Covanta Lee, Inc.
A Covanta Energy Company
10500 Buckingham Road
Fort Myers, FL 33905
Tel 239 337 2200
Fax 239 337 2510

COVANTA
ENERGY

January 24, 2011

Mr. Ajaya Satyal
Air Program Administrator
Florida Department of Environmental Protection
South Florida District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

RE: **Lee County Solid Waste Resource Recovery Facility**
CO_2 CEMS RATA
0710119

Dear Mr. Satyal,

Covanta Lee, Inc., on behalf of Lee County Solid Waste Division, is hereby submitting the Relative Accuracy Test Audit (RATA) on the carbon dioxide Continuous Emission Monitoring System (CEMS) that was undertaken at the LCRRF. This RATA will serve to certify the CEMS requirement per 40 CFR 98, *Mandatory Greenhouse Gas Reporting*.

If you have any questions regarding the enclosed material, please feel free to contact me. I can be reached during the day at (239) 337-2200, extension 228.

Sincerely,

Michael Duff
Facility Manager

cc:
	J. Kahn	(FDEP Tallahassee)
	L. Sampson	(LC-SWMD)
	D. Castro	(HDR)
	File	(K. Chardo)

Performance Specification Test #10748PST

December 2010

PERFORMED FOR

Covanta Projects, Inc.

Fairfield, New Jersey

at

Lee County Solid Waste Resource Recovery Facility

Fort Myers, Florida

by

TESTAR, Inc.

7424-108 ACC Boulevard

Raleigh, North Carolina 27617

919/957-9500

PE CERTIFICATION
TESTAR REPORT NUMBER 10748PST

I hereby certify that I have personally examined and am familiar with the information submitted herein. Based upon my own knowledge and my inquiry of those individuals responsible for obtaining the information presented, the foregoing information is true, accurate and complete. I am aware that this information is being requested for the purpose of determining compliance with local, state, and federal laws and may be submitted to appropriate governmental regulatory agencies for those purposes. I am aware that there are significant penalties for submitting false information to such agencies, including the possibility of fine and imprisonment.

Signature _____ Date: 1/21/11

Gary L. Williams, P.E.
Director

Professional Engineer, State of Florida

Seal Number 59213

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1 INTRODUCTION

1.1 General

Covanta Projects, Inc. contracted TESTAR, Inc. to conduct a Performance Specification Test (PST) on the new CO_2 analyzers installed on the outlets of Units 1, 2, and 3 at the Lee County Solid Waste Resource Recovery Facility in Fort Myers, Florida. The RATA and Seven-Day drift test results satisfied the requirements of 40 CFR Part 60, Appendix B and F. The testing program was conducted on December 8 and 9, 2010 by TESTAR under the supervision of Mr. Gregg Sydorko of Covanta Projects, Inc.

Table 1-1 presents the personnel from Covanta Energy and TESTAR that were involved in the testing program.

Table 1-1
Test Personnel

Affiliation	Personnel Responsibility
Covanta Projects, Inc.	Gregg Sydorko Test Coordinator
TESTAR, Inc.	Chris Wrenn CEMS Operator
	Jeff Aims Field Engineer
	Blake Cone Field Engineer
	Barrett Harris Field Engineer

2 SUMMARY OF RESULTS

2.1 Report Organization

The results of the testing project are summarized in Section 2. The process tested is discussed in Section 3. The sampling and analytical methods utilized are discussed in Section 4 while the Quality Assurance/Quality Control results are presented in Section 5. Appendix A contains detailed results of the relative accuracy test. Appendix B contains Reference Method Field Data for O_2 and CO_2. Appendix C contains the Source Data CEMS Printouts for and CO_2, Flow Rate, and Moisture. Appendix D contains the Source Seven-Day drift data. Appendix E contains the Reference Method Field data for flow rate and moisture and Appendix F contains all reference method calibration data. Refer to the Table of Contents and the List of Tables for a complete reference with appropriate page numbers.

2.2 Presentation of Results

Table 2-1 presents the results of the RATA and Table 2-2 presents the results of the Seven-Day Drift tests. A more detailed summary of the results is presented in the Appendix.

Table 2-1
RATA Test Summary

Parameter	Serial Number	Location	Units	Result	Specification
Carbon Dioxide	N2L1452T	Unit 1 Outlet	Dry Volume % Metric tons/hr	0.2% 6.6%	≤1.0% Absolute Mean Difference[1] ≤20% Relative Accuracy[2]
Carbon Dioxide	N2L1451T	Unit 2 Outlet	Dry Volume % Metric tons/hr	0.0% 7.3	≤1.0% Absolute Mean Difference[1] ≤20% Relative Accuracy[2]
Carbon Dioxide	N2L1462T	Unit 3 Outlet	Dry Volume % Metric tons/hr	0.1% 6.0%	≤1.0% Absolute Mean Difference[1] ≤20% Relative Accuracy$_2$

[1] 40CFR60, Appendix B, Performance Specification 3 for O2 and CO2, Section 13.2.
[2] 40CFR60, Appendix B, Performance Specification 6 for Continuous Emission Rate Monitoring Systems, Section 13.2.

Table 2-2
Seven-Day Drift Test Summary

Parameter	Serial Number	Location	Date	Units	Maximum Drift	Specification
CO_2 (zero) CO_2 (span)	N2L1462T	Unit 3 Outlet	12/09/10- 12/16/10	% CO_2 % CO_2	-0.10% -0.29%	<0.5% CO_2 <0.5% CO_2

3 PROCESS DESCRIPTION AND OPERATION

The Lee County Solid Waste Resource Recovery Facility processes up to 1,200 tons of solid waste each day, generating up to 39.7 megawatts of electricity. Each of the two (2) Martin GmbH waterwall furnaces processes up to 600 tons of waste per day. Waste is combusted at furnace temperatures exceeding 1,800 degrees Fahrenheit and reduced to an inert ash residue. Before leaving the facility, combustion air is directed through technologically advanced air pollution control equipment consisting of dry flue gas scrubbers, fabric filter baghouses, and mercury and NO_x abatement systems. During the relative accuracy testing the units were operating at greater than 50% of capacity.

The CEMS serving Units 1, 2, and 3 are dedicated dry extractive systems that consist of SO_2, NO_x, CO, CO_2, and O_2 analyzers, a dry extractive sampling system, and a microcomputer based DAHS. Descriptions of the analyzers are listed in **Table 3-1**.

Table 3-1
Covanta CEMS Analyzers

Pollutant Monitor	Unit	Location	Range	Analyzer	Serial Number
SO_2	1	Stack	0-400 ppm	Bovar 721M	93-721M-8056-7
CO/CO_2	1	Stack	0-500 ppm 0-20 %	Milton Roy ZRH2	N2L1452T
NO_x	1	Stack	0-500 ppm	TECO 42 H	42H-50337-285
O_2	1	Stack	0-25 %	Servomex 1400	01420/B143
Flow Rate	1	Stack	132 ft/sec	OFS 2000W	10060502
Moisture	1	Stack	0-30%	M&C	SN 2516
O_2	1	Economizer	0-25 %	Servomex 1400	01420/B146
SO_2	1	Economizer	0-1000 ppm	Bovar 721M	93-721M-8056-8
CO_2	1	Economizer	0-20 %	Milton Roy ZRH1	N2L1474T
CO	1	Economizer	0-2000 ppm 0-500 ppm	TECO 48	48-45332-273
SO_2	2	Stack	0-400 ppm	Bovar 721M	93-721M-8056-6
CO/CO_2	2	Stack	0-500 ppm 0-20 %	Milton Roy ZRH2	N2L1451T
NO_x	2	Stack	0-500 ppm	TECO 42 H	42H-45488-274
O_2	2	Stack	0-25 %	Servomex 1400	01420/B142
Flow Rate	2	Stack	132 ft/sec	OFS 2000W	10060503
Moisture	2	Stack	0-30%	M&C	SN 2516
O_2	2	Economizer	0-25 %	Servomex 1400	01420/B141
SO_2	2	Economizer	0-1000 ppm	Bovar 721M	93-721M-8056-5
CO_2	2	Economizer	0-20 %	Milton Roy ZRH1	N2L1462T
CO	2	Economizer	0-2000 ppm 0-500 ppm	TECO 48	48-46041-275
SO_2	3	Stack	1-400 ppm	Ametek 921-CE SO_2	AD921-S074
CO	3	Stack	0-500 ppm 0-2000 ppm	TECO 48i	0620717515
NO_x	3	Stack	0-500 ppm	TECO 42i HL	0620717514
O_2	3	Stack	0-25 %	Servomex 1440	01440DIV02/3792
CO_2	3	Stack	0-20 %	California Analytical ZRH	N2L1462T
Flow Rate	3	Stack	132 ft/sec	OFS 2000W	10060504
Moisture	3	Stack	0-30%	MIDAC I1309-1	488
NH_3	3	Economizer	0-100 ppm	MIDAC I1309-1	488
O_2	3	Economizer	0-25 %	Servomex 1440	01440DIV02/3791
SO_2	3	Economizer	1-1000 ppm	Ametek 921-CE SO_2	AD921-S077

4 SAMPLING AND ANALYTICAL METHODS

TESTAR, Inc. was contracted to conduct a RATA of carbon dioxide (% and metric tons/hr) on the outlets of Units 1, 2, and 3. The testing was performed on the Covanta Projects CEMS.

4.1 Relative Accuracy Test Equipment

TESTAR's extractive measurement system and all sampling and data reduction procedures conform with the requirements of Performance Specifications 3 and 6, and EPA Method 3A of 40 CFR 60, and the Quality Assurance Procedures of Appendix F. **Figure 4-1** presents a schematic of the reference measurement systems that was used at the test locations.

The effluent gas sample is conditioned to eliminate interference from water vapor and particulate matter before being introduced into each analyzer. All components of the sampling system that contact the sample are glass, stainless steel, or Teflon. A heated probe and particulate filter, heated sample lines, primary moisture removal trap, sample pump, and distribution manifold board are used to deliver a sample of flue gas to the analyzers. The sampling probe and filter housing is constructed of Type 316 stainless steel and is heated to maintain the sample temperature above the dew point.

The condenser is a Teflon or glass coil condenser in an ice bath that provides excellent condensate separation and optimum drying of the sample gas. A peristaltic pump continuously removes condensate from a knockout at the base of the coil.

The dry sample exiting the condenser is then transported through unheated 3/8-inch O.D. Teflon tubing by way of a Teflon-lined sample pump to the flow distribution manifold board, where the flow to the analyzers is monitored and controlled.

A three-way valve located on the manifold board delivers calibration gas to two locations: (1) immediately upstream of the analyzers for calibration error checks, and (2) at the outlet of the probe for the sampling system bias and calibration drift checks.

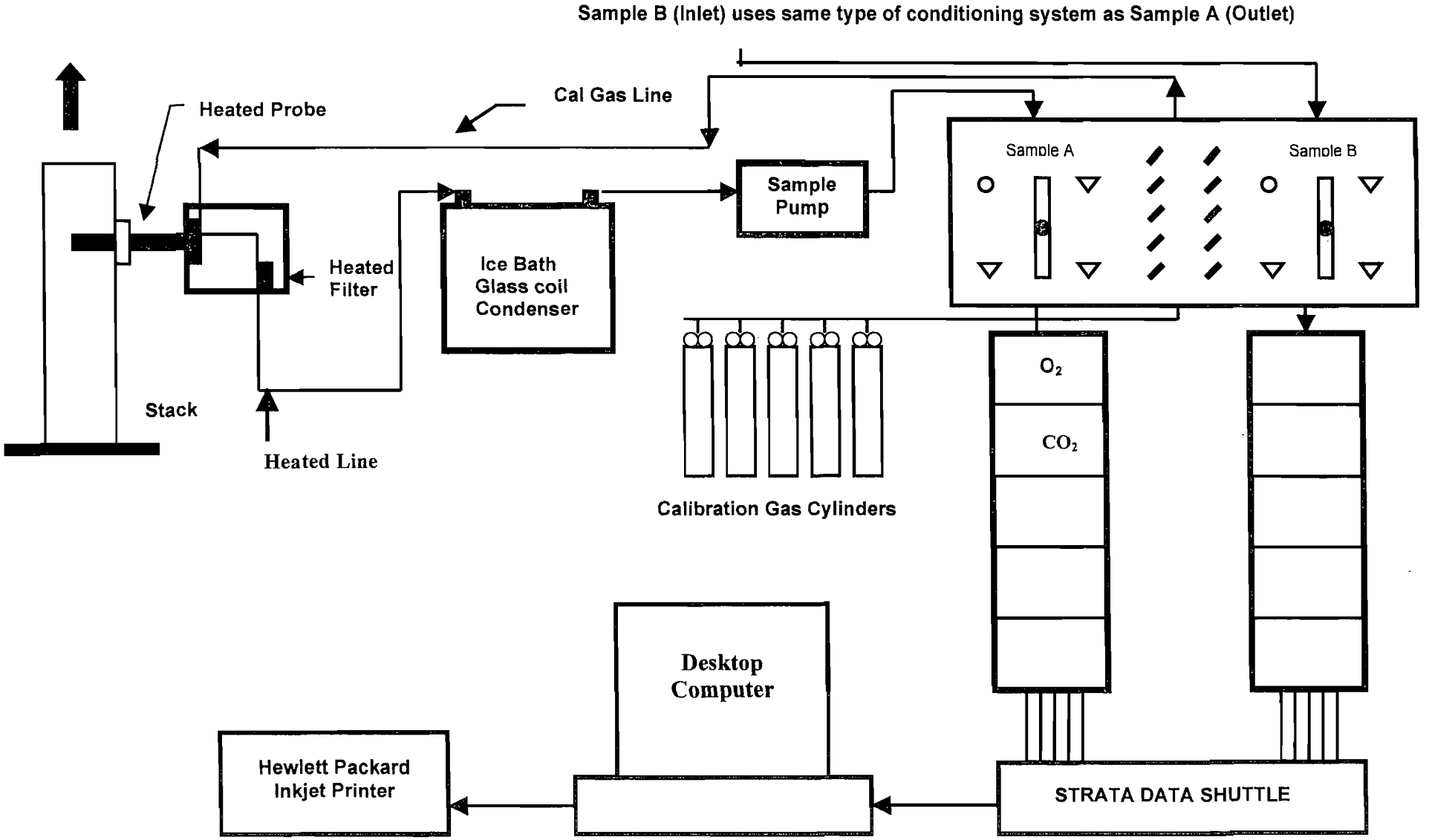

Figure 4-1. TESTAR Reference Method CEM System

Table 4-1 lists the gas analyzers that will be used during this test program. **Appendix A** to this document contains brief descriptions of the analyzers.

Table 4-1
Reference Method Analyzers

Parameter	Analyzer	Model	Serial Number	Range	Operational Principle
O_2 Outlet	Servomex	1420B	1420/B180	0-25%	Paramagnetic
O_2 Outlet	California Analytical	100P	8K12007	0-25%	Paramagnetic
CO_2 Outlet	Teledyne API	300EM	224	0-20%	NDIR
CO_2 Outlet	California Analytical	ZRH	A6J836T	0-20%	NDIR

4.2 Relative Accuracy Test Procedures

The reference test method procedures used for the RATA test program are instrumental test methods. They were conducted in accordance with 40 CFR 60, Appendix B, Performance Specifications 3 and 6. Relative accuracies were calculated according to the appropriate emission standards. To satisfy the RATA requirements of 40 CFR 60, Appendix B and F, the relative accuracy for O_2 and CO_2 must not exceed an absolute mean difference of $\pm$1.0%. In terms of the emission standard (metric tons/hr) the relative accuracy must not exceed $\pm$20% Relative Accuracy.

TESTAR, Inc. conducted the relative accuracy tests. The relative accuracy tests were conducted while each unit operated at greater than 50% of capacity.

The traverse sampling points were located so as to establish a "measurement line" through the centroidal area of the duct. The test points for the relative accuracy testing were located at 16.7%, 50.0%, and 83.3% of the internal diameter of the duct. **Figure 4-2** presents a schematic of the sampling point locations for the stack.

TESTAR used EPA Test Methods 3A as the reference method for measuring O_2 and CO_2. This method is an instrumental procedure. A sample is continuously extracted from the effluent stack gas stream. A portion of the sample stream is conveyed to each analyzer for the determination of O_2 and CO_2.

For each EPA Reference Method determination, the flue gas was sampled at three traverse points. The difference between the reference method sample and the monitor's reading was evaluated from a minimum of nine test runs.

4.3 Seven-day Calibration Drift Test Procedures

A seven-day calibration drift test was conducted on the new CO_2 analyzer installed on the Outlet of Unit 3. The zero and span calibration drift was recorded every twenty-four hours for seven consecutive days on each analyzer. The calibration drift test was conducted during which no unscheduled maintenance, repair, or adjustment took place. Complete summaries of the seven-day calibration drift test are included in Appendix D.

4.4 Moisture and Molecular Weight Determinations

EPA Method 3A was used to determine the flue gas molecular weight (including oxygen and carbon dioxide). EPA Method 4 was used to determine the flue gas moisture content. Data from EPA Methods 3 and 4 were used to calculate the volumetric flow rate of the stack gas. The volumetric flow rate was then used to calculate metric tons/hr of CO_2.

4.5 Flow Rate Measurements

Moisture and volumetric flow rate data were taken from sampling trains running simultaneously with each RATA test including EPA Methods 2, 3A, and 4. The sampling trains consisted of a heated glass probe, a heated filter, four chilled impingers, and a dry gas metering console. At the end of each test run, the moisture was measured and a volumetric flow rate was calculated.

