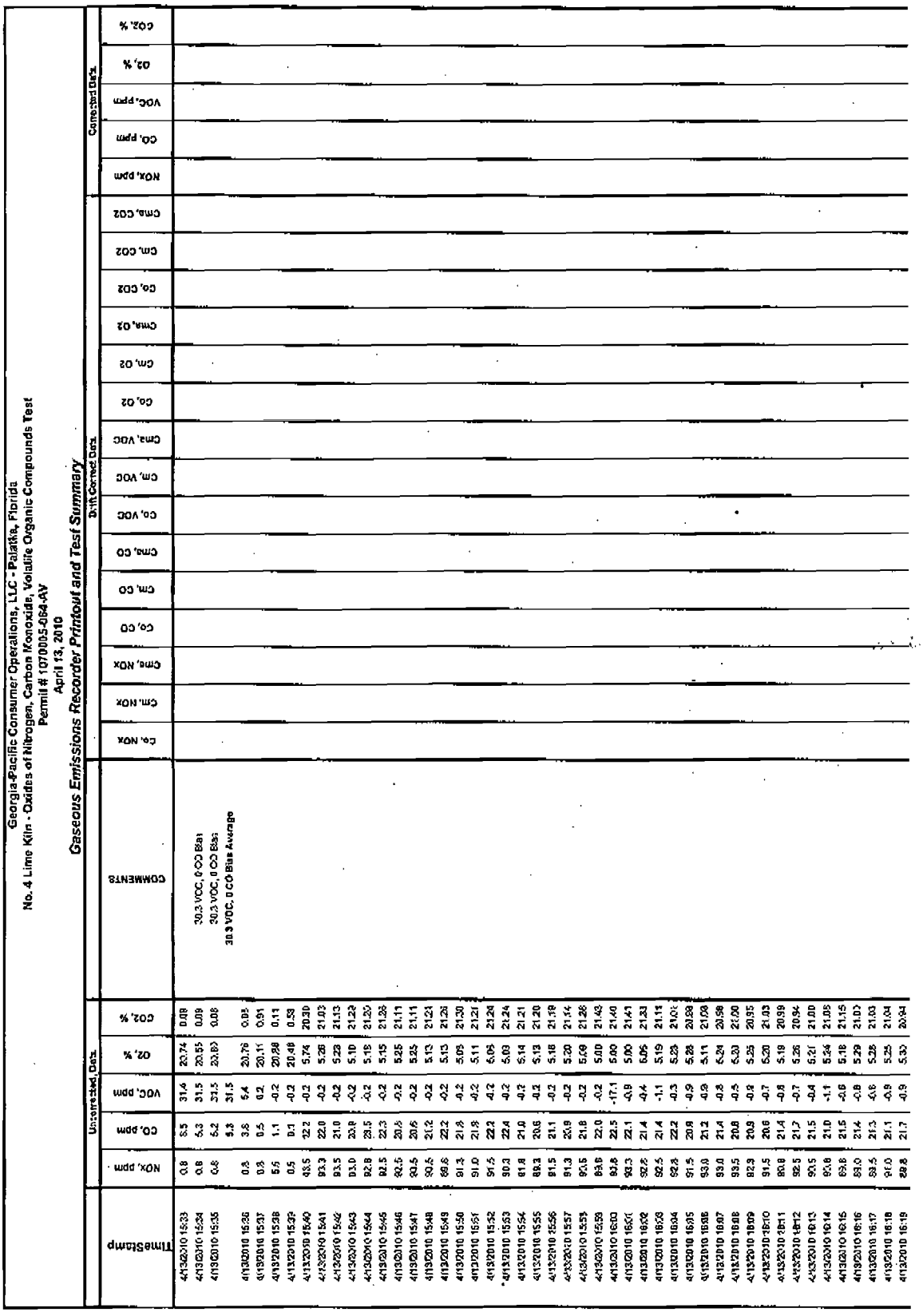
Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected, Data						Drift Correct Data													Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 14:02	111.0	20.5	5.8	5.31	21.15																				
4/13/2010 14:03	108.0	20.2	6.0	5.30	21.20																				
4/13/2010 14:04	108.0	20.0	6.1	5.28	21.09																				
4/13/2010 14:05	108.3	20.1	6.0	5.25	21.05																				
4/13/2010 14:06	105.8	20.4	5.9	5.35	20.85																				
4/13/2010 14:07	106.3	19.7	6.0	5.36	20.91																				
4/13/2010 14:08	105.8	19.8	6.1	5.31	20.93																				
4/13/2010 14:09	106.3	19.7	6.2	5.33	20.93																				
4/13/2010 14:10	103.8	20.3	6.3	5.26	21.01	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	110.1	17.7	6.3	5.3	21.0
4/13/2010 14:11	105.5	20.4	6.3	5.23	21.05	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	112.0	17.8	6.3	5.3	21.1
4/13/2010 14:12	105.5	19.9	6.2	5.29	20.98	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	112.0	17.2	6.3	5.4	21.0
4/13/2010 14:13	103.5	19.9	6.2	5.28	20.99	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	109.8	17.2	6.3	5.4	21.0
4/13/2010 14:14	104.5	20.0	6.2	5.28	20.93	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	111.2	17.4	6.3	5.4	21.0
4/13/2010 14:15	103.3	20.4	6.1	5.33	20.90	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	108.6	17.8	6.2	5.4	20.9
4/13/2010 14:16	102.0	19.8	6.1	5.51	20.64	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	105.2	17.1	6.2	5.6	20.7
4/13/2010 14:17	103.8	19.7	6.2	5.38	20.79	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	110.1	17.0	6.3	5.5	20.8
4/13/2010 14:18	103.3	19.4	6.1	5.39	20.78	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	110.1	16.7	6.2	5.5	20.8
4/13/2010 14:19	101.0	19.5	6.2	5.45	20.69	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	107.1	16.8	6.3	6.5	20.7
4/13/2010 14:20	102.0	19.1	6.2	5.31	20.85	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	108.2	16.3	6.3	5.4	20.9
4/13/2010 14:21	100.5	19.3	6.1	5.33	20.79	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	106.6	16.6	6.2	5.4	20.8
4/13/2010 14:22	100.0	19.3	6.1	5.44	20.77	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	108.1	16.6	6.2	5.5	20.7
4/13/2010 14:23	99.8	19.9	6.3	5.40	20.73	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	104.7	17.2	6.3	5.5	20.8
4/13/2010 14:24	97.0	19.8	6.1	5.46	20.63	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	102.8	17.2	6.2	5.5	20.7
4/13/2010 14:25	96.8	19.5	6.0	5.54	20.51	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	102.6	16.8	6.1	5.6	20.6
4/13/2010 14:26	97.5	19.4	6.1	5.53	20.43	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	103.4	16.7	6.2	5.7	20.5
4/13/2010 14:27	95.8	19.1	6.2	5.59	20.40	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	101.5	16.3	6.3	5.7	20.4
4/13/2010 14:28	94.8	19.0	6.2	5.58	20.36	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.4	16.2	6.3	5.7	20.4
4/13/2010 14:29	95.0	19.8	6.1	5.54	20.39	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.7	17.1	6.2	5.6	20.4
4/13/2010 14:30	94.8	19.2	6.2	5.48	20.49	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.4	16.5	6.3	5.6	20.5
4/13/2010 14:31	97.0	19.4	6.3	5.43	20.61	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	102.8	16.7	6.3	5.6	20.6
4/13/2010 14:32	95.0	19.1	6.2	5.45	20.62	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.7	16.3	6.3	5.5	20.6
4/13/2010 14:33	93.0	19.3	6.3	5.48	20.59	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.7	16.6	6.3	5.6	20.6
4/13/2010 14:34	93.5	19.2	6.3	5.49	20.55	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.3	16.5	6.3	5.6	20.6
4/13/2010 14:35	94.8	19.8	6.4	5.40	20.65	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.4	16.9	6.4	5.5	20.7
4/13/2010 14:36	95.0	19.9	6.5	5.37	20.75	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.7	17.2	6.5	5.4	20.8
4/13/2010 14:37	95.8	20.2	6.5	5.33	20.75	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	101.5	17.8	6.5	5.4	20.8
4/13/2010 14:38	94.8	19.8	6.4	5.24	20.80	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	100.4	17.1	6.4	5.3	20.8
4/13/2010 14:39	93.3	19.3	6.2	5.24	20.85	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.8	16.6	6.3	5.3	20.9
4/13/2010 14:40	94.0	19.1	6.3	5.20	20.96	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.6	16.3	6.3	5.3	21.0
4/13/2010 14:41	92.3	19.6	6.4	5.29	20.91	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	97.7	16.9	6.4	5.4	20.9
4/13/2010 14:42	92.5	20.0	6.4	5.29	20.93	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	98.0	17.7	6.4	5.4	21.0
4/13/2010 14:43	92.3	20.2	6.4	5.15	21.03	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	97.7	17.6	6.4	5.2	21.1
4/13/2010 14:44	91.3	19.6	6.5	5.24	20.94	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	95.6	17.1	6.5	5.3	21.0
4/13/2010 14:45	93.5	20.5	6.6	5.11	21.10	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.1	17.9	6.6	5.2	21.1
4/13/2010 14:46	93.5	20.9	6.4	5.05	21.18	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.1	18.4	6.4	5.1	21.2
4/13/2010 14:47	92.0	20.2	6.3	5.10	21.11	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	97.4	17.6	6.3	5.2	21.1
4/13/2010 14:48	93.5	20.4	6.6	5.15	21.05	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.1	17.8	6.6	5.2	21.1
4/13/2010 14:49	92.5	21.2	6.4	5.10	21.09	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.18	21.56	21.60	99.0	18.7	6.4	5.2	21.1