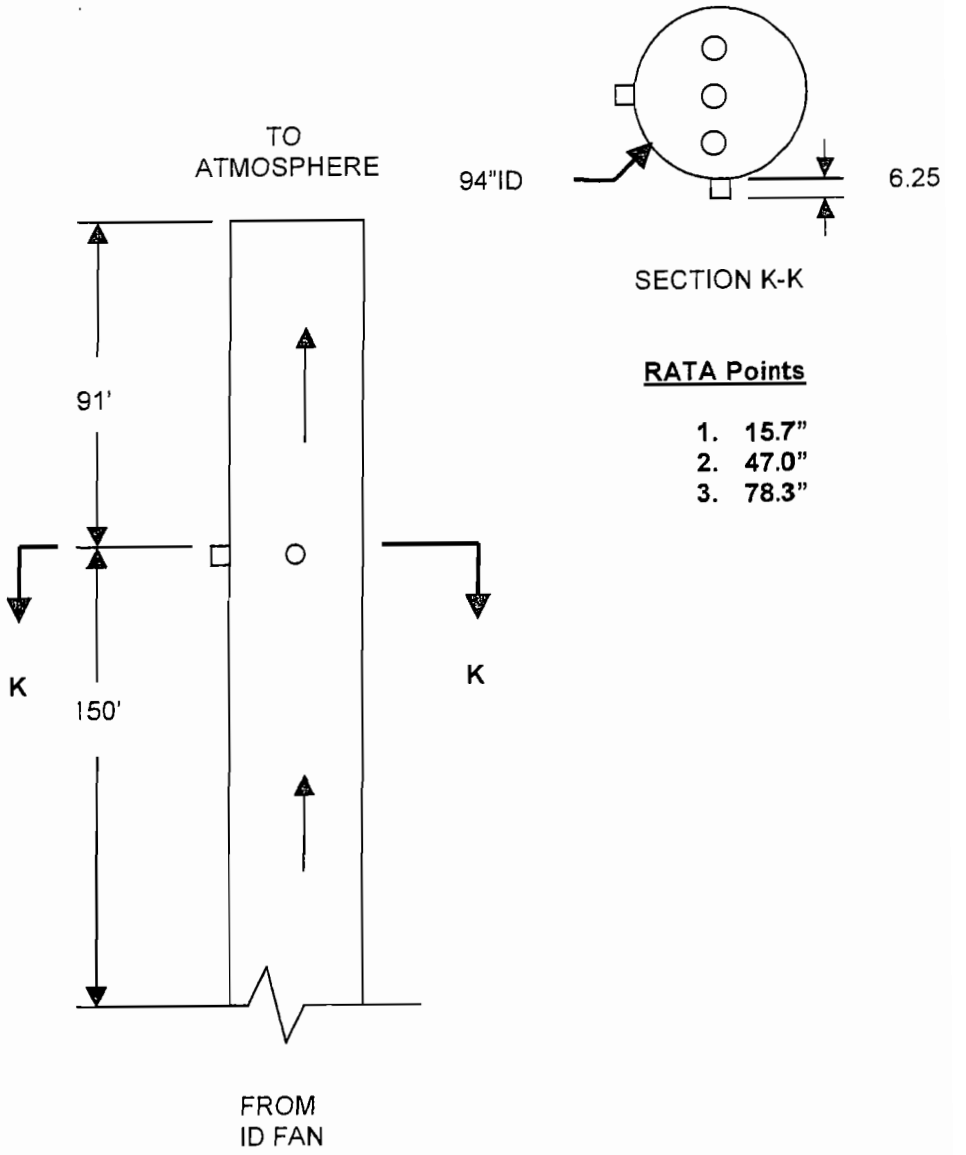

Figure 4-3. Stack Sampling Location
(Units 1, 2, and 3 are identical)

5 QA/QC RESULTS

5.1 QA/QC Policy Procedures

The calibration and quality assurance procedures of EPA Method 3A were followed throughout the test program and are summarized in Table 5-1. The results of sampling system bias and calibration drift tests for each test run are calculated and presented in Appendix B. The cylinder gas manufacturer's analyses of the O_2 and CO_2 calibration gases were conducted according to EPA Protocol 1 requirements. The certificates of analysis are included in the test report. A summary of the calibration gases used during the test program is presented in Table 5-2.

Table 5-1
Summary of QA/QC Procedures

Test Method	QA/QC Procedure	QA/QC Objective	QA/QC Results	Status of QA/QC
EPA M3A	Initial Calibration Error Test	< ±2%	< ±2%	Acceptable
	System Bias Test	< ±5%	< ±5%	Acceptable
	Drift Test	< ±3%	< ±3%	Acceptable
	Leak Check	<2% of average flow	0.0%	Acceptable
	Response Time	NA	42 seconds	Acceptable

Table 5-2
Reference Method Calibration Gas Values

Parameter	Span Level	Calibration Gas Value	Calibration Gas Serial Number
Oxygen	Mid	10.01 %	CC7638
	High	20.9 %	CC252375
Carbon Dioxide	Mid	8.941%	CC7638
	High	18.05%	CC252375

APPENDIX A
Relative Accuracy Results

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	Lee County RRF	Operator:	CMW
Test Location:	Unit 1 Stack		
Analyzer:	NA		
Serial Number:	NA		
App. Standard:	NA		
Parameter Units:	MT/hr		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/8/10	934	958	21.963	31.200	invalid		
2	12/8/10	1003	1027	22.687	32.193	invalid		
3	12/8/10	1154	1218	22.255	21.132	valid	1.123	1
4	12/8/10	1230	1254	21.929	21.100	valid	0.829	1
5	12/8/10	1300	1324	21.872	20.974	valid	0.898	1
6	12/8/10	1330	1354	22.349	21.199	valid	1.150	1
7	12/8/10	1417	1441	21.713	20.884	valid	0.829	1
8	12/8/10	1504	1528	20.728	19.924	valid	0.804	1
9	12/8/10	1533	1557	22.049	20.173	valid	1.876	4
10	12/8/10	1604	1628	21.682	20.639	valid	1.043	1
11	12/8/10	1633	1657	22.924	21.190	valid	1.734	3.007
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		21.945	20.802		1.143	

Standard Deviation	0.3983
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.3062

Relative Accuracy % of Reference Method: 6.6

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	Lee County RRF	Operator:	CMW
Test Location:	Unit 1 Stack		
Analyzer:	ZRH1GMF1		
Serial Number:	N2L1452T-CO2		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/8/10	934	958	8.624	8.9	VOID		
2	12/8/10	1003	1027	8.854	9.1	VOID		
3	12/8/10	1154	1218	8.710	8.9	valid	-0.190	0.036
4	12/8/10	1230	1254	8.695	8.9	valid	-0.205	0.042
5	12/8/10	1300	1324	8.802	9.0	valid	-0.198	0.039
6	12/8/10	1330	1354	8.913	9.0	valid	-0.087	0.008
7	12/8/10	1417	1441	8.925	9.1	valid	-0.175	0.031
8	12/8/10	1504	1528	8.601	8.8	valid	-0.199	0.040
9	12/8/10	1533	1557	8.836	9.0	valid	-0.164	0.027
10	12/8/10	1604	1628	8.873	9.0	valid	-0.127	0.016
11	12/8/10	1633	1657	9.194	9.3	valid	-0.106	0.011
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		8.839	9.000		-0.161	

Standard Deviation	0.0439
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0338

Absolute Difference = 0.2

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 1 Stack		

Run Number		1	2	3	4
Run Date		12/8/10	12/8/10	12/8/10	12/8/10
Run Start Time	hh:mm	934	1003	1154	1230
Run Stop Time	hh:mm	958	1027	1218	1254
Carbon Dioxide Percentage	% CO_2	8.624	8.854	8.710	8.695
CO2 Emission Rate lb/hr	CO2 lb/hr	48,429	50,024	49,071	48,354
Oxygen Percentage	% O_2	10.905	10.969	10.829	10.974
Dry Standard Stack Flow Rate	DSCFM	81,958	82,459	82,225	81,163
Metric Tons of CO2/hr	CO2 MT/hr	21.963	22.687	22.255	21.929

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 1 Stack		

Run Number		5	6	7	8
Run Date		12/8/10	12/8/10	12/8/10	12/8/10
Run Start Time	hh:mm	1300	1330	1417	1504
Run Stop Time	hh:mm	1324	1354	1441	1528
Carbon Dioxide Percentage	% CO_2	8.802	8.913	8.925	8.601
CO2 Emission Rate lb/hr	CO2 lb/hr	48,228	49,279	47,876	45,704
Oxygen Percentage	% O_2	10.765	10.621	10.655	10.888
Dry Standard Stack Flow Rate	DSCFM	79,968	80,692	78,290	77,554
Metric Tons of CO2/hr	CO2 MT/hr	21.872	22.349	21.713	20.728

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 1 Stack		

Run Number		9	10	11	
Run Date		12/8/10	12/8/10	12/8/10	
Run Start Time	hh:mm	1533	1604	1633	
Run Stop Time	hh:mm	1557	1628	1657	
Carbon Dioxide Percentage	% CO_2	8.836	8.873	9.194	
CO2 Emission Rate lb/hr	CO2 lb/hr	48,619	47,809	50,548	
Oxygen Percentage	% O_2	10.737	10.844	10.636	
Dry Standard Stack Flow Rate	DSCFM	80,305	78,638	80,241	
Metric Tons of CO2/hr	CO2 MT/hr	22.049	21.682	22.924	

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	Lee County RRF	Operator:	CMW
Test Location:	Unit 2 Stack		
Analyzer:	NA		
Serial Number:	NA		
App. Standard:	NA		
Parameter Units:	MT/hr		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/8/10	934	958	21.008	29.938	invalid		
2	12/8/10	1003	1027	20.780	30.393	invalid		
3	12/8/10	1154	1218	20.336	21.787	valid	-1.451	2
4	12/8/10	1230	1254	20.287	21.627	valid	-1.340	2
5	12/8/10	1300	1324	20.821	22.330	valid	-1.509	2
6	12/8/10	1330	1354	21.478	21.494	valid	-0.016	0
7	12/8/10	1417	1441	19.626	21.803	valid	-2.177	5
8	12/8/10	1504	1528	20.160	21.287	valid	-1.127	1
9	12/8/10	1533	1557	20.384	20.532	valid	-0.148	0
10	12/8/10	1604	1628	20.869	20.224	valid	0.645	0
11	12/8/10	1633	1657	22.570	21.737	valid	0.833	0.694
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		20.726	21.425		-0.699	

Standard Deviation	1.0561
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.8118

Relative Accuracy % of Reference Method: 7.3

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	Lee County RRF	Operator:	CMW
Test Location:	*Unit 2 Stack*		
Analyzer:	ZRH1GMF1		
Serial Number:	N2L1451T-CO2		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/8/10	934	958	8.795	8.80	valid	-0.005	0.000
2	12/8/10	1003	1027	8.907	9.00	valid	-0.093	0.009
3	12/8/10	1154	1218	8.895	8.90	valid	-0.005	0.000
4	12/8/10	1230	1254	8.896	8.90	valid	-0.004	0.000
5	12/8/10	1300	1324	9.048	9.20	valid	-0.152	0.023
6	12/8/10	1330	1354	9.099	9.00	valid	0.099	0.010
7	12/8/10	1417	1441	8.137	9.10	VOID		
8	12/8/10	1504	1528	8.874	9.00	valid	-0.126	0.016
9	12/8/10	1533	1557	8.850	8.80	valid	0.050	0.002
10	12/8/10	1604	1628	8.802	8.70	valid	0.102	0.010
11	12/8/10	1633	1657	9.041	9.40	VOID		
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		8.907	8.922		-0.015	

Standard Deviation	0.0925
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0711
Absolute Difference =	0.0

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 2 Stack		

Run Number		1	2	3	4
Run Date		*12/8/10*	*12/8/10*	*12/8/10*	*12/8/10*
Run Start Time	hh:mm	934	1003	1154	1230
Run Stop Time	hh:mm	958	1027	1218	1254
Carbon Dioxide Percentage	% CO_2	8.795	8.907	8.895	8.896
CO2 Emission Rate lb/hr	CO2 lb/hr	47,372	46,860	45,859	45,748
Oxygen Percentage	% O_2	11.108	10.904	10.848	10.837
Dry Standard Stack Flow Rate	DSCFM	78,611	76,783	75,244	75,053
Metric Tons of CO2/hr	CO2 MT/hr	21.008	20.780	20.386	20.287

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 2 Stack		

Run Number		5	6	7	8
Run Date		12/8/10	12/8/10	12/8/10	12/8/10
Run Start Time	hh:mm	1300	1330	1417	1504
Run Stop Time	hh:mm	1324	1354	1441	1528
Carbon Dioxide Percentage	% CO_2	9.048	9.099	8.137	8.874
CO2 Emission Rate lb/hr	CO2 lb/hr	45,910	47,358	43,274	44,453
Oxygen Percentage	% O_2	10.561	10.696	10.778	10.808
Dry Standard Stack Flow Rate	DSCFM	74055	75962	77618	73110
Metric Tons of CO2/hr	CO2 MT/hr	20.821	21.478	19.626	20.160

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	Lee County RRF	**Project #**	10748
Sampling Location	Unit 2 Stack		

Run Number		9	10	11	
Run Date		12/8/10	12/8/10	12/8/10	
Run Start Time	hh:mm	1533	1604	1633	
Run Stop Time	hh:mm	1557	1628	1657	
Carbon Dioxide Percentage	% CO_2	8.850	8.802	9.041	
CO2 Emission Rate lb/hr	CO2 lb/hr	44,948	46,016	49,766	
Oxygen Percentage	% O_2	10.995	11.255	10.752	
Dry Standard Stack Flow Rate	DSCFM	74124	76300	80337	
Metric Tons of CO2/hr	CO2 MT/hr	20.384	20.869	22.570	

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	Lee County RRF	Operator:	CMW
Test Location:	Unit 3 Stack		
Analyzer:	NA		
Serial Number:	NA		
App. Standard:	NA		
Parameter Units:	MT/hr		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/9/10	1434	1458	23.817	24.674	valid	-0.857	1
2	12/9/10	1502	1526	23.957	24.638	valid	-0.681	0
3	12/9/10	1530	1554	23.339	24.088	valid	-0.749	1
4	12/9/10	1607	1631	24.028	24.440	valid	-0.412	0
5	12/9/10	1635	1659	24.324	25.579	valid	-1.255	2
6	12/9/10	1702	1726	23.988	25.420	valid	-1.432	2
7	12/9/10	1730	1754	24.722	25.459	valid	-0.737	1
8	12/9/10	1757	1821	23.847	25.350	valid	-1.503	2
9	12/9/10	1824	1848	23.349	25.243	valid	-1.894	4
10	12/9/10	1852	1916	22.923	24.887	void		
11						invalid		
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		23.930	24.988		-1.058	

Standard Deviation	0.4840
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.3720

Relative Accuracy % of Reference Method: 6.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects	Project #:	10748
Facility:	LeeCounty RRF	Operator:	CMW
Test Location:	Unit 3 Stack		
Analyzer:	ZRH1GMF1		
Serial Number:	N2L1462T		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	12/9/10	1434	1458	12.195	12.15	valid	0.045	0.002
2	12/9/10	1502	1526	12.063	12.00	valid	0.063	0.004
3	12/9/10	1530	1554	12.008	11.89	valid	0.118	0.014
4	12/9/10	1607	1631	12.126	12.04	valid	0.086	0.007
5	12/9/10	1635	1659	12.315	12.21	valid	0.105	0.011
6	12/9/10	1702	1726	12.271	12.21	void		
7	12/9/10	1730	1754	12.114	12.03	valid	0.084	0.007
8	12/9/10	1757	1821	11.862	11.80	valid	0.062	0.004
9	12/9/10	1824	1848	12.060	11.99	valid	0.070	0.005
10	12/9/10	1852	1916	12.070	12.03	valid	0.040	0.002
11						invalid		
12						invalid		
13						invalid		
14						invalid		
15						invalid		
		Averages:		12.090	12.016		0.075	

Standard Deviation	0.0260
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0200
Absolute Difference =	0.1

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	LeeCounty RRF	**Project #**	10748
Sampling Location	Unit 3 Stack		

Run Number		1	2	3	4
Run Date		12/9/10	12/9/10	12/9/10	12/9/10
Run Start Time	hh:mm	1434	1502	1530	1607
Run Stop Time	hh:mm	1458	1526	1554	1631
Carbon Dioxide Percentage	% CO_2	12.195	12.063	12.008	12.126
CO2 Emission Rate lb/hr	CO2 lb/hr	52,516	52,825	51,462	52,981
Oxygen Percentage	% O_2	6.789	6.950	7.145	6.945
Dry Standard Stack Flow Rate	DSCFM	62,850	63,912	62,548	63,767
Metric Tons of CO2/hr	CO2 MT/hr	23.817	23.957	23.339	24.028

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	LeeCounty RRF	**Project #**	10748
Sampling Location	Unit 3 Stack		

Run Number		5	6	7	8
Run Date		12/9/10	12/9/10	12/9/10	12/9/10
Run Start Time	hh:mm	1635	1702	1730	1757
Run Stop Time	hh:mm	1659	1726	1754	1821
Carbon Dioxide Percentage	% CO_2	12.315	12.271	12.114	11.862
CO2 Emission Rate lb/hr	CO2 lb/hr	53,634	52,894	54,513	52,582
Oxygen Percentage	% O_2	6.839	6.852	7.015	7.121
Dry Standard Stack Flow Rate	DSCFM	63,562	62,910	65,676	64,695
Metric Tons of CO2/hr	CO2 MT/hr	24.324	23.988	24.722	23.847

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects	**Operator**	CMW
Plant Name	LeeCounty RRF	**Project #**	10748
Sampling Location	Unit 3 Stack		

Run Number		9	10		
Run Date		12/9/10	12/9/10		
Run Start Time	hh:mm	1824	1852		
Run Stop Time	hh:mm	1848	1916		
Carbon Dioxide Percentage	% CO_2	12.060	12.070		
CO2 Emission Rate lb/hr	CO2 lb/hr	51,484	50,545		
Oxygen Percentage	% O_2	6.949	6.994		
Dry Standard Stack Flow Rate	DSCFM	62,304	61,117		
Metric Tons of CO2/hr	CO2 MT/hr	23.349	22.923		

APPENDIX B

Reference Method Field Data

O_2 and CO_2

Calibration Error Test, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outle

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2-S1			CC7638	CC252375
CO2-S1			CC7638	CC252375
O2-S2			CC7638	CC252375
CO2-S2			CC7638	CC252375

Date/Time 12-08-2010 08:21:07 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Avg	0.085	0.011	0.043	-0.003
Zero Error%	0.4%	0.1%	0.2%	0.0%
Low Ref Cyl				
Low Avg				
Low Error%				
Mid Ref Cyl	10.010	8.941	10.010	8.941
Mid Avg	10.096	8.974	10.083	9.000
Mid Error%	0.4%	0.2%	0.4%	0.3%
High Ref Cyl	20.900	18.050	20.900	18.050
High Avg	20.996	17.970	21.029	18.236
High Error%	0.5%	0.4%	0.6%	1.0%

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outle

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 08:26:07 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.110	0.067	0.055	-0.002
Zero Bias%	0.1%	0.3%	0.1%	0.0%
Zero Drift%				
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	10.054	8.939	9.960	8.820
Span Bias%	0.2%	0.2%	0.6%	1.0%
Span Drift%				

System Bias Check End

Test Run 1 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 09:35:02	11.910	7.673	10.506	8.789
12-08-2010 09:36:01	11.518	8.052	10.879	8.712
12-08-2010 09:37:01	10.260	9.338	10.956	8.630
12-08-2010 09:38:01	9.659	9.642	10.708	8.682
12-08-2010 09:39:01	11.046	8.304	10.784	8.711
12-08-2010 09:40:01	11.545	8.040	10.942	8.656
12-08-2010 09:41:01	11.126	8.263	11.102	8.613
12-08-2010 09:42:01	11.514	8.029	11.169	8.611
12-08-2010 09:43:01	10.412	9.051	11.215	8.591
12-08-2010 09:44:01	10.405	8.854	11.430	8.552
12-08-2010 09:45:01	11.007	8.365	11.115	8.572
12-08-2010 09:46:01	10.871	8.490	10.489	8.732
12-08-2010 09:47:01	10.861	8.547	10.767	8.768
12-08-2010 09:48:01	9.515	9.915	11.139	8.641
12-08-2010 09:49:01	9.525	9.682	10.896	8.632
12-08-2010 09:50:01	10.822	8.460	10.874	8.710
12-08-2010 09:51:01	11.275	8.144	10.341	8.767
12-08-2010 09:52:01	11.676	7.799	11.371	8.721
12-08-2010 09:53:01	11.572	7.862	11.715	8.455
12-08-2010 09:54:01	11.304	8.105	11.433	8.550
12-08-2010 09:55:01	11.221	8.188	11.473	8.549
12-08-2010 09:56:01	10.766	8.668	11.335	8.568
12-08-2010 09:57:01	10.334	9.045	10.787	8.702
12-08-2010 09:58:01	10.045	9.330	10.628	8.759
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 09:58:02	10.841	8.577	11.002	8.653