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data						Drift Correct Data													Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 14:53	93.0	19.9	6.3	5.11	21.05	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	95.3	17.2	6.3	5.2	21.1
4/13/2010 14:51	91.5	20.4	6.6	5.01	21.19	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	96.9	17.8	6.6	5.1	21.2
4/13/2010 14:52	91.5	21.2	6.5	4.98	21.24	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	96.9	18.7	6.5	5.1	21.3
4/13/2010 14:51	91.0	21.3	6.4	4.88	21.34	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	96.4	18.8	6.4	5.0	21.4
4/13/2010 14:54	92.0	20.9	6.6	4.93	21.29	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	97.4	18.4	6.6	5.0	21.3
4/13/2010 14:55	90.0	20.6	6.5	4.86	21.35	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	95.3	18.0	6.5	4.9	21.4
4/13/2010 14:56	89.3	20.8	6.5	4.85	21.36	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	94.5	18.3	6.5	4.9	21.4
4/13/2010 14:57	90.5	21.1	6.6	4.89	21.29	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	95.8	18.6	6.6	5.0	21.3
4/13/2010 14:53	90.5	21.2	6.4	4.81	21.40	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	95.8	18.7	6.4	4.9	21.4
4/13/2010 14:59	89.5	21.3	6.6	4.83	21.34	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	94.7	18.8	6.6	5.0	21.4
4/13/2010 15:00	90.0	21.6	6.6	4.84	21.33	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	95.3	19.2	6.6	4.9	21.4
4/13/2010 15:01	88.5	21.2	6.7	4.78	21.44	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	93.7	18.7	6.7	4.9	21.5
4/13/2010 15:02	87.5	22.2	6.7	4.84	21.35	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	92.6	19.9	6.7	4.9	21.4
4/13/2010 15:03	88.3	22.0	6.6	4.75	21.48	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	93.4	19.6	6.6	4.8	21.5
4/13/2010 15:04	87.8	21.6	6.5	4.63	21.64	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	92.9	19.2	6.5	4.7	21.7
4/13/2010 15:05	86.5	21.8	6.3	4.62	21.59	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	91.5	19.6	6.3	4.9	21.6
4/13/2010 15:06	88.0	22.0	6.2	4.71	21.65	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	93.1	19.6	6.3	4.8	21.7
4/13/2010 15:07	86.8	21.5	6.2	4.75	21.64	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	91.8	19.1	6.3	4.8	21.7
4/13/2010 15:08	86.3	22.1	6.0	4.75	21.63	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	91.2	19.7	6.1	4.8	21.7
4/13/2010 15:09	87.3	21.7	6.0	4.89	21.43	Run 3	1.57	94.19	99.80	4.70	44.10	44.70	-0.29	31.30	30.30	-0.12	4.95	5.03	0.16	21.59	21.60	92.3	19.5	6.1	5.0	21.5
	94.6	20.3	6.4	5.58	20.93	Run 3 Average																101.2	17.7	6.4	5.3	21.0
4/13/2010 15:10	87.8	21.7	6.0	4.85	21.55																					
4/13/2010 15:11	85.3	21.3	6.0	4.80	21.42																					
4/13/2010 15:12	85.0	21.2	6.2	4.91	21.45																					
4/13/2010 15:13	85.8	21.5	6.5	4.81	21.61																					
4/13/2010 15:14	84.5	21.6	4.3	2.68	16.34																					
4/13/2010 15:15	81.0	6.0	0.8	-0.06	11.13																					
4/13/2010 15:16	64.0	3.8	0.3	-0.11	10.64																					
4/13/2010 15:17	2.0	3.1	0.0	-0.13	21.44																					
4/13/2010 15:18	1.5	3.1	-0.2	-0.13	21.49	21.6 CO2, 0 O2, 0 Nox Bias																				
4/13/2010 15:19	1.3	3.1	-0.3	-0.13	21.51	21.6 CO2, 0 O2, 0 Nox Bias																				
	1.4			-0.13	21.50	21.6 CO2, 0 O2, 0 Nox Bias Average																				
4/13/2010 15:20	1.3	2.9	-0.3	3.79	4.93																					
4/13/2010 15:21	1.0	2.8	-0.3	4.91	0.23	5.03 O2, 0 CO2 Bias																				
4/13/2010 15:22	1.0	2.8	-0.3	4.94	0.15	5.03 O2, 0 CO2 Bias																				
				4.93	0.19	5.03 O2, 0 CO2 Bias Average																				
4/13/2010 15:23	8.0	3.7	-0.3	2.01	6.13																					
4/13/2010 15:24	98.8	5.4	-0.3	-0.08	10.78																					
4/13/2010 15:25	94.0	5.1	-0.3	-0.09	10.83	99.8 Nox Bias																				
4/13/2010 15:26	94.0	5.8	-0.3	-0.09	10.90	99.8 Nox Bias																				
	94.0					93.8 Nox Bias Average																				
4/13/2010 15:27	84.0	15.6	1.8	5.91	7.73																					
4/13/2010 15:28	24.3	35.8	-0.3	20.55	0.21																					
4/13/2010 15:29	1.5	41.7	-0.3	20.60	0.14																					
4/13/2010 15:30	1.0	43.4	-0.3	20.66	0.11	44.7 CO, 0 VOC Bias																				
4/13/2010 15:31	1.0	43.5	-0.3	20.78	0.10	44.7 CO, 0 VOC Bias																				
		43.5	-0.3			44.7 CO, 0 VOC Bias Average																				
4/13/2010 15:32	0.8	35.8	22.2	20.76	0.03																					



Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-084-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data				Drift Corrected Data												Corrected Data				
TimeStamp	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 15:33	0.8	5.5	31.4	20.74	0.08	30.3 VOC, 0 CO Bias																			
4/13/2010 15:34	0.8	5.3	31.5	20.65	0.09	30.3 VOC, 0 CO Bias																			
4/13/2010 15:35	0.8	5.2	31.5	20.60	0.09	30.3 VOC, 0 CO Bias Average																			
4/13/2010 15:36	0.8	5.3	5.4	20.76	0.09																				
4/13/2010 15:37	0.8	0.5	0.2	20.11	0.91																				
4/13/2010 15:38	5.6	1.1	-0.2	20.58	0.11																				
4/13/2010 15:39	0.5	0.1	-0.2	20.49	0.53																				
4/13/2010 15:40	93.5	92.2	-0.2	5.74	20.30																				
4/13/2010 15:41	93.3	92.0	-0.2	5.26	21.03																				
4/13/2010 15:42	93.5	92.0	-0.2	5.23	21.13																				
4/13/2010 15:43	93.0	92.9	-0.2	5.10	21.22																				
4/13/2010 15:44	92.8	92.5	-0.2	5.18	21.20																				
4/13/2010 15:45	92.5	92.3	-0.2	5.15	21.26																				
4/13/2010 15:46	92.5	92.6	-0.2	5.25	21.11																				
4/13/2010 15:47	93.5	92.6	-0.2	5.25	21.11																				
4/13/2010 15:48	90.5	91.2	-0.2	5.13	21.24																				
4/13/2010 15:49	89.6	92.2	-0.2	5.13	21.26																				
4/13/2010 15:50	91.3	91.8	-0.2	5.05	21.30																				
4/13/2010 15:51	91.0	91.8	-0.2	5.11	21.21																				
4/13/2010 15:52	91.5	92.2	-0.2	5.05	21.24																				
4/13/2010 15:53	90.3	92.4	-0.2	5.03	21.24																				
4/13/2010 15:54	91.8	91.0	-0.2	5.14	21.21																				
4/13/2010 15:55	89.3	90.6	-0.2	5.13	21.20																				
4/13/2010 15:56	91.5	91.1	-0.2	5.18	21.19																				
4/13/2010 15:57	91.3	90.8	-0.2	5.20	21.14																				
4/13/2010 15:58	90.5	91.8	-0.2	5.09	21.26																				
4/13/2010 15:59	89.8	92.0	-0.2	5.00	21.40																				
4/13/2010 16:00	91.8	92.5	-17.1	5.00	21.40																				
4/13/2010 16:01	93.3	92.1	-0.9	5.00	21.41																				
4/13/2010 16:02	92.8	91.4	-0.4	5.05	21.33																				
4/13/2010 16:03	92.5	91.4	-1.1	5.19	21.11																				
4/13/2010 16:04	92.8	92.2	-0.3	5.23	21.03																				
4/13/2010 16:05	91.5	90.8	-0.9	5.28	20.88																				
4/13/2010 16:06	93.0	91.2	-0.8	5.11	21.08																				
4/13/2010 16:07	93.0	91.4	-0.8	5.24	20.88																				
4/13/2010 16:08	93.5	90.8	-0.5	5.33	21.00																				
4/13/2010 16:09	92.9	90.8	-0.8	5.25	20.95																				
4/13/2010 16:10	91.5	90.6	-0.7	5.20	21.03																				
4/13/2010 16:11	90.8	91.4	-0.8	5.19	20.99																				
4/13/2010 16:12	92.5	91.7	-0.7	5.26	20.94																				
4/13/2010 16:13	90.5	91.5	-0.4	5.21	21.00																				
4/13/2010 16:14	90.8	91.0	-1.1	5.24	21.05																				
4/13/2010 16:15	89.8	91.5	-0.6	5.18	21.15																				
4/13/2010 16:16	89.0	91.4	-0.8	5.29	21.07																				
4/13/2010 16:17	89.5	91.3	-0.6	5.26	21.03																				
4/13/2010 16:18	91.0	91.1	-0.9	5.25	21.04																				
4/13/2010 16:19	89.8	91.7	-0.9	5.33	20.94																				

Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070005-064-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

Timestamp	Uncorrected Data				Drift Correct Data												Corrected Data				
	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	COMMENTS	Co, NOx	Cm, NOx	Cma, NOx	Co, CO	Cm, CO	Cma, CO	Co, VOC	Cm, VOC	Cma, VOC	Co, O2	Cm, O2	Cma, O2	Co, CO2	Cm, CO2	Cma, CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/13/2010 16:20	89.2	21.1	-0.5	5.29	20.83																					
4/13/2010 16:21	91.0	20.9	-1.0	5.51	20.63																					
4/13/2010 16:22	91.3	19.8	-0.9	5.48	20.70																					
4/13/2010 16:23	90.0	20.0	-0.8	5.49	20.74																					
4/13/2010 16:24	91.0	20.9	-0.9	5.51	20.69																					
4/13/2010 16:25	83.6	20.7	-0.5	5.40	20.81																					
4/13/2010 16:26	83.3	23.2	-0.7	5.55	20.64																					
4/13/2010 16:27	81.0	23.1	-0.7	5.49	20.69																					
4/13/2010 16:28	83.0	23.0	-0.8	5.41	20.76																					
4/13/2010 16:29	83.3	15.6	-1.0	5.53	20.69																					
4/13/2010 16:30	83.0	15.3	-0.4	5.45	20.68																					
4/13/2010 16:31	83.3	15.7	-0.9	5.44	20.70																					
4/13/2010 16:32	83.8	20.0	-0.8	5.38	20.78																					
4/13/2010 16:33	83.0	20.1	-1.0	5.45	20.68																					
4/13/2010 16:34	83.3	20.2	-1.0	5.39	20.75																					
4/13/2010 16:35	83.8	20.0	-0.5	5.33	20.81																					
4/13/2010 16:36	86.8	20.6	-0.8	5.29	20.73																					
4/13/2010 16:37	86.5	20.7	-1.0	5.31	20.90																					
4/13/2010 16:38	86.8	21.0	-0.8	5.23	20.85																					
4/13/2010 16:39	86.0	21.3	-0.9	5.31	20.88																					
4/13/2010 16:40	86.0	22.0	-0.8	5.34	20.84																					
4/13/2010 16:41	86.5	21.4	-0.5	5.33	20.78																					
4/13/2010 16:42	87.8	20.2	-0.8	5.35	20.83																					
4/13/2010 16:43	89.0	20.1	-0.8	5.34	20.82																					
4/13/2010 16:44	87.8	21.0	-0.8	5.33	20.83																					
4/13/2010 16:45	87.5	21.1	-0.9	5.31	20.83																					
4/13/2010 16:46	74.3	14.2	-0.8	16.84	5.84																					
4/13/2010 16:47	2.0	0.9	-0.5	20.65	0.18																					
4/13/2010 16:48	1.3	0.2	-0.9	20.61	0.13																					
4/13/2010 16:49	1.0	0.2	-0.9	20.61	0.11																					
4/13/2010 16:50	0.8	0.2	-0.8	20.64	0.11																					
4/13/2010 16:51	0.9	0.2	-0.9	20.66	0.10																					
4/13/2010 16:52	0.9	0.1	-0.8	20.70	0.10																					
4/13/2010 16:53	0.9	0.2	-0.8	20.73	0.10																					
4/13/2010 16:54	0.8	0.2	-0.8	20.74	0.10																					
4/13/2010 16:55	0.8	0.2	-0.5	20.78	0.10																					
4/13/2010 16:56	0.8	0.2	-0.9	20.80	0.10																					
4/13/2010 16:57	0.8	0.2	-1.0	20.83	0.09																					
4/13/2010 16:58	0.8	0.2	-0.5	20.83	0.09																					
4/13/2010 16:59	0.8	0.2	-0.5	20.91	0.09																					
4/13/2010 17:00	0.8	0.2	-1.0	20.94	0.08																					
4/14/2010 6:30	0.5	0.0	-0.7	20.85	0.06																					
4/14/2010 6:31	0.5	0.1	-0.7	20.85	0.06																					
4/14/2010 6:32	0.5	0.0	-0.6	20.85	0.06																					
4/14/2010 6:33	0.5	-0.1	-0.5	20.85	0.06																					
4/14/2010 6:34	0.5	0.0	-0.5	20.85	0.06																					
4/14/2010 6:35	0.5	0.0	-0.6	20.85	0.06																					
4/14/2010 6:36	0.5	0.0	0.1	20.85	0.06																					

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Georgia-Pacific Consumer Operations, LLC - Palatka, Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Permit # 1070008-004-AV
April 13, 2010

Gaseous Emissions Recorder Printout and Test Summary

	Uncorrected Data					Dry Corrected Data														Corrected Data				
Time/Date/Hour	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %	Comments	Cor_NOx	Cor_NOx	Cor_NOx	Cor_CO	Cor_CO	Cor_CO	Cor_VOC	Cor_VOC	Cor_VOC	Cor_O2	Cor_O2	Cor_O2	Cor_CO2	Cor_CO2	Cor_CO2	NOx, ppm	CO, ppm	VOC, ppm	O2, %	CO2, %
4/14/2010 6:37	0.8	0.1	0.8	20.92	0.06																					
4/14/2010 6:38	0.8	49.4	0.8	89.96	0.06																					
4/14/2010 6:39	12.6	0.9	0.7	88.70	0.06																					
4/14/2010 6:40	37.0	0.3	0.8	20.72	0.06																					
4/14/2010 6:41	37.3	0.1	0.7	20.70	0.06																					
4/14/2010 6:42	37.3	0.0	0.4	20.70	0.06																					
4/14/2010 6:43	37.3	0.1	0.7	20.71	0.06																					
4/14/2010 6:44	37.3	0.0	0.4	20.70	0.06																					
4/14/2010 6:45	37.3	0.1	0.4	20.70	0.06																					
4/14/2010 6:46	37.3	0.1	0.5	20.71	0.06																					
4/14/2010 6:47	37.3	0.1	0.3	20.71	0.06																					
4/14/2010 6:48	37.3	0.0	0.6	20.71	0.06																					
4/14/2010 6:49	37.3	0.1	0.6	20.70	0.06																					
4/14/2010 6:50	37.3	0.1	0.6	20.71	0.06																					
4/14/2010 6:51	37.3	0.1	0.6	20.71	0.06																					
4/14/2010 6:52	37.3	0.1	0.6	20.71	0.06																					
4/14/2010 6:53	37.5	0.4	0.6	18.66	0.12																					
4/14/2010 6:54	37.6	161.4	0.4	0.86	0.63																					
4/14/2010 6:55	37.6	169.8	0.3	0.80	0.64																					
4/14/2010 6:56	37.6	169.8	0.3	0.81	0.64																					
4/14/2010 6:57	37.6	163.3	0.2	0.88	0.64																					
4/14/2010 6:58	37.8	8.2	0.1	4.88	0.64																					
4/14/2010 6:59	37.8	0.1	0.3	4.96	0.64																					
4/14/2010 7:00	37.8	0.1	0.3	4.98	0.64																					
4/14/2010 7:01	37.8	0.1	0.3	46.55	0.05																					
4/14/2010 7:02	37.6	0.1	0.2	20.86	0.06																					
4/14/2010 7:03	37.6	0.1	0.5	20.85	0.06																					
4/14/2010 7:04	37.6	0.1	0.5	20.85	0.06																					
4/14/2010 7:05	37.6	0.1	0.5	20.85	0.06																					
4/14/2010 7:06	37.6	0.1	0.5	20.85	0.06																					
4/14/2010 7:07	37.6	0.1	0.5	20.85	0.06																					
4/14/2010 7:08	37.6	0.1	0.6	20.85	0.06																					
4/14/2010 7:09	37.6	0.1	0.6	20.85	0.06																					
4/14/2010 7:10	37.6	0.1	0.6	20.85	0.06																					
4/14/2010 7:11	37.5	0.1	0.5	20.85	0.06																					
4/14/2010 7:12	37.5	0.1	0.5	20.85	0.06																					
4/14/2010 7:13	37.5	0.1	0.5	20.85	0.06																					
4/14/2010 7:14	37.5	0.1	0.5	20.85	0.06																					
4/14/2010 7:15	37.5	0.1	0.5	20.85	0.06																					

Georgia-Pacific Consumer Operations LLC-Palatka Florida
No. 4 Lime Kiln - Oxides of Nitrogen, Carbon Monoxide, Volatile Organic Compounds Test
Relative Accuracy Test
April 7, 2010
NOx Instrument Converter Efficiency Test

Date and Time		Highest Observed NO_x Peak Value (ppm v/v)	Nox Value at end of Efficiency Check (ppm v/v)	Percent Decrease From Peak Value
Date	Time			
4/14/10	6:48 7:15	37.8	37.5	0.7
		4/14/2010 6:46	37.3	
		4/14/2010 6:47	37.3	
		4/14/2010 6:48	37.3	
		4/14/2010 6:49	37.3	
		4/14/2010 6:50	37.3	
		4/14/2010 6:51	37.0	
		4/14/2010 6:52	37.3	
		4/14/2010 6:53	37.5	
		4/14/2010 6:54	37.5	
		4/14/2010 6:55	37.5	
		4/14/2010 6:56	37.5	
		4/14/2010 6:57	37.8	
		4/14/2010 6:58	37.8	
		4/14/2010 6:59	37.8	
		4/14/2010 7:00	37.5	
		4/14/2010 7:01	37.8	
		4/14/2010 7:02	37.5	
		4/14/2010 7:03	37.8	
		4/14/2010 7:04	37.8	
		4/14/2010 7:05	37.8	
		4/14/2010 7:06	37.8	
		4/14/2010 7:07	37.8	
		4/14/2010 7:08	37.5	
		4/14/2010 7:09	37.5	
		4/14/2010 7:10	37.5	
		4/14/2010 7:11	37.5	
		4/14/2010 7:12	37.5	
		4/14/2010 7:13	37.5	
		4/14/2010 7:14	37.5	
		4/14/2010 7:15	37.5	

EXAMPLE CALCULATIONS FOR GASEOUS EMISSIONS

Calculations for Run 1 of the NO_x Test

Correction of NO_x Concentrations for Instrument Drift

EPA Method 7E provides an equation for correcting the measured gaseous concentrations over a valid test run for instrument drift during the test run.

The EPA equation presented in Section 12 of EPA Method 7E is:

$$C_{gas} = (C_{avg} - C_o)(C_{ma} / (C_m - C_o))$$

Where:

C_{gas} = Effluent gas concentration, dry basis, ppm.

C_{avg} = Average gas concentration indicated by the gas analyzer, ppm.

C_o = Average of initial and final system calibration bias check responses for the zero gas, ppm.

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas, ppm.

C_{ma} = Actual concentration of the upscale calibration gas, ppm.

Using the average for Run 1 of the NO_x test:

C_{avg} = **90.73**

From the Pre test / post test bias checks:

Pre test + Post Test / 2

C_o =	1.00	1.38	2	1.19	ppm
C_m =	94.88	94.75	2	94.82	ppm
C_{ma} =	99.80	ppm			

	Cavg	Co	Cma	Cm	Co
C_{gas} =	90.73	1.19	99.80	94.82	1.19

C_{gas} = **95.4**

Calculation of the Mass of NO_x Emissions During the Test Run

The stack gas flow rate for each sampling run was measured using EPA Methods 1 through 4. Flow data in Appendix A presents the measured stack gas parameters and the calculation of the stack gas flow rate for Run 1 of the NO_x test.

The average mass emission rate of a pollutant over a sampling run was calculated by using the following equation:

$$M = \frac{C_{gas(avg)} \times MW \times Q_{std} \times 60}{385.1 \times 10^6}$$

Where:

M = Average mass emission rate of the pollutant over the sampling run in lbs/hr.

$C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a dry stack basis.

MW = Molecular weight of the pollutant in lbs/lb-mole.

Q_{std} = Stack gas flow rate during the sampling run in dry standard cubic feet per minute (scfmd).

385.1 = Number of cubic feet occupied by one pound mole of gas at standard conditions (68° F and 29.92 in. Hg), assuming ideal gas behavior.

10^6 = Conversion constant for parts per million to cubic feet of pollutant (1 ppm = 10^{-6} ft^3 pollutant / ft^3 stack gas)

60 = Conversion constant for minutes to hours (1 hr = 60 Minutes)

For the NO_x test:

$C_{gas(avg)}$ = 95.4 ppm

MW = 46 = 14 + 16 + 16

Q_{std} = 30827 SCFMD

$$M = \frac{C_{gas(avg)} \quad MW \quad Q_{std} \quad 60}{3.851E+08} = \frac{95.4 \quad 46 \quad 30827 \quad 60}{3.851E+08}$$

M = 21.1 lbs/hr

Calculation of the Concentration of NO_x Emissions During the Test Run Corrected to 10% Oxygen

The Concentration of NOx corrected to 10% Oxygen is determined by the following equation:

$$C_{10\%} = C_{gas(avg)} \times (20.9 - 10) / (20.9 - O2)$$

Where:

$C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a dry stack basis.

O2 = Average concentration of oxygen in the stack gas during the sampling run in percent. The concentration is expressed on a dry stack basis.

$C_{10\%}$ = Average concentration of the stack gas during the sampling run in ppm corrected to 10% Oxygen. The concentration is expressed on a dry stack basis.

For the Nox Test:

$C_{gas(avg)}$ =	95.4	ppm			
O2 =	4.4	percent			
$C_{10\%}$ =	$C_{gas(avg)}$	x	(20.9 - 10) /	(20.9 -O2)	
	95.4		10.9	16.5	
$C_{10\%}$ =	**63.1**	**ppm at 10% Oxygen**			

EXAMPLE CALCULATIONS FOR GASEOUS EMISSIONS

Calculations for Run 1 of the CO Test

Correction of CO Concentrations for Instrument Drift

EPA Method 7E provides an equation for correcting the measured gaseous concentrations over a valid test run for instrument drift during the test run.

The EPA equation presented in Section 12 of EPA Method 7E is:

$$C_{gas} = (C_{avg} - C_o)(C_{ma} / (C_m - C_o))$$

Where:

C_{gas} = Effluent gas concentration, dry basis, ppm.

C_{avg} = Average gas concentration indicated by the gas analyzer, ppm.

C_o = Average of initial and final system calibration bias check responses for the zero gas, ppm.

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas, ppm.

C_{ma} = Actual concentration of the upscale calibration gas, ppm.

Using the average for Run 1 of the CO test:

C_{avg} = 26.20

From the Pre test / post test bias checks:

Pre test + Post Test / 2

C_o =	3.60	4.80	2	4.20	ppm
C_m =	41.80	43.25	2	42.53	ppm
C_{ma} =	44.70	ppm			

	Cavg	Co	Cma	Cm	Co
C_{gas} =	26.20	4.20	44.70	42.53	4.20

C_{gas} = 25.7

Calculation of the Mass of CO Emissions During the Test Run

The stack gas flow rate for each sampling run was measured using EPA Methods 1 through 4. Flow data in Appendix A presents the measured stack gas parameters and the calculation of the stack gas flow rate for Run 1 of the CO test.