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 1 End

Final System Bias Check, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 10:02:14 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.107	0.097	0.075	-0.001
Zero Bias%	0.1%	0.5%	0.2%	0.0%
Zero Drift%	0.0%	0.2%	0.1%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.867	8.838	9.881	8.774
Span Bias%	1.1%	0.8%	1.0%	1.3%
Span Drift%	-0.9%	-0.6%	-0.4%	-0.3%
Ini Zero Avg	0.110	0.067	0.055	-0.002
Ini Span Avg	10.054	8.939	9.960	8.820
Run Avg	10.841	8.577	11.002	8.653
Co	0.108	0.082	0.065	-0.002
Cm	9.961	8.889	9.921	8.797
Correct Avg	10.905	8.624	11.108	8.795

System Bias Check End

Test Run 2 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 10:04:02	10.721	8.779	11.137	8.660
12-08-2010 10:05:02	10.657	8.853	10.985	8.680
12-08-2010 10:06:02	10.635	8.826	10.888	8.718
12-08-2010 10:07:02	10.978	8.566	10.722	8.745
12-08-2010 10:08:02	10.825	8.739	10.641	8.775
12-08-2010 10:09:02	10.343	9.183	10.771	8.783
12-08-2010 10:10:02	11.188	8.311	10.707	8.763
12-08-2010 10:11:02	11.528	8.089	10.894	8.762
12-08-2010 10:12:02	10.867	8.715	10.863	8.694
12-08-2010 10:13:02	10.371	9.178	10.808	8.727
12-08-2010 10:14:01	10.875	8.688	10.985	8.713
12-08-2010 10:15:01	11.081	8.516	10.716	8.690
12-08-2010 10:16:01	10.808	8.744	10.031	8.992
12-08-2010 10:17:01	10.542	8.982	10.440	8.874
12-08-2010 10:18:01	10.596	8.917	10.976	8.728
12-08-2010 10:19:01	11.226	8.305	10.866	8.649
12-08-2010 10:20:01	11.331	8.192	10.804	8.734
12-08-2010 10:21:01	11.346	8.196	10.930	8.681
12-08-2010 10:22:01	11.198	8.329	10.894	8.673
12-08-2010 10:23:01	10.613	9.038	11.020	8.648
12-08-2010 10:24:01	9.318	10.138	10.563	8.731
12-08-2010 10:25:01	9.916	9.468	10.404	8.824
12-08-2010 10:26:01	10.805	8.668	10.732	8.759
12-08-2010 10:27:01	11.276	8.224	10.458	8.731
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 10:27:01	10.793	8.735	10.760	8.739

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 10:36:23 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.000	0.000	0.000	0.000
Zero Bias%	0.4%	0.1%	0.2%	0.0%
Zero Drift%	-0.5%	-0.5%	-0.4%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.842	8.802	9.880	8.772
Span Bias%	1.2%	1.0%	1.0%	1.3%
Span Drift%	-0.1%	-0.2%	0.0%	0.0%
Ini Zero Avg	0.107	0.097	0.075	-0.001
Ini Span Avg	9.867	8.838	9.881	8.774
Run Avg	10.793	8.735	10.760	8.739
Co	0.053	0.048	0.037	-0.001
Cm	9.855	8.820	9.881	8.773
Correct Avg	10.969	8.854	10.904	8.907

System Bias Check End

Test Run 3 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 11:55:01	10.114	9.042	10.559	8.801
12-08-2010 11:56:01	11.018	8.071	10.482	8.708
12-08-2010 11:57:01	11.553	7.700	10.429	8.800
12-08-2010 11:58:01	11.146	8.112	10.408	8.752
12-08-2010 11:59:01	10.226	8.906	10.431	8.796
12-08-2010 12:00:01	10.345	8.765	10.955	8.683
12-08-2010 12:01:01	10.941	8.234	11.194	8.553
12-08-2010 12:02:01	10.865	8.323	10.669	8.632
12-08-2010 12:03:01	10.478	8.631	10.867	8.691
12-08-2010 12:04:01	10.974	8.158	10.889	8.614
12-08-2010 12:05:01	10.757	8.372	10.685	8.663
12-08-2010 12:06:01	10.667	8.487	10.548	8.708
12-08-2010 12:07:01	10.571	8.577	10.495	8.724
12-08-2010 12:08:01	10.266	8:871	9.928	8.826
12-08-2010 12:09:01	10.198	8.952	10.383	8.875
12-08-2010 12:10:01	10.318	8.856	11.034	8.640
12-08-2010 12:11:01	10.322	8.856	11.118	8.594
12-08-2010 12:12:01	10.497	8.664	11.114	8.564
12-08-2010 12:13:01	11.023	8.179	11.041	8.575
12-08-2010 12:14:01	10.845	8.454	10.162	8.779
12-08-2010 12:15:01	9.891	9.247	10.649	8.791
12-08-2010 12:16:01	10.260	8.863	10.720	8.686
12-08-2010 12:17:01	10.874	8.290	10.586	8.716
12-08-2010 12:18:01	10.851	8.342	11.017	8.671
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 12:18:01	10.625	8.540	10.682	8.702

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 3 End

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Final System Bias Check, Run 3 STRATA Version 3.2

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 12:22:00 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.083	-0.028	0.073	-0.003
Zero Bias%	0.0%	0.2%	0.1%	0.0%
Zero Drift%	0.4%	-0.2%	0.3%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.807	8.730	9.838	8.721
Span Bias%	1.4%	1.4%	1.2%	1.5%
Span Drift%	-0.2%	-0.4%	-0.2%	-0.3%
Ini Zero Avg	0.000	0.000	0.000	0.000
Ini Span Avg	9.842	8.802	9.880	8.772
Run Avg	10.625	8.540	10.682	8.702
Co	0.041	-0.014	0.036	-0.001
Cm	9.825	8.766	9.859	8.747
Correct Avg	10.829	8.710	10.848	8.895

System Bias Check End

Test Run 4 STRATA Version 3.2

	O2-S1 %	CO2-S1 %	O2-S2 %	CO2-S2 %
Begin calculating run averages				
12-08-2010 12:31:05	10.212	8.887	9.711	8.889
12-08-2010 12:32:05	10.990	8.186	9.971	8.967
12-08-2010 12:33:05	11.158	8.097	10.580	8.754
12-08-2010 12:34:04	10.633	8.605	10.440	8.702
12-08-2010 12:35:04	10.552	8.674	10.318	8.761
12-08-2010 12:36:04	11.006	8.206	10.444	8.765
12-08-2010 12:37:04	11.353	7.960	10.675	8.663
12-08-2010 12:38:04	11.020	8.263	10.463	8.689
12-08-2010 12:39:04	10.972	8.318	10.614	8.717
12-08-2010 12:40:04	11.121	8.191	10.683	8.635
12-08-2010 12:41:04	11.174	8.166	10.225	8.737
12-08-2010 12:42:04	10.836	8.460	10.532	8.764
12-08-2010 12:43:04	10.928	8.365	11.078	8.590
12-08-2010 12:44:04	10.925	8.365	11.360	8.485
12-08-2010 12:45:04	10.428	8.855	11.066	8.526
12-08-2010 12:46:04	10.157	9.014	11.001	8.586
12-08-2010 12:47:04	10.588	8.668	11.049	8.568
12-08-2010 12:48:04	10.270	9.002	11.109	8.576
12-08-2010 12:49:04	9.953	9.244	11.205	8.557
12-08-2010 12:50:04	10.573	8.659	10.979	8.561
12-08-2010 12:51:04	10.582	8.647	10.626	8.666
12-08-2010 12:52:04	10.886	8.375	10.609	8.711
12-08-2010 12:53:04	10.678	8.594	10.484	8.713
12-08-2010 12:54:04	10.571	8.732	10.149	8.785
Run Averages	O2-S1 %	CO2-S1 %	O2-S2 %	CO2-S2 %
12-08-2010 12:54:04	10.732	8.522	10.640	8.682

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time	12-08-2010		12:58:45		PASSED
Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2	
Units	%	%	%	%	
Zero Ref Cyl	0.000	0.000	0.000	0.000	
Zero Cal	0.085	0.011	0.043	-0.003	
Zero Avg	0.082	0.030	0.071	-0.003	
Zero Bias%	0.0%	0.1%	0.1%	0.0%	
Zero Drift%	0.0%	0.3%	0.0%	0.0%	
Span Ref Cyl	10.010	8.941	10.010	8.941	
Span Cal	10.096	8.974	10.083	9.000	
Span Avg	9.785	8.796	9.830	8.730	
Span Bias%	1.5%	1.0%	1.2%	1.5%	
Span Drift%	-0.1%	0.4%	0.0%	0.0%	
Ini Zero Avg	0.083	-0.028	0.073	-0.003	
Ini Span Avg	9.807	8.730	9.838	8.721	
Run Avg	10.732	8.522	10.640	8.682	
Co	0.082	0.001	0.072	-0.003	
Cm	9.796	8.763	9.834	8.726	
Correct Avg	10.974	8.695	10.837	8.896	

System Bias Check End

Test Run 5 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 13:01:02	10.696	8.591	8.966	9.618
12-08-2010 13:02:01	10.276	8.957	9.105	9.616
12-08-2010 13:03:01	10.375	8.843	9.299	9.485
12-08-2010 13:04:01	10.658	8.586	9.687	9.185
12-08-2010 13:05:01	10.486	8.779	10.117	8.901
12-08-2010 13:06:01	10.264	8.919	10.614	8.751
12-08-2010 13:07:01	11.110	8.127	10.910	8.634
12-08-2010 13:08:01	11.073	8.197	10.800	8.617
12-08-2010 13:09:01	10.258	8.980	10.667	8.657
12-08-2010 13:10:01	10.479	8.707	10.008	8.800
12-08-2010 13:11:01	10.431	8.807	10.318	8.802
12-08-2010 13:12:01	9.698	9.435	10.516	8.749
12-08-2010 13:13:01	10.503	8.607	10.718	8.664
12-08-2010 13:14:01	10.819	8.467	10.624	8.691
12-08-2010 13:15:01	9.579	9.529	10.625	8.696
12-08-2010 13:16:01	10.404	8.655	10.480	8.731
12-08-2010 13:17:01	11.200	7.971	10.269	8.746
12-08-2010 13:18:01	10.994	8.276	10.767	8.742
12-08-2010 13:19:01	10.221	8.902	10.375	8.667
12-08-2010 13:20:01	10.468	8.679	10.177	8.841
12-08-2010 13:21:02	10.220	8.830	10.613	8.746
12-08-2010 13:22:02	11.032	8.130	10.970	8.626
12-08-2010 13:23:02	10.703	8.502	11.194	8.508
12-08-2010 13:24:02	10.314	8.801	10.808	8.593
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 13:24:02	10.511	8.678	10.359	8.836

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 5 End

Final System Bias Check, Run 5 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 13:28:26 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.075	0.067	0.087	-0.002
Zero Bias%	0.0%	0.3%	0.2%	0.0%
Zero Drift%	0.0%	0.2%	0.1%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.775	8.832	9.816	8.733
Span Bias%	1.5%	0.8%	1.3%	1.5%
Span Drift%	0.0%	0.2%	-0.1%	0.0%
Ini Zero Avg	0.082	0.030	0.071	-0.003
Ini Span Avg	9.785	8.796	9.830	8.730
Run Avg	10.511	8.678	10.359	8.836
Co	0.078	0.048	0.079	-0.002
Cm	9.780	8.814	9.823	8.731
Correct Avg	10.765	8.802	10.561	9.048

System Bias Check End

Test Run 6 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 13:31:02	10.245	8.934	11.304	8.492
12-08-2010 13:32:02	10.313	8.880	11.260	8.508
12-08-2010 13:33:02	9.717	9.448	10.994	8.496
12-08-2010 13:34:02	9.822	9.248	10.743	8.632
12-08-2010 13:35:02	10.219	8.944	10.735	8.610
12-08-2010 13:36:02	10.279	8.921	10.757	8.641
12-08-2010 13:37:02	10.424	8.763	10.735	8.597
12-08-2010 13:38:02	10.790	8.418	10.685	8.626
12-08-2010 13:39:02	10.723	8.476	10.503	8.642
12-08-2010 13:40:02	10.299	8.917	10.411	8.686
12-08-2010 13:41:02	10.179	9.017	10.413	8.703
12-08-2010 13:42:02	10.264	8.949	10.124	8.710
12-08-2010 13:43:02	10.041	9.128	9.737	8.862
12-08-2010 13:44:02	10.110	9.052	9.781	8.883
12-08-2010 13:45:02	10.364	8.807	10.113	8.819
12-08-2010 13:46:02	10.463	8.647	10.368	8.717
12-08-2010 13:47:02	11.213	7.987	10.567	8.673
12-08-2010 13:48:02	11.265	7.976	10.636	8.627
12-08-2010 13:49:02	10.659	8.557	10.509	8.620
12-08-2010 13:50:02	10.152	9.053	10.534	8.670
12-08-2010 13:51:02	9.961	9.179	10.417	8.652
12-08-2010 13:52:02	10.304	8.879	10.105	8.733
12-08-2010 13:53:02	10.294	8.870	10.117	8.763
12-08-2010 13:54:02	10.665	8.559	10.202	8.717
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 13:54:02	10.365	8.817	10.490	8.670

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 6 End

Final System Bias Check, Run 6 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 14:01:17 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.072	0.066	0.079	-0.001
Zero Bias%	0.1%	0.3%	0.2%	0.0%
Zero Drift%	0.0%	0.0%	0.0%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.771	8.857	9.829	8.307
Span Bias%	1.6%	0.6%	1.2%	3.8%
Span Drift%	0.0%	0.1%	0.1%	-2.4%
Ini Zero Avg	0.075	0.067	0.087	-0.002
Ini Span Avg	9.775	8.832	9.816	8.733
Run Avg	10.365	8.817	10.490	8.670
Co	0.073	0.066	0.083	-0.002
Cm	9.773	8.845	9.822	8.520
Correct Avg	10.621	8.913	10.696	9.099

System Bias Check End

Test Run 7 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 14:18:05	10.880	8.290	10.120	7.172
12-08-2010 14:19:05	11.142	8.115	10.278	7.280
12-08-2010 14:20:05	10.646	8.579	10.477	7.165
12-08-2010 14:21:05	10.532	8.704	10.582	7.073
12-08-2010 14:22:05	10.660	8.610	10.590	6.974
12-08-2010 14:23:05	10.735	8.552	10.590	7.002
12-08-2010 14:24:05	10.370	8.897	10.682	6.997
12-08-2010 14:25:05	10.296	8.978	10.391	6.879
12-08-2010 14:26:05	10.345	8.932	9.999	7.221
12-08-2010 14:27:05	10.160	9.105	10.065	7.343
12-08-2010 14:28:05	10.190	9.096	10.504	7.246
12-08-2010 14:29:05	9.718	9.495	10.656	6.975
12-08-2010 14:30:05	9.915	9.314	10.786	6.893
12-08-2010 14:31:05	10.720	8.528	11.255	7.622
12-08-2010 14:32:05	11.109	8.220	11.096	8.293
12-08-2010 14:33:05	10.458	8.845	10.869	8.344
12-08-2010 14:34:05	10.093	9.291	9.610	8.647
12-08-2010 14:35:04	9.810	9.463	9.847	8.737
12-08-2010 14:36:04	10.821	8.478	10.814	8.518
12-08-2010 14:37:04	10.972	8.380	11.193	8.328
12-08-2010 14:38:04	10.850	8.510	10.849	8.413
12-08-2010 14:39:04	10.260	9.048	11.078	8.370
12-08-2010 14:40:04	10.612	8.719	10.916	8.392
12-08-2010 14:41:04	10.655	8.686	11.003	8.419
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 14:41:04	10.499	8.784	10.594	7.678

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 7 End

Final System Bias Check, Run 7 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 14:46:45 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.043	-0.003
Zero Avg	0.083	-0.055	0.095	-0.006
Zero Bias%	0.0%	0.4%	0.2%	0.0%
Zero Drift%	0.1%	-0.7%	0.1%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	10.083	9.000
Span Avg	9.964	8.743	9.861	8.568
Span Bias%	0.6%	1.3%	1.1%	2.4%
Span Drift%	0.9%	-0.6%	0.2%	1.4%
Ini Zero Avg	0.072	0.066	0.079	-0.001
Ini Span Avg	9.771	8.857	9.829	8.307
Run Avg	10.499	8.784	10.594	7.678
Co	0.077	0.005	0.087	-0.004
Cm	9.868	8.800	9.845	8.437
Correct Avg	10.655	8.925	10.778	8.137

System Bias Check End

Calibration Error Test, Run 8 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2-S2			CC7638	CC252375
CO2-S2			CC7638	CC252375

Date/Time 12-08-2010 14:58:56 PASSED

Analyte	O2-S2	CO2-S2
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Avg	0.050	-0.005
Zero Error%	0.2%	0.0%
Low Ref Cyl		
Low Avg		
Low Error%		
Mid Ref Cyl	10.010	8.941
Mid Avg	9.971	9.004
Mid Error%	0.2%	0.3%
High Ref Cyl	20.900	18.050
High Avg	20.835	18.032
High Error%	0.3%	0.1%

Calibration Error Test End

Recal Unit #2

Initial System Bias Check, Run 8 STRATA Version 3.2

Operator:	Chris Wrenn
Plant Name:	Lee County RRF
Location:	Units 1 & 2 Outlet

Reference Cylinder Numbers		
	Zero	Span
O2-S2		CC7638
CO2-S2		CC7638

Date/Time	12-08-2010		15:03:43	PASSED
Analyte	O2-S2	CO2-S2		
Units	%	%		
Zero Ref Cyl	0.000	0.000		
Zero Cal	0.050	-0.005		
Zero Avg	0.077	-0.002		
Zero Bias%	0.1%	0.0%		
Zero Drift%				
Span Ref Cyl	10.010	8.941		
Span Cal	9.971	9.004		
Span Avg	9.881	8.647		
Span Bias%	0.4%	2.0%		
Span Drift%				

System Bias Check End

Test Run 8 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 15:05:01	10.138	9.061	10.279	8.700
12-08-2010 15:06:01	10.758	8.465	10.546	8.629
12-08-2010 15:07:01	10.829	8.393	10.463	8.612
12-08-2010 15:08:01	10.995	8.250	10.627	8.618
12-08-2010 15:09:01	10.844	8.411	10.686	8.552
12-08-2010 15:10:01	10.077	9.139	10.695	8.563
12-08-2010 15:11:01	10.237	8.949	10.917	8.535
12-08-2010 15:12:01	10.861	8.348	10.496	8.524
12-08-2010 15:13:01	10.803	8.420	10.514	8.626
12-08-2010 15:14:01	10.391	8.740	10.805	8.533
12-08-2010 15:15:01	11.068	8.117	11.002	8.500
12-08-2010 15:16:01	11.486	7.887	10.649	8.486
12-08-2010 15:17:01	9.789	9.438	10.365	8.650
12-08-2010 15:18:01	9.975	9.060	10.719	8.554
12-08-2010 15:19:01	11.245	7.919	11.105	8.489
12-08-2010 15:20:01	12.178	7.148	10.350	8.540
12-08-2010 15:21:01	11.898	7.508	10.718	8.646
12-08-2010 15:22:01	11.050	8.190	11.246	8.415
12-08-2010 15:23:01	11.243	8.012	10.149	8.603
12-08-2010 15:24:01	10.701	8.596	10.559	8.669
12-08-2010 15:25:01	10.151	9.041	10.855	8.508
12-08-2010 15:26:01	10.798	8.418	10.722	8.561
12-08-2010 15:27:01	11.317	7.985	11.046	8.508
12-08-2010 15:28:01	11.170	8.154	10.499	8.563
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 15:28:01	10.833	8.402	10.667	8.566