The average mass emission rate of a pollutant over a sampling run was calculated by using the following equation:

$$M = \frac{C_{gas(avg)} \times MW \times Q_{d(std)} \times 60}{385.1 \times 10^{6}}$$

Where:

- M = Average mass emission rate of the pollutant over the sampling run in lbs/hr.
- $C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a dry stack basis.
- MW = Molecular weight of the pollutant in lbs/lb-mole.
- $Q_{d(std)}$ = Stack gas flow rate during the sampling run in dry standard cubic feet per minute (scfmd).
- 385.1 = Number of cubic feet occupied by one pound mole of gas at standard conditions (68° F and 29.92 in. Hg), assuming ideal gas behavior.
- 10^6 = Conversion constant for parts per million to cubic feet of pollutant (1 ppm = 10^{-6} ft^3 pollutant / ft^3 stack gas)
- 60 = Conversion constant for minutes to hours (1 hr = 60 Minutes)

For the CO test:

$C_{gas(avg)}$ =	25.7	ppm		
MW =	28	=	12 + 16	
$Q_{d(std)}$ =	30827	SCFMD		

$$M = \frac{C_{gas(avg)} \times MW \times Q_{d(std)} \times 60}{3.851E+08} = \frac{25.7 \times 28 \times 30827 \times 60}{3.851E+08}$$

M = 3.5 lbs/hr

Calculation of the Concentration of CO Emissions During the Test Run Corrected to 10% Oxygen

The Concentration of CO corrected to 10% Oxygen is determined by the following equation:

$$C_{10\%} = C_{gas(avg)} \times (20.9 - 10) / (20.9 - O2)$$

Where:

$C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a dry stack basis.

O2 = Average concentration of oxygen in the stack gas during the sampling run in percent. The concentration is expressed on a dry stack basis.

$C_{10\%}$ = Average concentration of the stack gas during the sampling run in ppm corrected to 10% Oxygen. The concentration is expressed on a dry stack basis.

For the CO Test:

$C_{gas(avg)}$ =	25.7	ppm			
O2 =	4.4	percent			
$C_{10\%}$ =	$C_{gas(avg)}$	x	(20.9 - 10) /	(20.9 -O2)	
	25.7		10.9	16.5	
$C_{10\%}$ =	**17.0**	**ppm at 10% Oxygen**			

EXAMPLE CALCULATIONS FOR GASEOUS EMISSIONS

Calculations for Run 1 of the VOC Test

Correction of VOC Concentrations for Instrument Drift

EPA Method 7E provides an equation for correcting the measured gaseous concentrations over a valid test run for instrument drift during the test run.

The EPA equation presented in Section 12 of EPA Method 7E is:

$$C_{gas} = (C_{avg} - C_o)(C_{ma} / (C_m - C_o))$$

Where:

C_{gas} = Effluent gas concentration as propane, wet basis, ppm.

C_{avg} = Average gas concentration indicated by the gas analyzer as propane, ppm.

C_o = Average of initial and final system calibration bias check responses for the zero gas as propane, ppm.

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas as propane, ppm.

C_{ma} = Actual concentration of the upscale calibration gas as propane, ppm.

Using the average for Run 1 of the VOC test:

C_{avg} = **6.78**

From the Pre test / post test bias checks:

Pre test + Post Test / 2

C_o =	0.09	-0.29	2	-0.10	ppm
C_m =	30.22	30.46	2	30.34	ppm
C_{ma} =	30.30	ppm			

	Cavg	Co	Cma	Cm	Co
C_{gas} =	6.78	-0.10	30.30	30.34	-0.10

C_{gas} = **6.8**

Calculation of the Mass of VOC Emissions as Methane During the Test Run

The stack gas flow rate for each sampling run was measured using EPA Methods 1 through 4. Flow data in Appendix A presents the measured stack gas parameters and the calculation of the stack gas flow rate for Run 1 of the VOC test.

The average mass emission rate of a pollutant over a sampling run was calculated by using the following equation:

$$M = \frac{3 \times C_{gas(avg)} \times MW \times Q_{w(std)} \times 60}{385.1 \times 10^6}$$

Where:

- M = Average mass emission rate of the pollutant over the sampling run in lbs/hr.
- $C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a wet stack basis.
- MW = Molecular weight of the pollutant in lbs/lb-mole.
- $Q_{w(std)}$ = Stack gas flow rate during the sampling run in wet standard cubic feet per minute (scfmw).
- 385.1 = Number of cubic feet occupied by one pound mole of gas at standard conditions (68° F and 29.92 in. Hg), assuming ideal gas behavior.
- 10^6 = Conversion constant for parts per million to cubic feet of pollutant (1 ppm = 10^{-6} ft^3 pollutant / ft^3 stack gas)
- 60 = Conversion constant for minutes to hours (1 hr = 60 Minutes)
- 3 = Number of carbon atoms in 1 molecule of propane

For the VOC test:

$C_{gas(avg)}$ =	6.8	ppm (as propane)	=	20.4	(as methane)
MW =	16	(Molecular Weight of Methane)			
$Q_{w(std)}$ =	45067	SCFMW			

$$M = \frac{3 \times C_{gas(avg)} \times MW \times Q_{w(std)} \times 60}{3.851E+08} = \frac{20.4 \times 16 \times 45067 \times 60}{3.851E+08}$$

M = 2.3 lbs/hr (as methane)

Calculation of the Concentration of VOC Emissions (as Methane) During the Test Run Corrected to 10% Oxygen

The Concentration of VOC (as Methane) corrected to 10% Oxygen is determined by the following equation:

$$C_{10\%} = C_{gas(avg)} \times (20.9 - 10) / (20.9 - O2)$$

Where:

$C_{gas(avg)}$ = Average concentration of the stack gas during the sampling run in ppm. This concentration is expressed on a wet stack basis.

O2 = Average concentration of oxygen in the stack gas during the sampling run in percent. The concentration is expressed on a dry stack basis.

$C_{10\%}$ = Average concentration of the stack gas during the sampling run in ppm corrected to 10% Oxygen. The concentration is expressed on a wet stack basis.

For the VOC Test:

$C_{gas(avg)}$ =	20.4	ppm			
O2 =	4.4	percent			
$C_{10\%}$ =	$C_{gas(avg)}$	x	(20.9 - 10) /	(20.9 -O2)	
	20.4		10.9	16.5	
$C_{10\%}$ =	**13.48**	**ppm at 10% Oxygen**			

EXAMPLE CALCULATIONS FOR GASEOUS EMISSIONS

Calculations for Run 1 of the CO_2 Test

Correction of CO_2 Concentrations for Instrument Drift

EPA Method 7E provides an equation for correcting the measured gaseous concentrations over a valid test run for instrument drift during the test run.

The EPA equation presented in Section 12 of EPA Method 7E is:

$$C_{gas} = (C_{avg} - C_o)(C_{ma} / (C_m - C_o))$$

Where:

C_{gas} = Effluent gas concentration, dry basis, percent.

C_{avg} = Average gas concentration indicated by the gas analyzer, percent.

C_o = Average of initial and final system calibration bias check responses for the zero gas, percent.

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas, percent.

C_{ma} = Actual concentration of the upscale calibration gas, percent.

Using the average for Run 1 of the CO_2 test:

C_{avg} = 22.90

From the Pre test / post test bias check:

Pre test + Post Test / 2

C_o =	0.06	0.11	2.00	0.09	percent
C_m =	21.50	21.53	2.00	21.52	percent
C_{ma} =	21.60	percent			

	Cavg	Co	Cma	Cm	Co
C_{gas} =	22.90	0.09	21.60	21.52	0.09

C_{gas} = 23.0

EXAMPLE CALCULATIONS FOR GASEOUS EMISSIONS

Calculations for Run 1 of the O_2 Test

Correction of O_2 Concentrations for Instrument Drift

EPA Method 7E provides an equation for correcting the measured gaseous concentrations over a valid test run for instrument drift during the test run.

The EPA equation presented in Section 12 of EPA Method 7E is:

$$C_{gas} = (C_{avg} - C_o)(C_{ma} / (C_m - C_o))$$

Where:

C_{gas} = Effluent gas concentration, dry basis, percent.

C_{avg} = Average gas concentration indicated by the gas analyzer, percent.

C_o = Average of initial and final system calibration bias check responses for the zero gas, percent.

C_m = Average of initial and final system calibration bias check responses for the upscale calibration gas, percent.

C_{ma} = Actual concentration of the upscale calibration gas, percent.

Using the average for Run 1 of the O_2 test:

C_{avg} = 4.30

From the Pre test / post test bias check:

Pre test + Post Test / 2

C_o =	-0.03	-0.09	2.00	-0.06	percent
C_m =	5.00	4.94	2.00	4.97	percent
C_{ma} =	5.03	percent			

	Cavg	Co	Cma	Cm	Co
C_{gas} =	4.30	-0.06	5.03	4.97	-0.06

C_{gas} = 4.4 percent

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Ambient Air Services (Starke, Florida)
Date	March 18, 2009
Delivery Receipt	DR-24187
Gas Standard	100.0 ppm NO, 100.0 ppm CO, 11.0% CO2/N2-EPA PROTOCOL
Final Analysis Date	March 18, 2009
Expiration Date	March 18, 2011

DO NOT USE BELOW 150 psig

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

Replicate Concentrations
Nitric Oxide: 99.7 ppm +/- 0.99 ppm
Carbon Monoxide: 103.2 ppm +/- 1.0 ppm
Carbon Dioxide: 11.3% +/- 0.11%
Nitrogen: Balance
Total Oxides of Nitrogen: 99.8 ppm
**** NOx for Reference Use Only ****

Reference Standards			
SRM/GMIS:	GMIS	GMIS	GMIS/GMIS
Cylinder Number:	CC-763278	CC-54548	CC-159114/CC-125534
Concentration:	96.0 ppm NO/N2	99.5 ppm CO/N2	7.20% CO2/13.32% CO2
Expiration Date:	08/25/10	06/22/09	08/26/10 - 01/28/11

Certification Instrumentation			
Component:	Nitric Oxide	Carbon Monoxide	Carbon Dioxide
Make/Model:	NEXUS-470	NEXUS-470	HP5890-II
Serial Number:	AEP99000154	AEP99000154	3336A59393
Principal of Measurement:	FTIR	FTIR	GC-TCD
Last Calibration:	March 03, 2009	March 02, 2009	March 06, 2009

Cylinder Data			
Cylinder Number:	EB-0015892	Cylinder Volume:	140 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	2000 psig, 70°F

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

Certified by: Mike Dunn
Date: March 18, 2009

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Ambient Air Services, Inc. (Starke, Florida)
Date	November 25, 2009
Delivery Receipt	DR-26787
Gas Standard	210 - 225 ppm Nitric Oxide/Nitrogen-EPA PROTOCOL
Final Analysis Date	November 25, 2009
Expiration Date	November 25, 2011

DO NOT USE BELOW 150 psig

Cylinder Data

Cylinder Serial Number:	EB-0020383	Cylinder Outlet:	CGA 660
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F
Expiration Date:	November 25, 2011		

Analytical Data

EPA Protocol, Section No. 2.2, Procedure G-1

Replicate Concentrations
Nitric Oxide: 212.9 ppm +/- 2.12 ppm
Nitrogen: Balance
Total Oxides of Nitrogen: 213.2 ppm
** NOx for reference Use Only **

Reference Standard(s):

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0016007	EB-0016008
Concentration:	173.46 ppm NO/Nitrogen	251.52 ppm NO/Nitrogen
Expiration Date:	May 18, 2011	May 14, 2011

Certification Instrumentation

Component:	Nitric Oxide
Make/Model:	Nicolet - NEXUS 470
Serial Number:	AEP99000154
Principal of Measurement:	FTIR
Last Calibration:	November 10, 2009

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

Certified by: Mike Duncan

Date: November 25, 2009

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- EPA PROTOCOL GAS -

Customer	Ambient Air Services (Starke, Florida)
Date	November 24, 2008
Delivery Receipt	DR-23127
Gas Standard	40.0 - 50.0 ppm Carbon Monoxide/Nitrogen - EPA PROTOCOL
Final Analysis Date	November 24, 2008
Expiration Date	November 24, 2011
Component	Carbon Monoxide
Balance Gas	Nitrogen

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

Replicate Concentrations

Carbon Monoxide: 44.7 ppm +/- 0.44 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-158976	CC-166348
Concentration:	25.1 ppm CO/Nitrogen	45.9 ppm CO/Nitrogen
Expiration Date	August 04, 2010	February 25, 2009

Certification Instrumentation

Component:	Carbon Monoxide
Make/Model:	Nicolet - NEXUS 470
Serial Number:	AEP99000154
Principal of Measurement:	FTIR
Last Calibration:	November 04, 2008

Cylinder Data

Cylinder Serial Number:	CC-166357	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

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

Certified by: Mike D
Date: November 24, 2008

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- EPA PROTOCOL GAS -

Customer	Ambient Air Services (Starke, Florida)
Date	October 14, 2008
Delivery Receipt	DR-22851
Gas Standard	13.5 - 16.5 ppm Propane/Nitrogen - EPA PROTOCOL
Final Analysis Date	October 14, 2008
Expiration Date	October 14, 2011

Component	Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Propane: 15.2 ppm +/- 0.15 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-166606	CC-165367
Concentration:	3.05 ppm C3H8/Nitrogen	19.92 ppm Propane/Nitrogen
Expiration Date:	December 05, 2008	June 13, 2009

Certification Instrumentation

Component:	Propane
Make/Model:	Agilent 7890A
Serial Number:	CN10736166
Principal of Measurement:	GC-FID
Last Calibration:	October 02, 2008

Cylinder Data

Cylinder Serial Number:	CC166370	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

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

Certified by:

Date: October 14, 2008

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- EPA PROTOCOL GAS -

** Re-certification **

Customer	Ambient Air Services (Starke, Florida)
Date	April 11, 2008
Delivery Receipt	DR-21414
Gas Standard	27.0 - 33.0 ppm Propane/Nitrogen - EPA PROTOCOL
Final Analysis Date	April 11, 2008
Expiration Date	April 11, 2011

Component	Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Propane: 30.3 ppm +/- 0.30 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-165367	CC-166570
Concentration:	19.92 ppm Propane/Nitrogen	50.92 ppm Propane/Nitrogen
Expiration Date:	June 13, 2009	June 17, 2009

Certification Instrumentation

Component:	Propane
Make/Model:	HP5890-II
Serial Number:	3336A59393
Principal of Measurement:	GC-FID
Last Calibration:	April 03, 2008

Cylinder Data

Cylinder Serial Number:	CC-158999	Cylinder Outlet:	CGA 350
Cylinder Volume:	128 Cubic Feet	Cylinder Pressure:	1825 psig, 70°F

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

Certified by: Mike Dunn

Date: April 11, 2008

Original Data: 30.2 ppm Propane/Nitrogen (May 31, 2005)

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- EPA PROTOCOL GAS -

Customer	Ambient Air Services, Inc (Starke, Florida)
Date	July 29, 2009
Delivery Receipt	DR-25466
Gas Standard	50.0 - 60.0 ppm Propane/Nitrogen - EPA PROTOCOL
Final Analysis Date	July 21, 2009
Expiration Date	July 21, 2012

Component	Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Propane: 57.1 ppm +/- 0.57 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-166570	CC-166582
Concentration:	50.81 ppm C3H8/Nitrogen	103.2 ppm Propane/Nitrogen
Expiration Date:	April 02, 2011	May 02, 2010

Certification Instrumentation

Component:	Propane
Make/Model:	Agilent 7890A
Serial Number:	CN10736166
Principal of Measurement:	GC-FID
Last Calibration:	July 02, 2009

Cylinder Data

Cylinder Serial Number:	CC-115889	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

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

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- EPA PROTOCOL GAS -

Customer	Ambient Air Services, Inc (Starke, FL)
Date	February 19, 2010
Delivery Receipt	DR-27583
Gas Standard	5.00% Oxygen/Nitrogen-EPA PROTOCOL
Final Analysis Date	February 16, 2010
Expiration Date	February 16, 2013

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

Oxygen: 5.03% +/- 0.05%

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS
Cylinder Number:	CC-250294
Concentration:	4.98% Oxygen/Nitrogen
Expiration Date:	June 08, 2011

Certification Instrumentation

Component:	Oxygen
Make/Model:	Servomex 244a
Serial Number:	1847
Principal of Measurement:	Paramagnetic
Last Calibration:	February 15, 2010

Cylinder Data

Cylinder Serial Number:	CC-251912	Cylinder Outlet:	CGA 590
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

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

Certified by: Mike Duncan

Mike Duncan

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Ambient Air Services, Inc (Starke, Florida)
Date	November 25, 2009
Delivery Receipt	DR-26787
Gas Standard	10-12% CO2, 10-12% Oxygen/Nitrogen-EPA PROTOCOL
Final Analysis Date	November 25, 2009
Expiration Date	November 25, 2012
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: 11.06% +/- 0.11%

Oxygen: 11.10% +/- 0.11%

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS/GMIS	GMIS/GMIS
Cylinder Number:	CC-165377/CC-125534	CC-231332/CC-85458
Concentration:	10.05% CO2/N2-13.2% CO2/Nitrogen	10.1% O2/N2 - 20.97% Oxygen/N2
Expiration Date:	04/06/11 - 04/01/11	03/04/11 - 04/15/11

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Agilent 7890A	Servomex 244a
Serial Number:	CN10736166	1847
Principal of Measurement:	GC-TCD	Paramagnetic
Last Calibration:	October 29, 2009	November 20, 2009

Cylinder Data

Cylinder Serial Number:	CC-92928	Cylinder Outlet:	CGA 590
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