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 8 End

Final System Bias Check, Run 8 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 15:32:06 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.050	-0.005
Zero Avg	0.085	-0.056	0.080	-0.006
Zero Bias%	0.0%	0.4%	0.1%	0.0%
Zero Drift%	0.0%	0.0%	0.0%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	9.971	9.004
Span Avg	9.970	8.730	9.889	8.615
Span Bias%	0.6%	1.4%	0.4%	2.2%
Span Drift%	0.0%	-0.1%	0.0%	-0.2%
Ini Zero Avg	0.083	-0.055	0.077	-0.002
Ini Span Avg	9.964	8.743	9.881	8.647
Run Avg	10.833	8.402	10.667	8.566
Co	0.084	-0.055	0.078	-0.004
Cm	9.967	8.736	9.885	8.631
Correct Avg	10.888	8.601	10.808	8.874

System Bias Check End

Test Run 9 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 15:34:02	10.392	8.848	10.986	8.480
12-08-2010 15:35:02	10.017	9.192	11.312	8.447
12-08-2010 15:36:01	10.012	9.225	11.343	8.359
12-08-2010 15:37:01	10.387	8.879	10.680	8.487
12-08-2010 15:38:01	11.002	8.290	11.036	8.537
12-08-2010 15:39:01	11.036	8.321	11.290	8.386
12-08-2010 15:40:01	10.494	8.793	10.749	8.448
12-08-2010 15:41:01	10.514	8.788	9.635	8.782
12-08-2010 15:42:01	10.620	8.712	10.643	8.703
12-08-2010 15:43:01	10.655	8.684	11.451	8.392
12-08-2010 15:44:01	10.257	9.037	11.256	8.379
12-08-2010 15:45:01	10.442	8.869	10.956	8.463
12-08-2010 15:46:01	10.708	8.618	10.839	8.500
12-08-2010 15:47:01	11.136	8.201	10.798	8.558
12-08-2010 15:48:01	11.031	8.297	10.878	8.482
12-08-2010 15:49:01	11.050	8.311	10.475	8.610
12-08-2010 15:50:01	10.435	8.926	10.236	8.690
12-08-2010 15:51:01	10.435	8.876	10.473	8.652
12-08-2010 15:52:01	10.979	8.339	10.764	8.594
12-08-2010 15:53:01	10.852	8.537	11.181	8.472
12-08-2010 15:54:01	10.613	8.703	10.738	8.505
12-08-2010 15:55:01	10.811	8.521	10.802	8.579
12-08-2010 15:56:01	11.384	8.009	10.966	8.488
12-08-2010 15:57:01	11.209	8.231	10.933	8.517
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 15:57:01	10.687	8.633	10.851	8.521

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 9 End

Final System Bias Check, Run 9 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time	12-08-2010		16:01:13		PASSED
Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2	
Units	%	%	%	%	
Zero Ref Cyl	0.000	0.000	0.000	0.000	
Zero Cal	0.085	0.011	0.050	-0.005	
Zero Avg	0.087	-0.050	0.076	-0.007	
Zero Bias%	0.0%	0.3%	0.1%	0.0%	
Zero Drift%	0.0%	0.0%	0.0%	0.0%	
Span Ref Cyl	10.010	8.941	10.010	8.941	
Span Cal	10.096	8.974	9.971	9.004	
Span Avg	9.968	8.743	9.882	8.603	
Span Bias%	0.6%	1.3%	0.4%	2.2%	
Span Drift%	0.0%	0.1%	0.0%	-0.1%	
Ini Zero Avg	0.085	-0.056	0.080	-0.006	
Ini Span Avg	9.970	8.730	9.889	8.615	
Run Avg	10.687	8.633	10.851	8.521	
Co	0.086	-0.053	0.078	-0.006	
Cm	9.969	8.736	9.885	8.609	
Correct Avg	10.737	8.836	10.995	8.850	

System Bias Check End

Test Run 10 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 16:05:03	10.781	8.647	11.568	8.301
12-08-2010 16:06:03	10.793	8.600	10.368	8.535
12-08-2010 16:07:03	11.064	8.357	10.419	8.681
12-08-2010 16:08:03	10.770	8.627	11.127	8.531
12-08-2010 16:09:03	10.698	8.738	11.439	8.365
12-08-2010 16:10:03	10.515	8.897	11.271	8.389
12-08-2010 16:11:03	10.681	8.804	11.413	8.379
12-08-2010 16:12:03	10.628	8.835	10.795	8.439
12-08-2010 16:13:03	10.970	8.510	10.347	8.657
12-08-2010 16:14:03	11.191	8.324	11.148	8.536
12-08-2010 16:15:03	10.921	8.588	11.521	8.353
12-08-2010 16:16:03	10.567	8.926	11.400	8.342
12-08-2010 16:17:03	10.978	8.595	11.050	8.434
12-08-2010 16:18:02	9.964	9.513	11.163	8.461
12-08-2010 16:19:02	10.060	9.324	10.978	8.476
12-08-2010 16:20:02	10.778	8.652	11.330	8.447
12-08-2010 16:21:03	11.154	8.337	11.196	8.412
12-08-2010 16:22:03	10.766	8.692	11.161	8.495
12-08-2010 16:23:03	10.413	9.004	11.372	8.397
12-08-2010 16:24:03	11.003	8.399	11.276	8.431
12-08-2010 16:25:03	11.497	7.984	11.269	8.427
12-08-2010 16:26:03	11.354	8.107	11.162	8.422
12-08-2010 16:27:03	10.953	8.514	10.688	8.553
12-08-2010 16:28:03	10.474	8.967	10.934	8.573
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 16:28:03	10.791	8.664	11.100	8.460

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 10 End

Final System Bias Check, Run 10 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

Reference Cylinder Numbers	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 16:32:02 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.050	-0.005
Zero Avg	0.087	-0.080	0.076	-0.009
Zero Bias%	0.0%	0.5%	0.1%	0.0%
Zero Drift%	0.0%	-0.2%	0.0%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	9.971	9.004
Span Avg	9.969	8.717	9.880	8.585
Span Bias%	0.6%	1.4%	0.4%	2.3%
Span Drift%	0.0%	-0.1%	0.0%	-0.1%
Ini Zero Avg	0.087	-0.050	0.076	-0.007
Ini Span Avg	9.968	8.743	9.882	8.603
Run Avg	10.791	8.664	11.100	8.460
Co	0.087	-0.065	0.076	-0.008
Cm	9.968	8.730	9.881	8.594
Correct Avg	10.844	8.873	11.255	8.802

System Bias Check End

Test Run 11 STRATA Version 3.2

	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
Begin calculating run averages				
12-08-2010 16:34:02	10.850	8.573	11.236	8.425
12-08-2010 16:35:02	11.212	8.233	10.833	8.580
12-08-2010 16:36:02	11.364	8.135	10.931	8.591
12-08-2010 16:37:02	10.826	8.685	10.944	8.580
12-08-2010 16:38:02	10.269	9.228	11.023	8.588
12-08-2010 16:39:02	10.253	9.216	10.345	8.631
12-08-2010 16:40:02	10.158	9.302	10.226	8.837
12-08-2010 16:41:02	10.260	9.181	10.527	8.735
12-08-2010 16:42:02	10.669	8.804	10.449	8.724
12-08-2010 16:43:02	10.718	8.760	10.408	8.724
12-08-2010 16:44:02	10.689	8.806	10.126	8.790
12-08-2010 16:45:02	10.539	8.949	10.075	8.847
12-08-2010 16:46:02	10.821	8.709	10.576	8.746
12-08-2010 16:47:01	10.371	9.169	10.677	8.664
12-08-2010 16:48:01	10.284	9.249	10.853	8.644
12-08-2010 16:49:01	10.751	8.821	10.833	8.628
12-08-2010 16:50:01	10.703	8.896	10.983	8.591
12-08-2010 16:51:01	10.609	8.982	11.104	8.577
12-08-2010 16:52:01	10.770	8.870	10.825	8.564
12-08-2010 16:53:01	10.333	9.240	10.319	8.707
12-08-2010 16:54:01	10.320	9.281	10.129	8.763
12-08-2010 16:55:01	10.397	9.158	10.181	8.773
12-08-2010 16:56:01	10.473	9.086	10.252	8.760
12-08-2010 16:57:01	10.209	9.304	10.538	8.701
Run Averages	O2-S1	CO2-S1	O2-S2	CO2-S2
	%	%	%	%
12-08-2010 16:57:01	10.577	8.943	10.600	8.674

Operator: *Chris Wrenn*
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet
Test Run 11 End

Final System Bias Check, Run 11 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 1 & 2 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S1		CC7638
CO2-S1		CC7638
O2-S2		CC7638
CO2-S2		CC7638

Date/Time 12-08-2010 17:00:49 PASSED

Analyte	O2-S1	CO2-S1	O2-S2	CO2-S2
Units	%	%	%	%
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.085	0.011	0.050	-0.005
Zero Avg	0.086	-0.098	0.074	-0.003
Zero Bias%	0.0%	0.6%	0.1%	0.0%
Zero Drift%	0.0%	-0.1%	0.0%	0.0%
Span Ref Cyl	10.010	8.941	10.010	8.941
Span Cal	10.096	8.974	9.971	9.004
Span Avg	9.951	8.671	9.867	8.570
Span Bias%	0.7%	1.7%	0.5%	2.4%
Span Drift%	-0.1%	-0.3%	-0.1%	-0.1%
Ini Zero Avg	0.087	-0.080	0.076	-0.009
Ini Span Avg	9.969	8.717	9.880	8.585
Run Avg	10.577	8.943	10.600	8.674
Co	0.087	-0.089	0.075	-0.006
Cm	9.960	8.694	9.873	8.577
Correct Avg	10.636	9.194	10.752	9.041

System Bias Check End

Calibration Error Test, Run 1 STRATA Version 3.2

Operator:	Chris Wrenn
Plant Name:	Lee County RRF
Location:	Units 3 Outlet

	Reference Cylinder Numbers			
	Zero	Low-range	Mid-range	High-range
O2-S3			CC7638	CC252375
CO2-S3			CC7638	CC252375

Date/Time	12-09-2010		08:03:40	PASSED
Analyte	O2-S3	CO2-S3		
Units	%	%		
Zero Ref Cyl	0.000	0.000		
Zero Avg	0.077	0.003		
Zero Error%	0.4%	0.0%		
Low Ref Cyl				
Low Avg				
Low Error%				
Mid Ref Cyl	10.010	8.941		
Mid Avg	10.073	8.940		
Mid Error%	0.3%	0.0%		
High Ref Cyl	20.900	18.050		
High Avg	20.980	17.926		
High Error%	0.4%	0.7%		

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 08:09:02 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.077	0.003
Zero Avg	0.091	0.092
Zero Bias%	0.1%	0.5%
Zero Drift%		
Span Ref Cyl	10.010	8.941
Span Cal	10.073	8.940
Span Avg	10.030	8.942
Span Bias%	0.2%	0.0%
Span Drift%		

System Bias Check End

Calibration Error Test, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers Zero	Low-range	Mid-range	High-range
O2-S3			CC7638	CC252375
CO2-S3			CC7638	CC252375

Date/Time 12-09-2010 14:15:31 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Avg	0.073	0.003
Zero Error%	0.3%	0.0%
Low Ref Cyl		
Low Avg		
Low Error%		
Mid Ref Cyl	10.010	8.941
Mid Avg	10.039	8.964
Mid Error%	0.1%	0.1%
High Ref Cyl	20.900	18.050
High Avg	20.901	17.985
High Error%	0.0%	0.4%

Re calibration

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 14:19:34 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.077	0.175
Zero Bias%	0.0%	1.0%
Zero Drift%		
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.931	9.015
Span Bias%	0.5%	0.3%
Span Drift%		

System Bias Check End

Test Run 1 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 14:35:02	7.215	11.850
12-09-2010 14:36:02	6.997	12.054
12-09-2010 14:37:02	6.850	12.157
12-09-2010 14:38:02	6.828	12.213
12-09-2010 14:39:02	6.540	12.491
12-09-2010 14:40:01	6.554	12.499
12-09-2010 14:41:01	6.032	12.903
12-09-2010 14:42:01	6.786	12.219
12-09-2010 14:43:01	6.973	12.072
12-09-2010 14:44:01	7.271	11.798
12-09-2010 14:45:01	7.188	11.924
12-09-2010 14:46:01	7.039	12.025
12-09-2010 14:47:01	7.101	11.992
12-09-2010 14:48:01	6.886	12.170
12-09-2010 14:49:01	6.319	12.742
12-09-2010 14:50:01	6.299	12.698
12-09-2010 14:51:01	6.581	12.455
12-09-2010 14:52:01	6.736	12.335
12-09-2010 14:53:01	6.176	12.843
12-09-2010 14:54:01	6.451	12.535
12-09-2010 14:55:01	6.938	12.164
12-09-2010 14:56:01	6.872	12.213
12-09-2010 14:57:01	6.833	12.259
12-09-2010 14:58:01	6.638	12.406
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 14:58:01	6.755	12.292

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 1 End

Final System Bias Check, Run 1 STRATA Version 3.2

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 15:00:53 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.080	0.330
Zero Bias%	0.0%	1.8%
Zero Drift%	0.0%	0.9%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.913	9.144
Span Bias%	0.6%	1.0%
Span Drift%	-0.1%	0.7%
Ini Zero Avg	0.077	0.175
Ini Span Avg	9.931	9.015
Run Avg	6.755	12.292
Co	0.078	0.252
Cm	9.922	9.079
Correct Avg	6.789	12.195

System Bias Check End

Test Run 2 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 15:03:02	7.046	11.997
12-09-2010 15:04:02	7.196	11.894
12-09-2010 15:05:02	7.327	11.845
12-09-2010 15:06:02	7.384	11.765
12-09-2010 15:07:02	6.797	12.337
12-09-2010 15:08:02	6.588	12.382
12-09-2010 15:09:02	7.221	11.877
12-09-2010 15:10:02	6.876	12.243
12-09-2010 15:11:02	6.919	12.163
12-09-2010 15:12:02	6.516	12.546
12-09-2010 15:13:02	6.814	12.222
12-09-2010 15:14:01	7.446	11.751
12-09-2010 15:15:01	7.719	11.565
12-09-2010 15:16:01	7.405	11.799
12-09-2010 15:17:01	7.135	12.121
12-09-2010 15:18:01	6.412	12.718
12-09-2010 15:19:01	6.428	12.724
12-09-2010 15:20:01	6.646	12.510
12-09-2010 15:21:01	6.842	12.370
12-09-2010 15:22:01	6.652	12.563
12-09-2010 15:23:01	6.767	12.509
12-09-2010 15:24:01	6.592	12.654
12-09-2010 15:25:01	6.426	12.823
12-09-2010 15:26:01	6.635	12.636
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 15:26:01	6.908	12.251

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 15:28:53 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.078	0.391
Zero Bias%	0.0%	2.1%
Zero Drift%	0.0%	0.3%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.913	9.202
Span Bias%	0.6%	1.3%
Span Drift%	0.0%	0.3%
Ini Zero Avg	0.080	0.330
Ini Span Avg	9.913	9.144
Run Avg	6.908	12.251
Co	0.079	0.360
Cm	9.913	9.173
Correct Avg	6.950	12.063

System Bias Check End

Test Run 3 STRATA Version 3.2

	O2-S3 %	CO2-S3 %
Begin calculating run averages		
12-09-2010 15:31:01	7.150	12.148
12-09-2010 15:32:01	7.161	12.148
12-09-2010 15:33:01	7.292	12.105
12-09-2010 15:34:01	6.438	12.872
12-09-2010 15:35:01	6.741	12.608
12-09-2010 15:36:01	6.948	12.395
12-09-2010 15:37:01	7.102	12.256
12-09-2010 15:38:01	6.916	12.409
12-09-2010 15:39:01	6.932	12.333
12-09-2010 15:40:01	7.353	11.954
12-09-2010 15:41:01	7.562	11.771
12-09-2010 15:42:01	8.086	11.356
12-09-2010 15:43:01	8.149	11.358
12-09-2010 15:44:01	6.997	12.335
12-09-2010 15:45:01	6.709	12.550
12-09-2010 15:46:01	6.429	12.811
12-09-2010 15:47:01	6.559	12.695
12-09-2010 15:48:01	6.858	12.415
12-09-2010 15:49:01	6.914	12.321
12-09-2010 15:50:01	7.319	11.973
12-09-2010 15:51:01	7.454	11.883
12-09-2010 15:52:01	7.551	11.818
12-09-2010 15:53:01	7.250	12.046
12-09-2010 15:54:01	6.459	12.819
Run Averages	O2-S3 %	CO2-S3 %
12-09-2010 15:54:01	7.097	12.224

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 3 End

Final System Bias Check, Run 3 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 15:56:39 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.078	0.401
Zero Bias%	0.0%	2.2%
Zero Drift%	0.0%	0.1%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.909	9.204
Span Bias%	0.6%	1.3%
Span Drift%	0.0%	0.0%
Ini Zero Avg	0.078	0.391
Ini Span Avg	9.913	9.202
Run Avg	7.097	12.224
Co	0.078	0.396
Cm	9.911	9.203
Correct Avg	7.145	12.008

System Bias Check End

Test Run 4 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 16:08:02	6.668	12.532
12-09-2010 16:09:01	6.319	12.855
12-09-2010 16:10:01	6.456	12.683
12-09-2010 16:11:01	6.697	12.449
12-09-2010 16:12:01	6.881	12.263
12-09-2010 16:13:01	6.951	12.243
12-09-2010 16:14:01	6.859	12.314
12-09-2010 16:15:01	6.982	12.280
12-09-2010 16:16:01	6.795	12.436
12-09-2010 16:17:01	6.606	12.559
12-09-2010 16:18:01	6.835	12.376
12-09-2010 16:19:01	6.870	12.309
12-09-2010 16:20:01	7.855	11.543
12-09-2010 16:21:01	7.826	11.602
12-09-2010 16:22:01	6.612	12.712
12-09-2010 16:23:01	6.674	12.549
12-09-2010 16:24:01	6.928	12.285
12-09-2010 16:25:01	7.558	11.770
12-09-2010 16:26:01	7.393	11.971
12-09-2010 16:27:01	6.619	12.562
12-09-2010 16:28:01	7.081	12.180
12-09-2010 16:29:01	6.810	12.413
12-09-2010 16:30:01	6.888	12.417
12-09-2010 16:31:01	6.832	12.481
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 16:31:01	6.917	12.324

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 16:33:50 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.109	0.392
Zero Bias%	0.2%	2.2%
Zero Drift%	0.1%	-0.1%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.946	9.179
Span Bias%	0.4%	1.2%
Span Drift%	0.2%	-0.1%
Ini Zero Avg	0.078	0.401
Ini Span Avg	9.909	9.204
Run Avg	6.917	12.324
Co	0.094	0.397
Cm	9.928	9.192
Correct Avg	6.945	12.126

System Bias Check End

Test Run 5 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 16:36:02	6.718	12.552
12-09-2010 16:37:01	6.944	12.405
12-09-2010 16:38:01	6.565	12.719
12-09-2010 16:39:01	6.295	12.987
12-09-2010 16:40:01	6.503	12.817
12-09-2010 16:41:01	6.627	12.690
12-09-2010 16:42:01	7.094	12.330
12-09-2010 16:43:01	6.714	12.630
12-09-2010 16:44:01	6.301	13.014
12-09-2010 16:45:01	6.254	13.065
12-09-2010 16:46:01	6.628	12.702
12-09-2010 16:47:01	7.277	12.121
12-09-2010 16:48:01	7.181	12.222
12-09-2010 16:49:02	6.851	12.510
12-09-2010 16:50:02	6.858	12.521
12-09-2010 16:51:02	6.943	12.403
12-09-2010 16:52:02	7.082	12.315
12-09-2010 16:53:02	7.082	12.277
12-09-2010 16:54:02	7.109	12.262
12-09-2010 16:55:02	7.054	12.320
12-09-2010 16:56:02	7.242	12.174
12-09-2010 16:57:02	6.714	12.689
12-09-2010 16:58:02	6.570	12.715
12-09-2010 16:59:02	7.377	12.030
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 16:59:02	6.832	12.520

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 5 End

Final System Bias Check, Run 5 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 17:01:41 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.089	0.401
Zero Bias%	0.1%	2.2%
Zero Drift%	-0.1%	0.0%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.962	9.218
Span Bias%	0.4%	1.4%
Span Drift%	0.1%	0.2%
Ini Zero Avg	0.109	0.392
Ini Span Avg	9.946	9.179
Run Avg	6.832	12.520
Co	0.099	0.396
Cm	9.954	9.198
Correct Avg	6.839	12.315

System Bias Check End

Test Run 6 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 17:03:02	5.491	13.714
12-09-2010 17:04:02	6.204	13.027
12-09-2010 17:05:02	6.912	12.367
12-09-2010 17:06:02	7.209	12.151
12-09-2010 17:07:02	7.471	11.963
12-09-2010 17:08:02	7.750	11.741
12-09-2010 17:09:02	7.763	11.766
12-09-2010 17:10:02	7.238	12.215
12-09-2010 17:11:02	6.956	12.448
12-09-2010 17:12:02	6.815	12.568
12-09-2010 17:13:02	6.627	12.732
12-09-2010 17:14:02	6.865	12.564
12-09-2010 17:15:02	6.489	12.825
12-09-2010 17:16:02	6.523	12.774
12-09-2010 17:17:02	6.822	12.535
12-09-2010 17:18:01	7.251	12.131
12-09-2010 17:19:01	7.253	12.161
12-09-2010 17:20:01	6.569	12.752
12-09-2010 17:21:01	6.755	12.586
12-09-2010 17:22:01	7.110	12.283
12-09-2010 17:23:01	6.359	12.908
12-09-2010 17:24:01	6.300	12.984
12-09-2010 17:25:01	6.591	12.699
12-09-2010 17:26:01	6.922	12.422
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 17:26:01	6.842	12.514

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 6 End

Final System Bias Check, Run 6 STRATA Version 3.2

Operator:	Chris Wrenn
Plant Name:	Lee County RRF
Location:	Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 17:28:59 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.087	0.427
Zero Bias%	0.1%	2.3%
Zero Drift%	0.0%	0.1%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.950	9.244
Span Bias%	0.4%	1.6%
Span Drift%	-0.1%	0.1%
Ini Zero Avg	0.089	0.401
Ini Span Avg	9.962	9.218
Run Avg	6.842	12.514
Co	0.088	0.414
Cm	9.956	9.231
Correct Avg	6.852	12.271

System Bias Check End

Test Run 7 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 17:31:11	7.385	12.044
12-09-2010 17:32:11	7.179	12.207
12-09-2010 17:33:11	7.074	12.331
12-09-2010 17:34:11	6.962	12.450
12-09-2010 17:35:10	6.676	12.700
12-09-2010 17:36:10	7.251	12.198
12-09-2010 17:37:10	7.035	12.391
12-09-2010 17:38:10	7.013	12.428
12-09-2010 17:39:10	7.164	12.280
12-09-2010 17:40:10	7.540	12.004
12-09-2010 17:41:10	7.191	12.306
12-09-2010 17:42:10	6.954	12.541
12-09-2010 17:43:10	7.280	12.228
12-09-2010 17:44:10	7.469	12.027
12-09-2010 17:45:10	7.642	11.902
12-09-2010 17:46:10	7.494	12.025
12-09-2010 17:47:10	6.800	12.620
12-09-2010 17:48:10	6.570	12.762
12-09-2010 17:49:10	6.609	12.720
12-09-2010 17:50:10	6.532	12.754
12-09-2010 17:51:10	6.584	12.731
12-09-2010 17:52:10	6.444	12.815
12-09-2010 17:53:10	6.382	12.843
12-09-2010 17:54:10	6.855	12.468
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 17:54:10	7.004	12.407

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 7 End

Final System Bias Check, Run 7 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 17:56:49 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.085	0.460
Zero Bias%	0.1%	2.5%
Zero Drift%	0.0%	0.2%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.966	9.303
Span Bias%	0.3%	1.9%
Span Drift%	0.1%	0.3%
Ini Zero Avg	0.087	0.427
Ini Span Avg	9.950	9.244
Run Avg	7.004	12.407
Co	0.086	0.443
Cm	9.958	9.273
Correct Avg	7.015	12.114

System Bias Check End

Test Run 8 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 17:58:03	7.288	12.048
12-09-2010 17:59:03	7.187	12.132
12-09-2010 18:00:02	7.025	12.275
12-09-2010 18:01:02	7.368	11.968
12-09-2010 18:02:02	7.013	12.307
12-09-2010 18:03:02	6.638	12.633
12-09-2010 18:04:02	6.718	12.541
12-09-2010 18:05:02	7.002	12.238
12-09-2010 18:06:02	7.364	11.960
12-09-2010 18:07:02	7.241	12.024
12-09-2010 18:08:02	7.535	11.852
12-09-2010 18:09:02	7.769	11.673
12-09-2010 18:10:02	7.398	11.981
12-09-2010 18:11:02	6.672	12.582
12-09-2010 18:12:02	6.482	12.740
12-09-2010 18:13:03	6.608	12.648
12-09-2010 18:14:03	6.997	12.245
12-09-2010 18:15:03	7.252	12.060
12-09-2010 18:16:03	7.110	12.187
12-09-2010 18:17:03	7.050	12.220
12-09-2010 18:18:03	7.145	12.164
12-09-2010 18:19:03	7.475	11.896
12-09-2010 18:20:03	7.130	12.174
12-09-2010 18:21:03	7.277	12.059
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 18:21:03	7.114	12.192

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 8 End

Final System Bias Check, Run 8 STRATA Version 3.2

Operator:	Chris Wrenn
Plant Name:	Lee County RRF
Location:	Units 3 Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 18:23:30 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.084	0.464
Zero Bias%	0.1%	2.6%
Zero Drift%	0.0%	0.0%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.966	9.304
Span Bias%	0.3%	1.9%
Span Drift%	0.0%	0.0%
Ini Zero Avg	0.085	0.460
Ini Span Avg	9.966	9.303
Run Avg	7.114	12.192
Co	0.085	0.462
Cm	9.966	9.303
Correct Avg	7.121	11.862

System Bias Check End

Test Run 9 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 18:25:02	7.319	12.055
12-09-2010 18:26:02	6.943	12.399
12-09-2010 18:27:02	6.238	13.028
12-09-2010 18:28:02	6.488	12.815
12-09-2010 18:29:02	7.065	12.262
12-09-2010 18:30:02	7.141	12.210
12-09-2010 18:31:02	6.996	12.335
12-09-2010 18:32:02	7.097	12.248
12-09-2010 18:33:02	6.897	12.504
12-09-2010 18:34:02	6.510	12.766
12-09-2010 18:35:02	6.965	12.368
12-09-2010 18:36:02	7.481	11.906
12-09-2010 18:37:02	7.205	12.129
12-09-2010 18:38:02	7.039	12.265
12-09-2010 18:39:01	7.191	12.166
12-09-2010 18:40:01	7.189	12.116
12-09-2010 18:41:01	7.414	11.962
12-09-2010 18:42:01	7.279	12.080
12-09-2010 18:43:01	6.959	12.348
12-09-2010 18:44:01	6.747	12.528
12-09-2010 18:45:01	6.536	12.687
12-09-2010 18:46:01	6.342	12.866
12-09-2010 18:47:01	6.565	12.633
12-09-2010 18:48:01	7.098	12.120
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 18:48:01	6.946	12.366

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet
Test Run 9 End

Final System Bias Check, Run 9 STRATA Version 3.2

Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 18:50:35 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.086	0.436
Zero Bias%	0.1%	2.4%
Zero Drift%	0.0%	-0.2%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.971	9.265
Span Bias%	0.3%	1.7%
Span Drift%	0.0%	-0.2%
Ini Zero Avg	0.084	0.464
Ini Span Avg	9.966	9.304
Run Avg	6.946	12.366
Co	0.085	0.450
Cm	9.969	9.284
Correct Avg	6.949	12.060

System Bias Check End

Test Run 10 STRATA Version 3.2

	O2-S3	CO2-S3
	%	%
Begin calculating run averages		
12-09-2010 18:53:02	7.157	12.174
12-09-2010 18:54:02	7.515	11.891
12-09-2010 18:55:02	7.239	12.094
12-09-2010 18:56:02	6.816	12.477
12-09-2010 18:57:01	6.998	12.336
12-09-2010 18:58:01	6.803	12.488
12-09-2010 18:59:01	6.449	12.743
12-09-2010 19:00:01	6.925	12.341
12-09-2010 19:01:01	7.082	12.201
12-09-2010 19:02:01	7.124	12.181
12-09-2010 19:03:01	7.300	12.050
12-09-2010 19:04:01	7.567	11.833
12-09-2010 19:05:01	7.591	11.835
12-09-2010 19:06:01	7.091	12.199
12-09-2010 19:07:01	7.452	11.922
12-09-2010 19:08:01	7.474	11.885
12-09-2010 19:09:01	7.586	11.831
12-09-2010 19:10:01	6.682	12.607
12-09-2010 19:11:01	6.598	12.644
12-09-2010 19:12:01	6.030	13.112
12-09-2010 19:13:01	6.051	13.065
12-09-2010 19:14:01	6.664	12.513
12-09-2010 19:15:01	6.731	12.479
12-09-2010 19:16:01	6.910	12.332
Run Averages	O2-S3	CO2-S3
	%	%
12-09-2010 19:16:01	6.993	12.301

Operator:	Chris Wrenn
Plant Name:	Lee County RRF
Location:	Units 3 Outlet

Test Run 10 End

Final System Bias Check, Run 10 STRATA Version 3.2
Operator: Chris Wrenn
Plant Name: Lee County RRF
Location: Units 3 Outlet

	Reference Cylinder Numbers Zero	Span
O2-S3		CC7638
CO2-S3		CC7638

Date/Time 12-09-2010 19:18:29 PASSED

Analyte	O2-S3	CO2-S3
Units	%	%
Zero Ref Cyl	0.000	0.000
Zero Cal	0.073	0.003
Zero Avg	0.086	0.372
Zero Bias%	0.1%	2.0%
Zero Drift%	0.0%	-0.4%
Span Ref Cyl	10.010	8.941
Span Cal	10.039	8.964
Span Avg	9.972	9.169
Span Bias%	0.3%	1.1%
Span Drift%	0.0%	-0.5%
Ini Zero Avg	0.086	0.436
Ini Span Avg	9.971	9.265
Run Avg	6.993	12.301
Co	0.086	0.404
Cm	9.972	9.217
Correct Avg	6.994	12.070

System Bias Check End

APPENDIX C

Source CEMS Data Printouts

CO2, Flow Rate, Moisture

U-1 CO2 #/Hr RATA RUN ___1____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 09:34
End of Report: 12/08/2010 09:57
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 09:34	7.9	14.3	94.6	132584	61344	27.898
12/08/2010 09:35	8.2	13.6	94.6	132761	64280	29.233
12/08/2010 09:36	9.4	13.7	94.6	132939	73700	33.518
12/08/2010 09:37	10.0	14.7	94.7	132902	77474	35.234
12/08/2010 09:38	8.8	15.0	94.9	133182	68080	30.962
12/08/2010 09:39	8.2	14.0	95.0	133145	64167	29.182
12/08/2010 09:40	8.6	13.7	95.1	133107	67513	30.704
12/08/2010 09:41	8.2	14.0	95.2	133425	64302	29.244
12/08/2010 09:42	9.2	14.1	95.3	133565	72135	32.806
12/08/2010 09:43	9.3	14.9	95.3	133565	72240	32.854
12/08/2010 09:44	8.6	14.8	95.3	133565	66881	30.417
12/08/2010 09:45	8.8	14.6	95.2	133603	68617	31.206
12/08/2010 09:46	8.8	14.7	95.1	133463	68465	31.137
12/08/2010 09:47	10.0	15.0	97.7	137112	79647	36.222
12/08/2010 09:48	10.1	16.5	95.1	133463	76921	34.982
12/08/2010 09:49	8.9	16.7	95.0	133323	67548	30.720
12/08/2010 09:50	8.5	15.6	95.0	133145	65277	29.687
12/08/2010 09:51	8.1	15.1	94.9	133005	62508	28.428
12/08/2010 09:52	8.1	14.9	94.8	132688	62506	28.427
12/08/2010 09:53	8.4	14.9	94.6	132584	64770	29.456
12/08/2010 09:54	8.5	15.3	94.8	132864	65371	29.730
12/08/2010 09:55	8.9	15.5	94.8	133042	68377	31.097
12/08/2010 09:56	9.3	16.1	95.2	133603	71242	32.400
12/08/2010 09:57	9.6	16.4	95.0	133323	73124	33.256
Period Average =	**8.9**	**14.9**	95.1	133332	**68604**	**31.200**
Period Avg Dry =				**113437**		

U-1 CO2 #/Hr RATA RUN 2

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 10:03
End of Report: 12/08/2010 10:26

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 10:03	9.1	15.0	95.4	133527	70584	32.100
12/08/2010 10:04	9.1	15.0	95.5	133667	70658	32.134
12/08/2010 10:05	9.2	15.1	95.6	133807	71425	32.483
12/08/2010 10:06	8.8	15.3	95.5	133667	68087	30.965
12/08/2010 10:07	9.0	15.0	95.6	133807	69954	31.814
12/08/2010 10:08	9.5	14.9	95.7	133947	74005	33.656
12/08/2010 10:09	8.8	15.0	99.1	138522	70810	32.203
12/08/2010 10:10	8.3	14.5	95.9	134227	65097	29.605
12/08/2010 10:11	8.9	14.3	96.0	134546	70132	31.895
12/08/2010 10:12	9.5	14.9	97.1	136270	75288	34.240
12/08/2010 10:13	9.1	15.6	96.0	134726	70715	32.160
12/08/2010 10:14	8.8	15.6	96.2	135007	68526	31.165
12/08/2010 10:15	9.0	15.3	96.4	135287	70479	32.053
12/08/2010 10:16	9.3	15.5	96.3	134967	72484	32.965
12/08/2010 10:17	9.3	15.7	96.3	134787	72216	32.843
12/08/2010 10:18	8.7	15.5	96.3	134787	67717	30.797
12/08/2010 10:19	8.5	14.9	96.3	134787	66630	30.302
12/08/2010 10:20	8.5	14.7	96.2	134647	66717	30.342
12/08/2010 10:21	8.6	14.7	96.3	134967	67663	30.772
12/08/2010 10:22	9.2	14.8	96.4	135107	72374	32.914
12/08/2010 10:23	10.4	15.7	99.7	139732	83720	38.075
12/08/2010 10:24	9.9	16.7	96.5	135067	76121	34.619
12/08/2010 10:25	9.1	16.3	96.5	135067	70306	31.974
12/08/2010 10:26	8.6	15.3	96.4	134927	67167	30.547
Period Average =	**9.1**	**15.2**	96.4	134994	**70786**	**32.193**
Period Avg Dry =				**114447**		

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Date/Time Printed: 01/13/2011 15:31

U-1 CO2 #/Hr RATA RUN ___3____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 11:54
End of Report: 12/08/2010 12:17

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 11:54		14.6	65.7	92326	44185	20.094
12/08/2010 11:55	8.6	15.2	65.7	92203	45953	20.899
12/08/2010 11:56	8.0	14.7	65.7	92203	42999	19.555
12/08/2010 11:57	8.3	14.3	65.7	92203	44821	20.384
12/08/2010 11:58	9.2	14.7	65.7	92203	49449	22.489
12/08/2010 11:59	9.2	15.5	66.8	93747	49805	22.651
12/08/2010 12:00	8.6	15.7	65.5	91922	45543	20.712
12/08/2010 12:01	8.7	15.4	65.3	91642	46096	20.964
12/08/2010 12:02	9.0	15.5	65.7	92080	47856	21.764
12/08/2010 12:03	8.5	15.9	65.3	91398	44651	20.306
12/08/2010 12:04	8.7	15.7	65.4	91538	45880	20.866
12/08/2010 12:05	8.8	16.0	65.4	91416	46181	21.002
12/08/2010 12:06	8.9	16.4	67.7	94631	48118	21.883
12/08/2010 12:07	9.1	16.8	65.5	91556	47373	21.544
12/08/2010 12:08	9.3	17.6	65.5	91678	48012	21.835
12/08/2010 12:09	9.2	18.2	65.7	91957	47293	21.508
12/08/2010 12:10	9.2	18.2	65.7	91835	47231	21.480
12/08/2010 12:11	9.1	18.2	65.6	91818	46709	21.242
12/08/2010 12:12	8.6	17.9	65.6	91818	44304	20.149
12/08/2010 12:13	8.6	17.5	66.5	93077	45130	20.525
12/08/2010 12:14	9.5	17.7	65.7	91957	49134	22.345
12/08/2010 12:15	9.3	18.2	66.1	92517	48099	21.875
12/08/2010 12:16	8.7	17.9	66.1	92517	45161	20.538
12/08/2010 12:17	8.6	16.9	66.1	92517	45185	20.550
Period Average =	**8.9**	**16.4**	65.8	92198	**46465**	**21.132**
Period Avg Dry =				**77036**		

U-1 CO2 #/Hr RATA RUN 4

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 12:30
End of Report: 12/08/2010 12:53

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 12:30	9.3	17.2	66.0	92624	48743	22.168
12/08/2010 12:31	8.7	17.6	66.3	93045	45584	20.731
12/08/2010 12:32	8.4	16.8	66.3	93045	44440	20.210
12/08/2010 12:33	8.9	16.6	66.6	93466	47412	21.562
12/08/2010 12:34	9.0	17.3	66.5	93201	47407	21.560
12/08/2010 12:35	8.7	17.4	68.3	95724	47011	21.380
12/08/2010 12:36	8.3	17.0	66.4	93061	43813	19.925
12/08/2010 12:37	8.5	16.5	66.3	93045	45131	20.525
12/08/2010 12:38	8.7	16.8	66.2	92905	45958	20.901
12/08/2010 12:39	8.6	16.9	66.1	92764	45306	20.604
12/08/2010 12:40	8.4	16.8	66.1	92764	44305	20.149
12/08/2010 12:41	8.8	16.7	66.0	92501	46339	21.074
12/08/2010 12:42	8.7	16.6	65.9	92360	45798	20.828
12/08/2010 12:43	8.7	16.7	65.8	92220	45674	20.772
12/08/2010 12:44	9.1	17.1	65.3	91642	47246	21.487
12/08/2010 12:45	9.4	17.5	65.3	91642	48568	22.088
12/08/2010 12:46	9.0	17.7	67.6	94869	48022	21.840
12/08/2010 12:47	9.2	17.7	65.3	91642	47420	21.566
12/08/2010 12:48	9.6	18.0	65.4	91660	49311	22.426
12/08/2010 12:49	9.1	18.3	65.5	91678	46580	21.184
12/08/2010 12:50	9.0	17.8	65.5	91678	46351	21.080
12/08/2010 12:51	8.7	17.4	65.3	91398	44886	20.413
12/08/2010 12:52	8.8	17.3	65.4	91660	45587	20.732
12/08/2010 12:53	9.0	17.6	65.5	91922	46587	21.187
Period Average =	**8.9**	**17.2**	66.0	92605	**46395**	**21.100**
Period Avg Dry =				**76658**		