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

Certified by: Mike Duncan

Mike Duncan

Unmatched Excellence

2564 Pemberton Drive ~ Apopka, Florida 32703 ~ Phone (407)-292-2990 ~ Fax (407)-292-3313
~ www.liquidtechcorp.com ~

Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Ambient Air Services (Starke, Florida)
Date	March 18, 2009
Delivery Receipt	DR-24187
Gas Standard	20.0 - 25.0% Carbon Dioxide/Nitrogen-EPA PROTOCOL
Final Analysis Date	March 18, 2009
Expiration Date	March 18, 2012
Component	Carbon Dioxide
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Carbon Dioxide: 21.6% +/- 0.21%

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-115915	CC-158974
Concentration:	19.4% CO2/Nitrogen	39.86% CO2/Nitrogen
Expiration Date:	January 21, 2011	March 17, 2010

Certification Instrumentation

Component:	Carbon Dioxide
Make/Model:	Hewlett Packard 5890 II
Serial Number:	3336A59393
Principal of Measurement:	TCD
Last Calibration:	March 06, 2009

Cylinder Data

Cylinder Serial Number:	EB-0015962	Cylinder Outlet:	CGA 580
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F
Expiration Date:	March 18, 2012		

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

Certified by: Mike Lee

Date: March 18, 2009

Unmatched Excellence

2564 Pemberton Drive ~ Apopka, Florida 32703 ~ Phone (407)-292-2990 ~ Fax (407)-292-3313
~ www.liquidtechcorp.com ~

APPENDIX C

TEST PROTOCOL

Georgia-Pacific Palatka Operations
Stack Testing protocol – #4 Lime Kiln
FFY 2010

No. 4 Lime Kiln (017)

The outlet of the No. 4 Lime Kiln will be tested downstream of the control device for the parameters listed below.

Test Parameter	Permit Limits	
	Concentration	Mass Emission Rate
Particulate Matter (PM)	NA	22.9 lb/hr (0.55 lb/ton LMS)
Sulfur Dioxide (SO_2)	16.9 ppm @ 10% O_2	9.1 lb/hr
Carbon Monoxide (CO)	69 ppm @ 10% O_2	16.3 lb/hr
Nitrogen Oxides (NO_x)	140 ppm @ 10% O_2	54.2 lb/hr
Volatile Organic Compounds (VOC) as methane	70 ppm @ 10% O_2	9.4 lb/hr

The compliance testing will consist of three one-hour runs for PM (EPA methods 1-5), SO2 (EPA method 8), CO (EPA method 10), NOx (EPA method 7E), and VOC (EPA method 25A). The following information will be monitored and reported for each test run: lime mud input, fuel firing rate, venturi scrubber flow and differential pressure, and CEMS data (O2, TRS).

In accordance with current Title V permit 064-AV, compliance with the emissions standard for TRS (12-month rolling total of 25.1 tons) is determined by data collected by the existing CEMS. Compliance testing will not be conducted for TRS. However, relative accuracy testing (RATA) will be conducted (EPA method 16) on the TRS CEMS concurrently with the annual compliance testing.

We will attempt to perform all testing during a single day and while the process is operated at >90% of permitted LMS firing rate. However, if delays prevent the completion of testing in one day, then testing will continue the following day contingent on weather and process availability.

It is anticipated that a one-hour run for PM, SO_2, NO_x, CO, and VOC will be performed during each TRS sampling run. Sulfur Dioxide testing will be performed using EPA Ref. Method 8.

An integrated gas sample will be collected during gas sampling for each parameter requiring oxygen correction. Each integrated sample will be analyzed by Orsat or instrumentally by EPA Method 3A. Alternatively, if continuous instrumental analysis is performed for oxygen by EPA Method 3A during TRS testing, the average oxygen measurement during the time of sampling may be used to correct the concentrations.

The concentration of each parameter will be oxygen corrected. The mean of the oxygen-corrected values will be used to demonstrate compliance. The mean of the three volumetric flow rate (VFR) measurements made during PM sampling will be used to calculate the mass emission rate for each parameter from the mean of the three concentration measurements.

The table below describes the sampling location for the No. 4 Lime Kiln.

Georgia-Pacific Palatka Operations
Stack Testing protocol – #4 Lime Kiln
FFY 2010

Source Description	A rotary kiln burning oil to produce lime (CaO) from $CaCO_3$
Pollution Control Equipment	Venturi scrubber to remove particulate matter and TRS
Sampling Port Height	~ 80 ft above grade
Stack Diameter At Ports	~ 5 feet
Sampling Ports (Number)	2 four-inch ports at 90° Location meets 8&2 criteria.
Volumetric Flow Rate	~ 56,000 acfm
Gas Temperature	~ 170 °F
Moisture Content	~ 38 % (Saturated at gas temperature.)
Sample Port Access	Stairs to landing area, ladder (20ft) to sampling platform.
Electrical Access	Available about 50 ft from base of ladder (15 amp) 460VAC available within 100 ft of mobile lab setup location.
Miscellaneous Information	Mobile lab may be set up at base of stack. Setup area is concrete. Platform has adequate work area.

The Testing Contractor will be responsible for preparation of the test reports and GP will be responsible for submission of the reports as outlined below. The Testing Contractor will prepare Item 3 shown below. GP will prepare Items 1 and 2. The report will be submitted within 45 days of the test date to FDEP to document compliance with the permit limits. The reports will consist of:

1. Transmittal letter from the responsible official at GP.
2. Executive Summary of all results
3. Contractor's Emission Test Report that will contain Process and Control Equipment Operating Parameters and Relevant Project Correspondence

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APPENDIX D

LABORATORY ACCREDITATION

-LELAP Certificate
-Laboratory Scope of Accreditation

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Ambient Air Services Inc.
106 Ambient Air Way
Starke, FL 32091

Agency Interest No. 100329

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory, and does not constitute an endorsement of the suitability of the listed methods for any specific application.

To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Nathan Levy

Nathan Levy, Administrator
Louisiana Environmental Laboratory Accreditation Program

Certificate Number: 04064
Expiration Date: June 30, 2010
Issued On: July 1, 2009

Louisiana Environmental Laboratory
LELAP
Accreditation Program

Laboratory Scope of Accreditation

Organization

04064 **(904) 964-8440**
Ambient Air Services Inc.
106 Ambient Air Way
Starke, FL 32091

Louisiana Stack Testing Program Certification

Method Code	Method Ref	Analyte	Status	Date Effective	Type	AA
1217	Method 1 40 CFR 60 App. A	Traverse Points	Accredited	8/4/2003	STATE	LA
1218	Method 10 40 CFR 60 App. A	Carbon monoxide (CO)	Accredited	8/4/2003	STATE	LA
1245	Method 17 40 CFR 60 App. A	Particulates	Accredited	8/4/2003	STATE	LA
1247	Method 19 40 CFR 60 App. A	Nitrogen Oxides (NOx)	Accredited	8/4/2003	STATE	LA
1247	Method 19 40 CFR 60 App. A	Particulates SO2 NOx sulfur removal efficiency	Accredited	8/4/2003	STATE	LA
1247	Method 19 40 CFR 60 App. A	Sulfur dioxide	Accredited	8/4/2003	STATE	LA
1250	Method 20 40 CFR 60 App. A	Nitrogen Oxides (NOx)	Accredited	8/4/2003	STATE	LA
1250	Method 20 40 CFR 60 App. A	Oxygen	Accredited	8/4/2003	STATE	LA
1250	Method 20 40 CFR 60 App. A	Sulfur dioxide	Accredited	8/4/2003	STATE	LA
1251	Method 201A 40 CFR 51 App. M	Particulates <10 um	Accredited	8/4/2003	STATE	LA
1262	Method 22 40 CFR 60 App. A	Visible emissions from coke oven batteries	Accredited	8/4/2003	STATE	LA
1279	Method 3 40 CFR 60 App. A	Carbon dioxide oxygen dry molecular weight	Accredited	8/4/2003	STATE	LA
1296	Method 3A 40 CFR 60 App. A	Carbon dioxide	Accredited	8/4/2003	STATE	LA
1296	Method 3A 40 CFR 60 App. A	Oxygen	Accredited	8/4/2003	STATE	LA
1302	Method 4 40 CFR 60 App. A	Moisture content	Accredited	8/4/2003	STATE	LA
1303	Method 5 40 CFR 60 App. A	Particulates	Accredited	8/4/2003	STATE	LA
1304	Method 5A 40 CFR 60 App. A	Particulates from asphalt processing	Accredited	8/4/2003	STATE	LA
1305	Method 5B 40 CFR 60 App. A	Particulates	Accredited	8/4/2003	STATE	LA
1306	Method 5D 40 CFR 60 App. A	Particulates from fabric filters	Accredited	8/4/2003	STATE	LA
1312	Method 6 40 CFR 60 App. A	Sulfur dioxide	Accredited	8/4/2003	STATE	LA
1315	Method 6C 40 CFR 60 App. A	Sulfur dioxide	Accredited	8/4/2003	STATE	LA
1321	Method 7E 40 CFR 60 App. A	Nitrogen Oxides (NOx)	Accredited	8/4/2003	STATE	LA
1322	Method 8 40 CFR 60 App. A	Sulfur dioxide	Accredited	8/4/2003	STATE	LA
1322	Method 8 40 CFR 60 App. A	Sulfuric Acid Mist	Accredited	8/4/2003	STATE	LA
1323	Method 9 40 CFR 60 App. A	Opacity	Accredited	8/4/2003	STATE	LA
1761	Method 101A 40 CFR 61 App. B (Sample Only)	Mercury	Accredited	8/4/2003	STATE	LA
1793	Method 12 40 CFR 60 App. A (Sample Only)	Lead	Accredited	8/4/2003	STATE	LA

Issue Date: July 1, 2009
Expiration Date: June 30, 2010

The most recently issued scope is the official scope of the facility. Please note that the information on the scopes maybe subject to change. Any questions concerning the accreditation of specific methods and analytes should be directed to LELAP.