Date/Time Printed: 01/13/2011 15:33

U-1 CO2 #/Hr RATA RUN ___5____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 13:00
End of Report: 12/08/2010 13:23
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 13:00	8.9	17.5	65.2	91379	45853	20.853
12/08/2010 13:01	9.2	17.3	65.1	91239	47440	21.575
12/08/2010 13:02	9.1	17.6	65.2	91501	46889	21.324
12/08/2010 13:03	8.9	17.7	64.9	91080	45592	20.735
12/08/2010 13:04	9.0	17.6	64.8	90940	46089	20.961
12/08/2010 13:05	9.3	17.5	68.8	96554	50627	23.024
12/08/2010 13:06	8.5	17.4	64.5	90519	43432	19.752
12/08/2010 13:07	8.4	16.9	64.5	90519	43181	19.638
12/08/2010 13:08	9.2	16.7	64.3	90238	47260	21.493
12/08/2010 13:09	9.1	17.1	67.2	94308	48621	22.112
12/08/2010 13:10	9.0	16.9	64.0	89817	45907	20.878
12/08/2010 13:11	9.7	17.2	63.9	89677	49222	22.385
12/08/2010 13:12	9.0	17.8	63.8	89537	45268	20.587
12/08/2010 13:13	8.6	17.3	64.0	89817	43655	19.854
12/08/2010 13:14	9.8	16.9	64.0	89817	49987	22.734
12/08/2010 13:15	9.1	17.4	64.1	89838	46148	20.988
12/08/2010 13:16	8.3	17.1	67.9	95037	44689	20.324
12/08/2010 13:17	8.4	16.4	64.4	90258	43316	19.699
12/08/2010 13:18	9.2	16.6	64.3	90118	47254	21.491
12/08/2010 13:19	8.9	16.9	64.4	90258	45620	20.747
12/08/2010 13:20	9.2	16.9	64.4	90258	47157	21.446
12/08/2010 13:21	8.5	17.1	64.1	89958	43320	19.701
12/08/2010 13:22	8.6	16.6	63.8	89656	43946	19.986
12/08/2010 13:23	9.1	16.7	63.8	89537	46384	21.095
Period Average =	**9.0**	**17.1**	64.8	90911	**46119**	**20.974**
Period Avg Dry =				**75339**		

U-1 CO2 #/Hr RATA RUN 6

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 13:30
End of Report: 12/08/2010 13:53

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 13:30	9.2	18.1	68.1	95317	49081	22.321
12/08/2010 13:31	9.1	18.2	64.8	90698	46139	20.983
12/08/2010 13:32	9.6	18.0	64.9	90959	48933	22.254
12/08/2010 13:33	9.6	18.5	65.0	91099	48710	22.153
12/08/2010 13:34	9.2	18.4	65.2	91379	46881	21.321
12/08/2010 13:35	9.2	18.8	65.4	91538	46733	21.253
12/08/2010 13:36	9.0	18.8	65.6	91695	45795	20.827
12/08/2010 13:37	8.7	18.7	65.6	91695	44323	20.157
12/08/2010 13:38	8.7	18.5	67.3	94072	45584	20.731
12/08/2010 13:39	9.1	18.7	65.4	91538	46282	21.048
12/08/2010 13:40	9.2	19.2	65.4	91538	46502	21.149
12/08/2010 13:41	9.2	19.8	65.4	91538	46157	20.992
12/08/2010 13:42	9.3	19.9	65.4	91660	46663	21.222
12/08/2010 13:43	9.3	20.0	65.7	92080	46818	21.292
12/08/2010 13:44	9.0	19.9	65.6	91818	45235	20.572
12/08/2010 13:45	9.0	18.7	65.7	92203	46106	20.968
12/08/2010 13:46	8.3	17.1	65.7	92203	43356	19.718
12/08/2010 13:47	8.1	15.9	65.5	92045	42851	19.488
12/08/2010 13:48	8.7	15.7	65.5	92168	46196	21.009
12/08/2010 13:49	9.2	16.3	65.6	92309	48577	22.092
12/08/2010 13:50	9.4	16.9	65.2	91746	48977	22.274
12/08/2010 13:51	9.1	17.2	65.1	91606	47171	21.452
12/08/2010 13:52	9.1	16.7	68.0	95558	49503	22.513
12/08/2010 13:53	8.8	16.3	65.2	91624	46120	20.975
Period Average =	**9.0**	**18.1**	65.7	92087	**46612**	**21.199**
Period Avg Dry =				**75423**		

Date/Time Printed: 01/13/2011 15:34

U-1 CO2 #/Hr RATA RUN ___7____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 14:17
End of Report: 12/08/2010 14:40
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 14:17	8.7	15.3	62.6	87852	44241	20.120
12/08/2010 14:18	8.3	15.0	62.6	87852	42357	19.263
12/08/2010 14:19	8.8	14.7	62.6	87735	45007	20.468
12/08/2010 14:20	9.0	15.1	62.6	87852	45875	20.863
12/08/2010 14:21	8.8	15.4	63.3	88716	45137	20.528
12/08/2010 14:22	8.9	15.6	62.6	87852	45098	20.510
12/08/2010 14:23	9.1	15.6	62.6	87852	46112	20.971
12/08/2010 14:24	9.2	16.1	62.6	87852	46342	21.076
12/08/2010 14:25	9.1	16.3	62.7	87993	45803	20.830
12/08/2010 14:26	9.4	16.2	62.6	87735	47230	21.480
12/08/2010 14:27	9.3	16.2	62.7	87758	46740	21.257
12/08/2010 14:28	9.7	16.3	65.0	90857	50412	22.926
12/08/2010 14:29	9.7	16.6	62.7	87642	48453	22.036
12/08/2010 14:30	9.0	16.6	62.6	87619	44945	20.440
12/08/2010 14:31	8.5	16.0	62.6	87619	42753	19.444
12/08/2010 14:32	9.1	15.4	63.6	89137	46897	21.328
12/08/2010 14:33	9.4	15.7	62.6	87852	47575	21.637
12/08/2010 14:34	9.9	16.3	62.6	87735	49683	22.595
12/08/2010 14:35	9.0	16.9	62.4	87455	44700	20.329
12/08/2010 14:36	8.7	16.2	62.3	87315	43504	19.785
12/08/2010 14:37	8.7	15.7	62.1	87151	43681	19.866
12/08/2010 14:38	9.3	15.7	62.3	87431	46844	21.304
12/08/2010 14:39	9.1	16.0	64.8	90819	47443	21.576
12/08/2010 14:40	9.0	15.7	62.3	87315	45272	20.589
Period Average =	**9.1**	**15.9**	62.8	88042	**45921**	**20.884**
Period Avg Dry =				**74080**		

U-1 CO2 #/Hr RATA RUN ___8____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 15:04
End of Report: 12/08/2010 15:27
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 15:04	9.5	16.7	64.3	89998	48672	22.135
12/08/2010 15:05	8.9	16.6	61.7	86359	43807	19.923
12/08/2010 15:06	8.8	16.1	61.8	86499	43645	19.849
12/08/2010 15:07	8.6	15.8	61.7	86359	42736	19.436
12/08/2010 15:08	8.7	15.8	61.7	86474	43290	19.688
12/08/2010 15:09	9.4	15.9	61.6	86334	46642	21.212
12/08/2010 15:10	9.4	16.4	61.3	85913	46139	20.983
12/08/2010 15:11	8.8	16.3	64.6	90538	45574	20.726
12/08/2010 15:12	8.7	15.5	61.1	85633	43022	19.566
12/08/2010 15:13	9.1	15.2	61.1	85519	45100	20.511
12/08/2010 15:14	8.6	15.2	61.1	85519	42622	19.384
12/08/2010 15:15	8.1	14.6	61.6	86334	40813	18.561
12/08/2010 15:16	9.5	14.2	61.0	85493	47623	21.658
12/08/2010 15:17	9.6	15.1	60.9	85353	47541	21.621
12/08/2010 15:18	8.4	15.1	60.8	85213	41531	18.887
12/08/2010 15:19	7.6	14.3	60.7	85186	37917	17.244
12/08/2010 15:20	7.7	13.5	60.6	85159	38763	17.629
12/08/2010 15:21	8.5	13.4	60.4	84992	42755	19.444
12/08/2010 15:22	8.4	13.8	62.1	87267	43183	19.639
12/08/2010 15:23	8.8	13.7	60.2	84597	43906	19.968
12/08/2010 15:24	9.4	14.1	60.4	84765	46775	21.273
12/08/2010 15:25	8.9	14.7	60.6	85046	44123	20.067
12/08/2010 15:26	8.3	14.6	63.9	89677	43440	19.756
12/08/2010 15:27	8.4	14.4	60.6	85046	41791	19.006
Period Average =	**8.8**	**15.0**	61.5	86220	**43809**	**19.924**
Period Avg Dry =				**73251**		

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U-1 CO2 #/Hr RATA RUN ___9____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 15:33
End of Report: 12/08/2010 15:56
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 15:33	9.1	15.9	60.8	85099	44508	20.242
12/08/2010 15:34	9.4	16.2	60.8	85099	45811	20.834
12/08/2010 15:35	9.5	16.6	60.9	85239	46153	20.990
12/08/2010 15:36	9.3	16.5	61.0	85379	45310	20.606
12/08/2010 15:37	8.7	16.2	64.8	90698	45189	20.551
12/08/2010 15:38	8.6	15.6	61.0	85379	42351	19.261
12/08/2010 15:39	9.1	15.5	60.9	85239	44793	20.371
12/08/2010 15:40	9.1	15.9	60.9	85239	44581	20.275
12/08/2010 15:41	9.1	16.0	60.9	85239	44528	20.251
12/08/2010 15:42	9.0	16.0	61.1	85519	44183	20.094
12/08/2010 15:43	9.3	16.0	61.0	85379	45581	20.730
12/08/2010 15:44	9.2	16.2	60.9	85239	44910	20.424
12/08/2010 15:45	9.0	16.2	60.9	85353	43993	20.007
12/08/2010 15:46	8.6	15.8	60.9	85467	42295	19.235
12/08/2010 15:47	8.6	15.3	61.1	85747	42685	19.413
12/08/2010 15:48	8.6	15.2	61.1	85747	42735	19.435
12/08/2010 15:49	9.1	15.2	61.2	85888	45294	20.599
12/08/2010 15:50	9.3	15.7	61.6	86334	46256	21.037
12/08/2010 15:51	8.8	15.8	65.4	91538	46352	21.080
12/08/2010 15:52		15.3	61.8	86499	43560	19.810
12/08/2010 15:53		15.4	61.9	86639	46084	20.958
12/08/2010 15:54		15.6	61.7	86474	42894	19.508
12/08/2010 15:55	8.4	15.5	61.6	86449	41934	19.071
12/08/2010 15:56	8.5	15.0	61.5	86309	42616	19.381
Period Average =	**9.0**	**15.8**	61.5	86133	**44358**	**20.173**
Period Avg Dry =				**72545**		

U-1 CO2 #/Hr RATA RUN 10

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 16:04
End of Report: 12/08/2010 16:27

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 16:04	9.0	15.2	61.3	85458	44572	20.271
12/08/2010 16:05	9.0	15.3	61.4	85711	44652	20.307
12/08/2010 16:06	8.7	15.1	64.0	89459	45157	20.537
12/08/2010 16:07	8.9	14.9	61.6	86104	44567	20.269
12/08/2010 16:08	9.0	14.9	61.7	86129	45081	20.502
12/08/2010 16:09	9.3	15.1	62.0	86548	46701	21.239
12/08/2010 16:10	9.1	15.3	62.0	86433	45528	20.705
12/08/2010 16:11	9.2	15.2	62.2	86712	46231	21.025
12/08/2010 16:12	9.0	15.3	62.2	86712	45173	20.544
12/08/2010 16:13	8.6	15.0	62.4	86991	43458	19.764
12/08/2010 16:14	8.9	14.7	62.4	87107	45193	20.553
12/08/2010 16:15	9.3	14.8	62.4	87107	47168	21.451
12/08/2010 16:16	8.9	15.1	62.6	87386	45125	20.522
12/08/2010 16:17	9.7	15.1	62.4	87107	49024	22.295
12/08/2010 16:18	9.8	15.8	62.3	86967	49042	22.304
12/08/2010 16:19	9.1	16.0	62.3	86967	45431	20.661
12/08/2010 16:20	8.7	15.4	64.1	89718	45128	20.523
12/08/2010 16:21	9.0	14.9	62.2	87059	45568	20.724
12/08/2010 16:22	9.3	15.2	62.2	87059	46921	21.339
12/08/2010 16:23	8.9	15.7	62.2	87059	44638	20.301
12/08/2010 16:24	8.4	15.4	62.2	87059	42280	19.228
12/08/2010 16:25	8.4	15.0	62.1	86919	42412	19.288
12/08/2010 16:26	8.8	15.3	62.0	86779	44203	20.103
12/08/2010 16:27	9.2	16.0	62.1	86919	45905	20.877
Period Average =	**9.0**	**15.2**	62.3	86978	**45382**	**20.639**
Period Avg Dry =				**73725**		

Date/Time Printed: 01/13/2011 15:37

U-1 CO2 #/Hr RATA RUN ___11____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U1 CO2 Lb-Hr
Start of Report: 12/08/2010 16:33
End of Report: 12/08/2010 16:56

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G63-C2	G63-C22	G63-C21	G63-C25	G63-C26	G63-C29
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Outle	U-1 Outle	U-1 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	FLOWs	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 16:33	8.9	15.7	62.3	87315	44769	20.360
12/08/2010 16:34	8.7	15.8	64.0	89697	44904	20.422
12/08/2010 16:35	8.5	15.9	62.4	87455	42724	19.430
12/08/2010 16:36	9.0	16.1	62.4	87572	45190	20.552
12/08/2010 16:37	9.5	16.6	62.5	87712	47492	21.599
12/08/2010 16:38	9.6	17.1	62.8	88016	47870	21.771
12/08/2010 16:39	9.7	17.3	62.8	88016	48252	21.944
12/08/2010 16:40	9.6	17.4	62.9	88156	47773	21.726
12/08/2010 16:41	9.3	17.2	62.9	88038	46330	21.070
12/08/2010 16:42	9.2	16.8	63.0	88178	46126	20.977
12/08/2010 16:43	9.2	16.8	63.0	88061	46065	20.950
12/08/2010 16:44	9.4	17.0	63.1	88201	47028	21.388
12/08/2010 16:45	9.1	17.3	63.3	88598	45567	20.723
12/08/2010 16:46	9.4	17.4	63.3	88480	46949	21.352
12/08/2010 16:47	9.7	17.8	63.1	88318	48125	21.886
12/08/2010 16:48	9.3	17.9	62.9	88038	45938	20.892
12/08/2010 16:49	9.2	17.4	64.6	90418	46957	21.355
12/08/2010 16:50	9.4	17.5	62.8	87898	46584	21.186
12/08/2010 16:51	9.2	17.7	62.8	87898	45482	20.685
12/08/2010 16:52	9.6	17.8	63.0	88178	47553	21.626
12/08/2010 16:53	9.7	18.2	63.0	88061	47751	21.716
12/08/2010 16:54	9.6	18.5	63.1	88201	47160	21.448
12/08/2010 16:55	9.5	18.6	63.2	88341	46686	21.232
12/08/2010 16:56	9.6	18.6	65.6	91695	48968	22.270
Period Average =	**9.3**	**17.3**	63.1	88356	**46593**	**21.190**
Period Avg Dry =				**73100**		

Date/Time Printed: 01/13/2011 15:37

U-2 CO2 #/Hr RATA RUN ___1____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 09:34
End of Report: 12/08/2010 09:57

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 09:34	9.1	15.7	90.4	126698	66422	30.208
12/08/2010 09:35	8.8	15.4	90.5	126838	64532	29.348
12/08/2010 09:36	8.7	15.0	90.5	126838	64101	29.152
12/08/2010 09:37	8.9	14.9	90.8	127428	65957	29.996
12/08/2010 09:38	8.8	14.9	90.9	127399	65201	29.652
12/08/2010 09:39	8.7	14.8	91.0	127539	64607	29.382
12/08/2010 09:40	8.6	14.4	91.1	127679	64234	29.213
12/08/2010 09:41	8.6	14.3	91.2	127990	64466	29.318
12/08/2010 09:42	8.5	14.3	91.3	128130	63786	29.009
12/08/2010 09:43	8.3	14.2	91.4	128442	62510	28.428
12/08/2010 09:44	8.6	14.1	91.4	128442	64845	29.490
12/08/2010 09:45	9.2	14.3	91.5	128582	69283	31.509
12/08/2010 09:46	9.0	14.6	91.7	128691	67596	30.742
12/08/2010 09:47	8.6	14.3	91.9	128972	64961	29.543
12/08/2010 09:48	8.8	13.9	92.0	129112	66854	30.404
12/08/2010 09:49	8.8	13.9	92.0	129112	66854	30.404
12/08/2010 09:50	9.4	13.8	91.7	128691	71262	32.409
12/08/2010 09:51	8.4	14.0	91.4	128270	63325	28.799
12/08/2010 09:52		13.4	91.1	128020		
12/08/2010 09:53		13.1	90.8	127599		
12/08/2010 09:54		13.1	90.5	127177		
12/08/2010 09:55	8.5	13.1	90.4	127037	64127	29.164
12/08/2010 09:56	9.1	13.2	90.4	127037	68575	31.187
12/08/2010 09:57	9.2	13.6	90.3	126896	68933	31.349
Period Average =	**8.8**	**14.2**	91.1	127859	**65830**	**29.938**
Period Avg Dry =				**109730**		

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Date/Time Printed: 01/13/2011 13:52

U-2 CO2 #/Hr RATA RUN ___2____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 10:03
End of Report: 12/08/2010 10:26

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 10:03	8.8	13.7	89.8	126193	65494	29.786
12/08/2010 10:04	8.9	13.7	89.7	126053	66165	30.091
12/08/2010 10:05	9.0	14.0	89.7	126053	66676	30.323
12/08/2010 10:06	9.2	14.1	89.6	125912	68002	30.926
12/08/2010 10:07	9.2	14.3	89.7	126053	67920	30.889
12/08/2010 10:08	9.1	14.5	89.6	125744	66861	30.407
12/08/2010 10:09	9.1	14.7	89.6	125744	66704	30.336
12/08/2010 10:10	8.9	14.8	89.6	125744	65162	29.635
12/08/2010 10:11	9.0	14.5	89.6	125577	66038	30.033
12/08/2010 10:12	9.0	14.5	89.8	125857	66185	30.100
12/08/2010 10:13	8.9	14.6	90.1	126277	65591	29.830
12/08/2010 10:14	9.1	14.4	90.4	126698	67447	30.674
12/08/2010 10:15	9.7	15.0	90.3	126727	71406	32.474
12/08/2010 10:16	9.3	15.5	90.4	126698	68043	30.945
12/08/2010 10:17	8.8	15.3	90.4	126867	64623	29.390
12/08/2010 10:18	8.9	14.8	90.6	127148	65889	29.965
12/08/2010 10:19	8.9	14.7	90.7	127118	65951	29.994
12/08/2010 10:20	8.9	14.7	90.8	127258	66024	30.027
12/08/2010 10:21	8.9	14.8	91.0	127539	66092	30.058
12/08/2010 10:22	8.8	14.9	91.1	127679	65344	29.718
12/08/2010 10:23	9.2	15.1	91.5	128069	68362	31.090
12/08/2010 10:24	9.3	15.7	91.8	128660	68933	31.350
12/08/2010 10:25	9.0	15.8	91.9	128629	66614	30.295
12/08/2010 10:26	9.2	15.5	91.8	128660	68354	31.086
Period Average =	9.0	14.7	90.4	126790	66828	30.393
Period Avg Dry =				108110		

U-2 CO2 #/Hr RATA RUN ___3____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

C)any: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 11:54
End of Report: 12/08/2010 12:17

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 11:54	9.0	15.8	65.9	92980	48153	21.899
12/08/2010 11:55	9.1	15.5	65.7	92698	48713	22.154
12/08/2010 11:56	9.2	15.4	65.6	92557	49231	22.390
12/08/2010 11:57	9.2	15.4	65.5	92540	49222	22.386
12/08/2010 11:58	9.1	15.4	65.5	92540	48687	22.142
12/08/2010 11:59	8.6	15.2	65.5	92540	46121	20.975
12/08/2010 12:00	8.4	14.7	65.5	92540	45314	20.608
12/08/2010 12:01	8.9	14.4	65.5	92540	48180	21.912
12/08/2010 12:02	8.7	14.7	65.5	92540	46932	21.344
12/08/2010 12:03	8.7	14.7	65.5	92540	46932	21.344
1[illegible]/2010 12:04	8.9	14.6	65.3	92382	47986	21.823
12/[illegible]/2010 12:05	9.0	14.7	65.3	92382	48468	22.042
12/08/2010 12:06	9.0	14.8	65.2	92240	48337	21.983
12/08/2010 12:07	9.6	15.0	65.2	92240	51438	23.393
12/08/2010 12:08	9.1	15.4	65.3	92258	48539	22.075
12/08/2010 12:09	8.6	15.0	65.3	92258	46089	20.961
12/08/2010 12:10	8.5	14.4	65.3	92258	45875	20.863
12/08/2010 12:11	8.5	14.1	65.3	92382	46097	20.964
12/08/2010 12:12	8.6	13.9	65.3	92382	46748	21.260
12/08/2010 12:13	9.5	14.1	65.3	92382	51520	23.431
12/08/2010 12:14	9.0	14.6	65.3	92382	48525	22.068
12/08/2010 12:15	8.9	14.5	65.3	92382	48042	21.849
12/08/2010 12:16	9.0	14.5	65.3	92382	48582	22.094
12/08/2010 12:17	8.6	14.7	65.0	91834	46039	20.938
Period Average =	**8.9**	**14.8**	65.4	92423	**47907**	**21.787**
Period Avg Dry =				78733		

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U-2 CO2 #/Hr RATA RUN ___4____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

( )any: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 12:30
End of Report: 12/08/2010 12:53 **Validation:** Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 12:30	9.7	16.2	65.6	92557	51416	23.383
12/08/2010 12:31	9.5	16.7	65.7	92698	50132	22.799
12/08/2010 12:32	9.0	16.4	65.8	92839	47737	21.710
12/08/2010 12:33	9.1	15.9	65.8	92839	48556	22.083
12/08/2010 12:34	9.2	16.0	65.8	92839	49031	22.299
12/08/2010 12:35	9.1	16.1	65.7	92823	48432	22.026
12/08/2010 12:36	8.8	15.8	65.6	92681	46931	21.344
12/08/2010 12:37	9.0	15.6	65.6	92557	48047	21.851
12/08/2010 12:38	8.9	15.6	65.7	92698	47586	21.641
12/08/2010 12:39	8.9	15.5	65.8	92964	47779	21.729
1)/2010 12:40	9.3	15.4	65.9	93105	50061	22.767
12/08/2010 12:41	9.0	15.8	65.8	92839	48080	21.866
12/08/2010 12:42	8.5	15.5	65.8	92964	45632	20.753
12/08/2010 12:43	8.2	15.1	65.7	92823	44162	20.084
12/08/2010 12:44	8.5	14.9	65.6	92681	45816	20.836
12/08/2010 12:45	8.6	15.2	65.5	92540	46121	20.975
12/08/2010 12:46	8.6	15.4	65.4	92399	45942	20.894
12/08/2010 12:47	8.6	15.7	65.5	92540	45849	20.851
12/08/2010 12:48	8.5	15.7	65.5	92665	45377	20.637
12/08/2010 12:49	8.7	15.6	65.5	92665	46500	21.147
12/08/2010 12:50	9.0	15.9	65.4	92523	47859	21.766
12/08/2010 12:51	9.0	16.4	65.2	92116	47365	21.541
12/08/2010 12:52	9.1	16.7	65.2	92116	47720	21.702
12/08/2010 12:53	9.4	16.9	65.2	92116	49174	22.364
Period Average =	**8.9**	**15.8**	65.6	92649	**47554**	**21.627**
Period Avg Dry =				77980		

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U-2 CO2 #/Hr RATA RUN ___5____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 13:00
End of Report: 12/08/2010 13:23

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 13:00	10.5	18.4	65.8	92591	54215	24.656
12/08/2010 13:01	10.4	18.5	66.0	92872	53796	24.466
12/08/2010 13:02	10.2	18.3	66.2	93029	52980	24.095
12/08/2010 13:03	9.8	17.8	66.4	93310	51369	23.362
12/08/2010 13:04	9.4	17.3	66.5	93326	49581	22.548
12/08/2010 13:05	9.0	16.7	66.5	93201	47751	21.716
12/08/2010 13:06	8.8	16.1	66.4	93185	47018	21.383
12/08/2010 13:07	8.8	15.7	66.3	93045	47171	21.453
12/08/2010 13:08	9.0	15.6	66.2	92905	48228	21.933
12/08/2010 13:09	9.6	15.7	66.2	92905	51382	23.368
12/08/2010 13:10	9.3	16.1	66.1	92764	49465	22.496
12/08/2010 13:11	9.1	15.9	66.1	92888	48582	22.094
12/08/2010 13:12	8.9	15.4	66.1	92888	47796	21.737
12/08/2010 13:13	9.0	15.2	66.0	92748	48375	22.000
12/08/2010 13:14	9.0	15.2	66.0	92624	48310	21.971
12/08/2010 13:15	9.2	15.2	66.0	92624	49384	22.459
12/08/2010 13:16	9.4	15.3	65.9	92484	50321	22.885
12/08/2010 13:17	8.8	15.4	65.8	92343	46982	21.367
12/08/2010 13:18	9.3	15.1	65.8	92343	49828	22.661
12/08/2010 13:19	9.4	15.6	65.8	92343	50067	22.770
12/08/2010 13:20	9.0	15.9	65.8	92220	47702	21.694
12/08/2010 13:21	8.6	15.6	65.9	92360	45814	20.836
12/08/2010 13:22	8.4	15.1	65.8	92343	45006	20.468
12/08/2010 13:23	8.8	14.9	65.8	92343	47260	21.493
Period Average =	**9.2**	**16.1**	66.1	92737	**49099**	**22.330**
Period Avg Dry =				77822		

U-2 CO2 #/Hr RATA RUN ___6____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 13:30
End of Report: 12/08/2010 13:53

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 13:30	8.3	14.8	65.5	91922	44423	20.203
12/08/2010 13:31	8.3	14.6	65.3	91642	44392	20.189
12/08/2010 13:32	8.6	14.5	65.2	91501	45980	20.911
12/08/2010 13:33	8.8	14.8	65.1	91483	46875	21.318
12/08/2010 13:34	8.8	15.4	65.1	91483	46545	21.168
12/08/2010 13:35	8.8	15.6	65.2	91624	46506	21.150
12/08/2010 13:36	8.8	15.6	65.0	91343	46363	21.085
12/08/2010 13:37	8.8	15.6	64.9	91080	46230	21.025
12/08/2010 13:38	9.0	15.7	64.9	91080	47225	21.477
12/08/2010 13:39	9.1	15.9	64.9	91080	47636	21.664
12/08/2010 13:40	9.1	16.1	65.0	91221	47596	21.646
12/08/2010 13:41	9.4	16.1	65.1	91239	49175	22.364
12/08/2010 13:42	9.7	16.5	64.8	90819	50270	22.862
12/08/2010 13:43	9.7	16.7	64.6	90538	49995	22.737
12/08/2010 13:44	9.4	16.8	64.7	90679	48466	22.041
12/08/2010 13:45	9.2	16.5	65.0	91099	47826	21.750
12/08/2010 13:46	8.9	16.2	65.1	91118	46442	21.121
12/08/2010 13:47	8.9	16.0	65.1	91118	46553	21.172
12/08/2010 13:48	9.1	15.9	65.1	91118	47656	21.673
12/08/2010 13:49	9.0	16.1	65.1	91239	47083	21.412
12/08/2010 13:50	9.2	16.3	65.2	91379	48088	21.870
12/08/2010 13:51	9.4	17.4	65.2	91258	48423	22.022
12/08/2010 13:52		17.8	65.3	91398		
12/08/2010 13:53		17.2	65.5	91800		
Period Average =	**9.0**	**16.0**	65.1	91261	**47261**	**21.494**
Period Avg Dry =				76655		

U-2 CO2 #/Hr RATA RUN ___7____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 14:17
End of Report: 12/08/2010 14:40
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 14:17	9.5	17.5	65.9	92360	49469	22.498
12/08/2010 14:18	9.3	18.4	65.9	92360	47900	21.784
12/08/2010 14:19	9.2	18.5	65.9	92360	47327	21.523
12/08/2010 14:20	9.1	18.2	66.1	92764	47190	21.461
12/08/2010 14:21	9.1	18.3	66.2	93029	47267	21.496
12/08/2010 14:22	9.1	18.4	66.2	93029	47209	21.470
12/08/2010 14:23	9.0	18.4	66.3	93169	46760	21.266
12/08/2010 14:24	9.6	18.3	66.3	93169	49939	22.712
12/08/2010 14:25	9.6	18.8	66.6	93466	49792	22.644
12/08/2010 14:26	9.5	19.0	66.9	93887	49373	22.454
12/08/2010 14:27	9.0	19.0	67.1	94168	46914	21.336
12/08/2010 14:28	9.0	18.5	67.2	94434	47337	21.528
12/08/2010 14:29	8.8	17.4	67.4	94969	47176	21.455
12/08/2010 14:30	8.4	15.7	67.3	94956	45952	20.898
12/08/2010 14:31	8.6	14.9	67.0	94659	47344	21.531
12/08/2010 14:32	8.8	14.8	66.8	94377	48357	21.992
12/08/2010 14:33	9.9	15.1	66.5	93701	53822	24.478
12/08/2010 14:34	9.7	16.0	66.3	93294	51949	23.626
12/08/2010 14:35	8.8	15.8	66.2	93153	47170	21.452
12/08/2010 14:36	8.4	15.1	66.1	93013	45332	20.616
12/08/2010 14:37	8.8	14.6	65.8	92591	47554	21.627
12/08/2010 14:38	8.6	14.5	65.4	92028	46244	21.031
12/08/2010 14:39	8.7	14.4	65.2	91869	46756	21.264
12/08/2010 14:40	8.7	14.4	64.9	91324	46479	21.138
Period Average =	**9.1**	**16.8**	66.3	93255	**47942**	**21.803**
Period Avg Dry =				77557		

U-2 CO2 #/Hr RATA RUN 8

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 15:04
End of Report: 12/08/2010 15:27

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 15:04	9.4	15.8	64.2	89978	48669	22.134
12/08/2010 15:05	9.2	15.7	64.1	89838	47616	21.655
12/08/2010 15:06	9.2	15.4	64.1	89958	47849	21.761
12/08/2010 15:07	9.1	15.4	64.2	90098	47403	21.558
12/08/2010 15:08	9.0	15.3	64.2	90098	46937	21.346
12/08/2010 15:09	9.0	15.2	64.1	89838	46857	21.310
12/08/2010 15:10	8.8	14.9	64.2	90098	46111	20.970
12/08/2010 15:11	9.1	14.6	64.2	90098	47851	21.762
12/08/2010 15:12	9.1	14.8	64.1	89958	47665	21.677
12/08/2010 15:13	8.8	14.8	64.0	89937	46082	20.958
12/08/2010 15:14	8.7	14.5	63.8	89656	45576	20.727
12/08/2010 15:15	9.0	14.3	63.6	89375	47110	21.425
12/08/2010 15:16	9.3	14.6	63.5	89235	48434	22.027
12/08/2010 15:17	8.9	14.9	63.5	89116	46126	20.978
12/08/2010 15:18	8.6	14.6	63.4	88975	44658	20.310
12/08/2010 15:19	9.3	14.3	63.2	88576	48245	21.941
12/08/2010 15:20	9.0	14.7	63.2	88576	46471	21.134
12/08/2010 15:21	8.5	14.6	63.2	88576	43941	19.984
12/08/2010 15:22	9.5	14.2	63.0	88296	49184	22.368
12/08/2010 15:23	9.1	14.9	62.9	88274	46717	21.246
12/08/2010 15:24	8.8	14.7	62.8	88133	45211	20.561
12/08/2010 15:25	9.0	14.4	62.8	88133	46401	21.103
12/08/2010 15:26	8.7	14.3	62.6	87852	44764	20.358
12/08/2010 15:27	9.2	14.0	62.6	87852	47502	21.603
Period Average =	9.0	14.8	63.6	89189	46808	21.287
Period Avg Dry =				76000		

U-2 CO2 #/Hr RATA RUN ___9____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 15:33
End of Report: 12/08/2010 15:56
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 15:33	8.7	13.8	62.3	87431	44809	20.379
12/08/2010 15:34	8.4	13.5	62.3	87431	43415	19.744
12/08/2010 15:35	8.3	13.2	62.2	87291	42978	19.546
12/08/2010 15:36	9.0	13.1	62.3	87431	46731	21.252
12/08/2010 15:37	8.7	13.5	62.2	87175	44833	20.390
12/08/2010 15:38	8.4	13.5	62.2	87175	43287	19.686
12/08/2010 15:39	8.9	13.2	62.1	87035	45949	20.897
12/08/2010 15:40	9.9	13.8	62.1	87035	50759	23.084
12/08/2010 15:41	9.0	14.8	62.2	87175	45682	20.776
12/08/2010 15:42	8.2	14.3	62.1	87151	41854	19.035
12/08/2010 15:43	8.4	13.7	62.1	87151	43176	19.636
12/08/2010 15:44	8.7	13.8	62.1	87151	44666	20.313
12/08/2010 15:45	8.8	14.3	62.0	87010	44844	20.395
12/08/2010 15:46	8.9	14.7	62.1	87035	45155	20.536
12/08/2010 15:47	8.8	15.1	62.3	87315	44581	20.275
12/08/2010 15:48	9.2	15.2	62.5	87595	46702	21.239
12/08/2010 15:49	9.4	15.6	62.5	87595	47492	21.599
12/08/2010 15:50	9.3	15.7	62.4	87455	46857	21.310
12/08/2010 15:51	9.0	15.5	62.3	87315	45380	20.638
12/08/2010 15:52	8.6	15.0	62.2	87175	43550	19.806
12/08/2010 15:53	9.0	14.5	62.1	87035	45770	20.815
12/08/2010 15:54	9.0	14.7	62.1	87035	45663	20.767
12/08/2010 15:55	8.8	14.7	62.1	87035	44648	20.305
12/08/2010 15:56	8.8	14.5	62.1	87035	44753	20.353
Period Average =	8.8	**14.3**	62.2	87219	**45147**	**20.532**
Period Avg Dry =				74729		

U-2 CO2 #/Hr RATA RUN ___10____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 16:04
End of Report: 12/08/2010 16:27
Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 16:04	8.2	13.4	62.3	87315	42374	19.271
12/08/2010 16:05	9.3	13.5	62.2	87175	47925	21.796
12/08/2010 16:06	9.3	14.8	62.1	87035	47129	21.434
12/08/2010 16:07	8.6	15.0	62.2	87175	43550	19.806
12/08/2010 16:08	8.3	14.3	62.3	87315	42445	19.303
12/08/2010 16:09	8.4	13.8	62.4	87572	43334	19.708
12/08/2010 16:10	8.3	13.7	62.4	87455	42810	19.469
12/08/2010 16:11	8.9	13.7	62.4	87455	45905	20.877
12/08/2010 16:12	9.3	14.4	62.6	87619	47668	21.679
12/08/2010 16:13	8.6	14.9	62.7	87758	43892	19.962
12/08/2010 16:14	8.2	14.3	62.7	87758	42146	19.167
12/08/2010 16:15	8.3	13.8	62.7	87876	42967	19.541
12/08/2010 16:16	8.7	13.8	62.7	87993	45097	20.510
12/08/2010 16:17	8.6	14.2	62.6	87852	44301	20.147
12/08/2010 16:18	8.8	14.2	62.6	87852	45331	20.616
12/08/2010 16:19	8.5	14.3	62.7	87876	43747	19.895
12/08/2010 16:20	8.6	14.2	62.8	88016	44384	20.185
12/08/2010 16:21	8.7	14.4	62.9	88038	44806	20.377
12/08/2010 16:22	8.4	14.5	62.9	88156	43269	19.678
12/08/2010 16:23	8.5	14.4	62.9	88156	43835	19.935
12/08/2010 16:24	8.5	14.6	62.9	88274	43791	19.915
12/08/2010 16:25	8.6	14.7	62.9	88274	44254	20.126
12/08/2010 16:26	9.1	14.9	63.0	88414	46792	21.280
12/08/2010 16:27	8.9	15.5	63.1	88554	45512	20.698
Period Average =	**8.7**	**14.3**	62.6	87790	**44469**	**20.224**
Period Avg Dry =				**75232**		

U-2 CO2 #/Hr RATA RUN ___11____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: All Data Groups
Report Name: U2 CO2 Lb-Hr
Start of Report: 12/08/2010 16:33
End of Report: 12/08/2010 16:56

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G75-C2	G75-C21	G75-C15	G75-C24	G75-C25	G75-C26
Long Descrip.	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Outle	U-2 Outle	U-2 Outle
Short Descrip.	CO2s	H2Os	VELOCITYs	OutFlow	CO2s#	CO2sMT
Units	%	%	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-30	0-132	0-500000	0-100000	0-50
12/08/2010 16:33	8.7	15.4	63.1	88554	44542	20.257
12/08/2010 16:34	9.1	15.9	63.1	88554	46315	21.063
12/08/2010 16:35	9.1	16.4	63.1	88554	46040	20.938
12/08/2010 16:36	9.1	16.7	63.2	88695	45947	20.896
12/08/2010 16:37	9.0	16.8	63.2	88695	45388	20.642
12/08/2010 16:38	9.7	16.9	63.1	88436	48717	22.156
12/08/2010 16:39	9.8	17.7	63.1	88436	48745	22.168
12/08/2010 16:40	9.5	18.0	63.3	88598	47167	21.451
12/08/2010 16:41	9.6	17.9	63.6	89018	47948	21.806
12/08/2010 16:42	9.6	17.9	64.0	89459	48185	21.914
12/08/2010 16:43	9.8	18.2	64.0	89459	49009	22.289
12/08/2010 16:44	9.9	18.3	64.1	89718	49592	22.554
12/08/2010 16:45	9.4	18.2	64.1	89718	47145	21.441
12/08/2010 16:46	9.3	17.6	64.3	89998	47132	21.435
12/08/2010 16:47	9.2	17.4	64.4	90138	46811	21.289
12/08/2010 16:48	9.2	17.4	64.5	90278	46884	21.322
12/08/2010 16:49	9.1	17.4	64.6	90298	46385	21.095
12/08/2010 16:50	9.0	17.5	64.9	90717	46032	20.935
12/08/2010 16:51	9.2	17.6	65.1	90997	47143	21.440
12/08/2010 16:52	9.6	17.9	65.9	92237	49681	22.594
12/08/2010 16:53	9.7	18.1	67.1	93917	50989	23.189
12/08/2010 16:54	9.7	18.2	67.2	94182	51070	23.226
12/08/2010 16:55	9.6	18.1	67.4	94463	50757	23.083
12/08/2010 16:56	9.3	17.8	67.6	94743	49497	22.510
Period Average =	9.4	17.5	64.5	90328	47797	21.737
Period Avg Dry =				74547		