Print Date 6/25/2009 1:17:47 PM

Louisiana Environmental Laboratory
LELAP
Accreditation Program

Laboratory Scope of Accreditation

Organization

04064 **(904) 964-8440**
Ambient Air Services Inc.
106 Ambient Air Way
Starke, FL 32091

Louisiana Stack Testing Program Certification

Method Code	Method Ref	Analyte	Status	Date Effective	Type	AA
1795	Method 13A 40 CFR 60 App. A (Sample Only)	Fluoride	Accredited	8/4/2003	STATE	LA
1797	Method 13B 40 CFR 60 App. A (Sample Only)	Fluoride	Accredited	8/4/2003	STATE	LA
1805	Method 16 40 CFR 60 App. A (Sample Only)	Dimethyl Disulfide	Accredited	8/4/2003	STATE	LA
1805	Method 16 40 CFR 60 App. A (Sample Only)	Dimethyl Sulfide	Accredited	8/4/2003	STATE	LA
1805	Method 16 40 CFR 60 App. A (Sample Only)	Hydrogen sulfide	Accredited	8/4/2003	STATE	LA
1805	Method 16 40 CFR 60 App. A (Sample Only)	Methyl Mercaptan	Accredited	8/4/2003	STATE	LA
1819	Method 2 40 CFR 60 App. A (Sample Only)	Stack gas velocity volume flow rate	Accredited	8/4/2003	STATE	LA
1851	Method 25A 40 CFR 60 App. A (Sample Only)	Gaseous Organic Emissions	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Antimony	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Arsenic	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Barium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Beryllium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Cadmium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Chromium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Cobalt	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Copper	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Lead	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Manganese	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Mercury	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Nickel	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Phosphorus total	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Selenium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Silver	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Thallium	Accredited	8/4/2003	STATE	LA
1861	Method 29 40 CFR 60 App. A (Sample Only)	Zinc	Accredited	8/4/2003	STATE	LA
1889	Method 308 40 CFR 63 App. A (Sample Only)	Methanol	Accredited	8/4/2003	STATE	LA
2032	Method 5C 40 CFR 60 APP. A	Particulate Emissions.	Accredited	8/4/2003	STATE	LA

Issue Date: July 1, 2009
Expiration Date: June 30, 2010

The most recently issued scope is the official scope of the facility. Please note that the information on the scope may be subject to change. Any questions concerning the accreditation of specific methods and analytes should be directed to LELAP.

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APPENDIX E

PROCESS DATA

Lime Kiln Operating Data and Scrubber Operating Data

GEORGIA-PACIFIC PALATKA OPERATIONS

LIME KILN STACK TEST - April 13, 2010

PROCESS AND SCRUBBER DATA

PM and non-TRS gases

RUN #1	Process Data				Scrubber Data	
4/13 8:35-9:37	Lime Mud Flow	Lime Mud	LM solids	Fuel Oil	Flow	Diff. Press.
5-min period starting at	gpm	%solids	TPH	gpm	gpm	inches H2O
13-Apr-10 08:35:00	371.5	32.4	38.0	12.8	668.5	26.8
13-Apr-10 08:40:00	371.1	32.3	37.9	12.8	668.6	26.8
13-Apr-10 08:45:00	371.2	32.3	37.9	12.8	668.5	26.8
13-Apr-10 08:50:00	370.7	32.1	37.6	12.8	668.4	26.8
13-Apr-10 08:55:00	370.9	32.3	37.9	12.8	668.4	26.9
13-Apr-10 09:00:00	370.6	32.3	37.8	12.7	668.4	26.9
13-Apr-10 09:05:00	370.7	32.3	37.8	12.8	668.4	26.7
13-Apr-10 09:10:00	371.2	32.1	37.6	12.8	668.4	26.8
13-Apr-10 09:15:00	371.0	32.2	37.7	12.8	668.3	26.8
13-Apr-10 09:20:00	370.8	32.2	37.7	12.9	668.3	26.9
13-Apr-10 09:25:00	370.5	32.1	37.6	12.8	668.3	26.9
13-Apr-10 09:30:00	371.0	32.0	37.2	12.8	668.3	26.8
13-Apr-10 09:35:00	370.8	32.3	37.8	12.8	668.2	26.7
RUN #1 AVERAGE =	370.9	32.2	37.7	12.8	668.4	26.8

RUN #2	Process Data				Scrubber Data	
4/13 12:08-13:10	Lime Mud Flow	Lime Mud	LM solids	Fuel Oil	Flow	Diff. Press.
5-min period starting at	gpm	%solids	TPH	gpm	gpm	inches H2O
13-Apr-10 12:05:00	371.1	32.4	37.9	13.0	667.6	26.7
13-Apr-10 12:10:00	371.0	32.1	37.6	13.0	667.6	26.7
13-Apr-10 12:15:00	371.8	32.5	38.2	13.0	667.6	26.7
13-Apr-10 12:20:00	372.6	32.4	38.2	13.0	667.5	26.8
13-Apr-10 12:25:00	372.4	32.4	38.2	13.0	667.5	26.9
13-Apr-10 12:30:00	372.7	32.4	38.1	13.0	667.5	26.8
13-Apr-10 12:35:00	373.1	32.4	38.2	13.0	667.5	26.8
13-Apr-10 12:40:00	370.7	32.2	37.7	12.9	667.4	26.7
13-Apr-10 12:45:00	370.2	32.1	37.6	12.8	667.4	26.8
13-Apr-10 12:50:00	370.2	32.3	37.8	12.8	667.4	27.0
13-Apr-10 12:55:00	372.4	32.3	38.0	12.7	667.4	26.9
13-Apr-10 13:00:00	370.6	32.2	37.7	12.7	667.4	26.8
13-Apr-10 13:05:00	370.5	32.3	37.8	12.7	667.3	26.9
RUN #2 AVERAGE =	371.5	32.3	37.9	12.9	667.5	26.8

RUN #3	Process Data				Scrubber Data	
4/13 14:10-15:12	Lime Mud Flow	Lime Mud	LM solids	Fuel Oil	Flow	Diff. Press.
5-min period starting at	gpm	%solids	TPH	gpm	gpm	inches H2O
13-Apr-10 14:10:00	370.6	32.3	37.8	12.8	667.1	26.7
13-Apr-10 14:15:00	370.7	32.3	37.8	12.8	667.0	26.7
13-Apr-10 14:20:00	371.3	32.3	37.8	12.7	667.0	26.7
13-Apr-10 14:25:00	370.7	32.3	37.8	12.7	667.1	26.7
13-Apr-10 14:30:00	370.7	32.2	37.7	12.7	667.1	26.7
13-Apr-10 14:35:00	371.4	32.2	37.8	12.7	667.2	26.9
13-Apr-10 14:40:00	371.4	32.2	37.8	12.7	667.2	26.9
13-Apr-10 14:45:00	370.8	32.1	37.6	12.7	667.3	26.5
13-Apr-10 14:50:00	370.5	32.3	37.8	12.7	667.3	26.8
13-Apr-10 14:55:00	371.3	32.2	37.8	12.7	667.3	26.9
13-Apr-10 15:00:00	370.4	32.0	37.5	12.6	667.4	26.9
13-Apr-10 15:05:00	370.7	32.1	37.6	12.6	667.4	26.9
13-Apr-10 15:10:00	371.0	32.2	37.8	12.6	667.5	26.8
RUN #3 AVERAGE =	370.9	32.2	37.7	12.7	667.2	26.8
TEST AVERAGE =	371.1	32.2	37.8	12.8	667.7	26.8