U3 CO2 #/Hr RATA Run ___1____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

C)ny: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 14:34
End of Report: 12/09/2010 14:57 **Validation:** All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 14:34	11.80	16.85	38.2	77797	52165	23.724
12/09/2010 14:35	12.00	13.28	38.2	77797	55327	25.162
12/09/2010 14:36	12.10	13.43	38.2	77694	55618	25.294
12/09/2010 14:37	12.10	16.66	38.1	77389	53333	24.255
12/09/2010 14:38	12.30	16.17	38.2	77592	54676	24.866
12/09/2010 14:39	12.30	15.29	38.2	77592	55250	25.127
12/09/2010 14:40	12.80	16.78	38.3	77795	56632	25.756
12/09/2010 14:41	12.10	16.46	38.4	78101	53952	24.537
12/09/2010 14:42	12.00	16.38	38.3	77898	53419	24.294
12/09/2010 14:43	11.70	16.38	38.4	77998	52150	23.717
1')/2010 14:44	11.80	16.18	38.3	77795	52584	23.915
12.)/2010 14:45	11.90	17.80	38.3	77898	52074	23.682
12/09/2010 14:46	11.80	16.57	38.4	78204	52615	23.928
12/09/2010 14:47	12.00	17.03	38.3	78001	53073	24.137
12/09/2010 14:48	12.50	16.09	38.4	78101	55983	25.460
12/09/2010 14:49	12.60	16.48	38.5	78201	56240	25.577
12/09/2010 14:50	12.30	16.56	38.3	78001	54708	24.881
12/09/2010 14:51	12.20	16.56	38.4	78204	54405	24.743
12/09/2010 14:52	12.70	16.67	38.3	78001	56413	25.656
12/09/2010 14:53	12.40	16.96	38.3	77898	54816	24.930
12/09/2010 14:54	12.00	16.64	38.4	77998	53321	24.250
12/09/2010 14:55	12.10	16.82	38.5	78201	53789	24.462
12/09/2010 14:56	12.00	13.81	38.5	78304	55347	25.171
12/09/2010 14:57	12.20	16.97	38.5	78304	54207	24.652
Period Average =	**12.15**	**16.20**	38.3	77949	**54254**	**24.674**
Period Avg Dry =				65320		

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U3 CO2 #/Hr RATA Run ___2____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 15:02
End of Report: 12/09/2010 15:25

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 15:02	11.80	13.31	38.6	78612	54956	24.993
12/09/2010 15:03	11.70	16.57	38.5	78408	52305	23.788
12/09/2010 15:04	11.60	16.66	38.6	78612	51937	23.620
12/09/2010 15:05	11.60	16.48	38.5	78408	51914	23.610
12/09/2010 15:06	12.10	17.14	38.4	78204	53584	24.369
12/09/2010 15:07	12.20	17.14	38.4	78101	53956	24.538
12/09/2010 15:08	11.70	16.56	38.4	78101	52106	23.697
12/09/2010 15:09	12.00	16.93	38.5	78304	53344	24.260
12/09/2010 15:10	11.90	18.10	38.4	78101	52019	23.657
12/09/2010 15:11	12.30	16.55	38.5	78304	54928	24.980
12/09/2010 15:12	12.10	16.91	38.6	78612	54013	24.564
12/09/2010 15:13	11.50	13.50	38.6	78612	53441	24.304
12/09/2010 15:14	11.30	16.33	38.6	78612	50794	23.100
12/09/2010 15:15	11.50	16.33	38.7	78815	51826	23.570
12/09/2010 15:16	11.80	18.12	38.7	78711	51972	23.636
12/09/2010 15:17	12.40	16.30	38.7	78607	55755	25.357
12/09/2010 15:18	12.40	15.75	38.6	78508	56051	25.491
12/09/2010 15:19	12.30	13.11	38.7	78815	57565	26.180
12/09/2010 15:20	12.10	13.50	38.6	78612	56230	25.572
12/09/2010 15:21	12.30	13.29	38.6	78508	57222	26.024
12/09/2010 15:22	12.20	16.46	38.6	78301	54538	24.803
12/09/2010 15:23	12.30	16.46	38.7	78504	55127	25.071
12/09/2010 15:24	12.50	15.78	38.8	78707	56626	25.753
12/09/2010 15:25	12.40	13.19	38.8	78810	57976	26.367
Period Average =	**12.00**	**15.85**	38.6	78495	**54174**	**24.638**
Period Avg Dry =				66052		

U3 CO2 #/Hr RATA Run ___3____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 15:30
End of Report: 12/09/2010 15:53

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 15:30	11.90	16.42	38.8	79019	53710	24.427
12/09/2010 15:31	11.90	16.42	38.8	79019	53710	24.427
12/09/2010 15:32	11.80	16.37	38.8	79124	53361	24.268
12/09/2010 15:33	12.50	16.67	38.7	79024	56253	25.583
12/09/2010 15:34	12.30	16.69	38.6	78716	55124	25.070
12/09/2010 15:35	12.10	16.50	38.6	78716	54351	24.718
12/09/2010 15:36	11.90	16.23	38.6	78612	53555	24.356
12/09/2010 15:37	12.10	16.90	38.7	78711	54087	24.598
12/09/2010 15:38	12.00	17.38	38.6	78508	53193	24.191
12/09/2010 15:39	11.60	17.97	38.7	78815	51252	23.309
12/09/2010 15:40	11.50	17.97	38.6	78820	50814	23.109
12/09/2010 15:41	11.00	18.17	38.5	78720	48425	22.023
12/09/2010 15:42	11.00	18.57	38.4	78516	48063	21.858
12/09/2010 15:43	12.00	18.07	38.5	78408	52682	23.959
12/09/2010 15:44	12.20	16.21	38.4	77998	54489	24.781
12/09/2010 15:45	12.40	16.21	38.5	78201	55527	25.253
12/09/2010 15:46	12.30	17.91	38.5	78304	54032	24.573
12/09/2010 15:47	12.10	16.80	38.4	78204	53804	24.469
12/09/2010 15:48	12.00	16.80	38.4	78204	53359	24.267
12/09/2010 15:49	11.60	17.25	38.5	78304	51367	23.361
12/09/2010 15:50	11.60	16.55	38.4	77998	51599	23.467
12/09/2010 15:51	11.50	17.24	38.4	78101	50798	23.102
12/09/2010 15:52	11.70	16.09	38.5	78304	52536	23.893
12/09/2010 15:53	12.40	16.85	38.5	78201	55102	25.060
Period Average =	11.89	17.01	38.6	78523	52966	24.088
Period Avg Dry =				65166		

U3 CO2 #/Hr RATA Run ___4____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 16:07
End of Report: 12/09/2010 16:30

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 16:07	12.20	17.62	38.5	78304	53782	24.459
12/09/2010 16:08	12.50	17.41	38.5	78201	55173	25.092
12/09/2010 16:09	12.40	17.90	38.6	78404	54548	24.808
12/09/2010 16:10	12.10	16.38	38.6	78508	54286	24.688
12/09/2010 16:11	12.00	16.38	38.6	78508	53837	24.484
12/09/2010 16:12	12.00	16.88	38.6	78508	53515	24.338
12/09/2010 16:13	12.10	16.88	38.7	78711	54101	24.604
12/09/2010 16:14	12.00	17.61	38.7	78711	53182	24.186
12/09/2010 16:15	12.10	17.40	38.6	78508	53623	24.387
12/09/2010 16:16	12.30	16.49	38.7	78815	55326	25.161
12/09/2010 16:17	12.10	16.02	38.5	78512	54522	24.796
12/09/2010 16:18	12.10	15.71	38.5	78512	54723	24.887
12/09/2010 16:19	11.30	16.67	38.5	78512	50523	22.977
12/09/2010 16:20	11.30	17.68	38.5	78408	49845	22.669
12/09/2010 16:21	12.40	17.68	38.5	78304	54624	24.842
12/09/2010 16:22	12.30	16.28	38.5	78201	55033	25.028
12/09/2010 16:23	12.00	13.37	38.5	78304	55630	25.300
12/09/2010 16:24	11.50	18.06	38.6	78508	50557	22.993
12/09/2010 16:25	11.60	18.10	38.7	78711	51104	23.241
12/09/2010 16:26	12.30	16.47	38.7	78607	55193	25.101
12/09/2010 16:27	11.90	18.03	38.7	78711	52470	23.863
12/09/2010 16:28	12.10	16.99	38.8	78915	54169	24.635
12/09/2010 16:29	12.10	16.99	38.8	78915	54169	24.635
12/09/2010 16:30	12.20	15.15	38.8	78915	55827	25.389
Period Average =	**12.04**	**16.84**	38.6	78551	**53740**	**24.440**
Period Avg Dry =				**65323**		

U3 CO2 #/Hr RATA Run ___5____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 16:35
End of Report: 12/09/2010 16:58

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 16:35	12.30	16.37	38.7	78711	55332	25.164
12/09/2010 16:36	12.10	13.47	38.6	78404	56100	25.514
12/09/2010 16:37	12.40	13.47	38.7	78607	57640	26.214
12/09/2010 16:38	12.60	13.34	38.7	78607	58658	26.677
12/09/2010 16:39	12.50	13.01	38.7	78711	58491	26.601
12/09/2010 16:40	12.40	12.54	38.7	78711	58337	26.531
12/09/2010 16:41	12.00	16.97	38.7	78711	53595	24.374
12/09/2010 16:42	12.30	13.49	38.7	78607	57162	25.996
12/09/2010 16:43	12.70	13.14	38.8	78707	59335	26.985
12/09/2010 16:44	12.80	13.01	38.8	78707	59892	27.238
12/09/2010 16:45	12.40	13.01	38.9	79014	58247	26.490
12/09/2010 16:46	11.90	16.36	39.0	79321	53954	24.537
12/09/2010 16:47	11.90	13.49	38.8	79019	55593	25.283
12/09/2010 16:48	12.20	16.62	38.8	79019	54932	24.982
12/09/2010 16:49	12.20	13.03	38.9	79014	57294	26.056
12/09/2010 16:50	12.10	13.13	39.0	79217	56905	25.879
12/09/2010 16:51	12.00	13.50	38.9	79014	56050	25.491
12/09/2010 16:52	12.00	15.88	38.8	78915	54440	24.758
12/09/2010 16:53	11.90	15.88	38.8	79124	54129	24.617
12/09/2010 16:54	12.00	16.39	38.7	79129	54256	24.675
12/09/2010 16:55	11.90	17.44	38.7	79129	53128	24.162
12/09/2010 16:56	12.30	16.30	38.6	78820	55455	25.220
12/09/2010 16:57	12.40	13.62	38.6	78612	57544	26.170
12/09/2010 16:58	11.70	14.87	38.5	78408	53371	24.272
Period Average =	12.21	14.51	38.8	78843	56243	25.579
Period Avg Dry =				67400		

U3 CO2 #/Hr RATA Run ___6____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 17:02
End of Report: 12/09/2010 17:25

Validation: Valid Data Only

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 17:02	13.30	17.06	38.5	78304	59030	26.846
12/09/2010 17:03	12.70	13.24	38.5	78201	58886	26.780
12/09/2010 17:04	12.10	15.97	38.5	78304	54410	24.745
12/09/2010 17:05	11.90	16.21	38.5	78512	53500	24.331
12/09/2010 17:06	11.70	16.18	38.5	78616	52689	23.962
12/09/2010 17:07	11.40	16.03	38.4	78516	51364	23.360
12/09/2010 17:08		16.33	38.4	78412		
12/09/2010 17:09			38.4	78308		
12/09/2010 17:10			38.5	78408		
12/09/2010 17:11			38.6	78508		
12/09/2010 17:12			38.6	78508		
12/09/2010 17:13			38.5	78201		
12/09/2010 17:14			38.5	78201		
12/09/2010 17:15			38.6	78404		
12/09/2010 17:16			38.6	78508		
12/09/2010 17:17			38.5	78408		
12/09/2010 17:18	11.70		38.4	78204		
12/09/2010 17:19	12.40		38.4	78101		
12/09/2010 17:20	12.20	13.08	38.4	77998	56525	25.707
12/09/2010 17:21	11.90	13.43	38.5	78201	55056	25.038
12/09/2010 17:22	12.50	16.46	38.6	78198	55805	25.379
12/09/2010 17:23	12.60	13.19	38.7	78297	58528	26.617
12/09/2010 17:24	12.40	12.88	38.8	78603	58030	26.391
12/09/2010 17:25	12.10	12.88	38.9	79014	56922	25.887
Period Average =	**12.21**	**14.84**	38.5	78372	**55895**	**25.420**
Period Avg Dry =				66741		

U3 CO2 #/Hr RATA Run ___7____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 17:30
End of Report: 12/09/2010 17:53

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 17:30	11.80	13.47	38.7	78815	54996	25.011
12/09/2010 17:31	11.80	12.51	38.7	78815	55606	25.289
12/09/2010 17:32	12.00	16.51	38.7	78815	53963	24.542
12/09/2010 17:33	12.00	16.51	38.6	78508	53753	24.446
12/09/2010 17:34	12.30	10.32	38.7	78607	59257	26.949
12/09/2010 17:35	12.00	12.54	38.7	78607	56380	25.641
12/09/2010 17:36	12.00	10.59	38.8	78810	57786	26.280
12/09/2010 17:37	12.00	13.29	38.7	78711	55971	25.455
12/09/2010 17:38	12.00	13.00	38.7	78711	56158	25.540
12/09/2010 17:39	11.70	15.78	38.7	78815	53074	24.137
12/09/2010 17:40	11.90	13.49	38.7	78815	55449	25.218
12/09/2010 17:41	12.10	13.49	38.8	79019	56527	25.708
12/09/2010 17:42	11.90	16.65	38.8	79019	53562	24.359
12/09/2010 17:43	11.70	13.34	38.8	79124	54826	24.934
12/09/2010 17:44	11.50	13.65	38.8	79124	53696	24.420
12/09/2010 17:45	11.60	16.64	38.8	79019	52218	23.748
12/09/2010 17:46	12.10	13.24	38.7	78815	56544	25.715
12/09/2010 17:47	12.40	13.10	38.7	78815	58040	26.396
12/09/2010 17:48	12.30	12.31	38.7	78711	58018	26.386
12/09/2010 17:49	12.30	12.31	38.7	78607	57942	26.351
12/09/2010 17:50	12.40	13.30	38.8	78707	57827	26.299
12/09/2010 17:51	12.40	12.34	38.8	78707	58467	26.590
12/09/2010 17:52	12.50	13.33	38.8	78707	58273	26.502
12/09/2010 17:53	12.10	15.51	38.9	79014	55204	25.106
Period Average =	**12.03**	**13.63**	38.7	78809	**55981**	**25.459**
Period Avg Dry =				**68064**		

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Date/Time Printed: 01/13/2011 13:43

U3 CO2 #/Hr RATA Run ___8____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 17:57
End of Report: 12/09/2010 18:20

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 17:57	11.70	16.48	39.1	79630	53178	24.184
12/09/2010 17:58	11.70	13.05	39.0	79321	55147	25.080
12/09/2010 17:59	11.90	12.29	39.1	79525	56725	25.798
12/09/2010 18:00	11.60	10.47	39.0	79531	56447	25.671
12/09/2010 18:01	11.90	13.08	38.9	79328	56075	25.502
12/09/2010 18:02	12.20	13.74	39.0	79426	57122	25.978
12/09/2010 18:03	12.10	12.28	39.0	79321	57537	26.167
12/09/2010 18:04	11.90	12.35	39.2	79623	56756	25.812
12/09/2010 18:05	11.60	12.35	39.1	79420	55184	25.097
12/09/2010 18:06	11.70	13.32	39.0	79426	55048	25.035
12/09/2010 18:07	11.50	12.40	39.0	79531	54754	24.901
12/09/2010 18:08	11.30	13.09	39.0	79637	53449	24.308
12/09/2010 18:09	11.50	15.51	38.9	79328	52675	23.956
12/09/2010 18:10	12.10	12.35	38.9	79118	57344	26.079
12/09/2010 18:11	12.30	12.64	39.0	79217	58172	26.456
12/09/2010 18:12	12.30	10.22	39.0	79217	59783	27.188
12/09/2010 18:13	11.90	10.22	39.0	79426	57991	26.374
12/09/2010 18:14	11.70	13.15	38.9	79328	55088	25.053
12/09/2010 18:15	11.80	12.85	38.9	79433	55825	25.388
12/09/2010 18:16	11.80	16.79	38.9	79433	53301	24.240
12/09/2010 18:17	11.80	13.63	38.9	79328	55252	25.128
12/09/2010 18:18	11.50	12.44	38.9	79118	54444	24.761
12/09/2010 18:19	11.80	13.49	38.9	79118	55195	25.102
12/09/2010 18:20	11.70	12.76	38.9	79223	55262	25.132
Period Average =	11.80	12.96	39.0	79375	55740	25.350
Period Avg Dry =				69091		

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Date/Time Printed: 01/13/2011 13:43

U3 CO2 #/Hr RATA Run ___9____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 18:24
End of Report: 12/09/2010 18:47

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 18:24	11.70	13.16	38.7	78815	54725	24.888
12/09/2010 18:25	12.00	12.43	38.8	78915	56672	25.774
12/09/2010 18:26	12.60	16.91	38.8	78915	56462	25.678
12/09/2010 18:27	12.40	16.30	38.8	78915	55973	25.456
12/09/2010 18:28	11.90	13.03	38.8	79019	55889	25.417
12/09/2010 18:29	11.80	13.03	38.8	79124	55493	25.237
12/09/2010 18:30	11.90	13.23	38.8	79124	55834	25.393
12/09/2010 18:31	11.90	12.26	38.7	78920	56313	25.610
12/09/2010 18:32	12.00	12.80	38.7	78920	56436	25.666
12/09/2010 18:33	12.40	13.32	38.6	78508	57667	26.226
12/09/2010 18:34	12.00	13.37	38.6	78508	55775	25.366
12/09/2010 18:35	11.60	16.53	38.6	78508	51949	23.626
12/09/2010 18:36	11.70	12.33	38.6	78508	55033	25.028
12/09/2010 18:37	11.90	12.33	38.6	78508	55974	25.456
12/09/2010 18:38	11.80	15.89	38.7	78711	53388	24.280
12/09/2010 18:39	11.80	16.29	38.6	78612	53067	24.134
12/09/2010 18:40	11.60	12.15	38.6	78612	54747	24.898
12/09/2010 18:41	11.70	12.77	38.6	78612	54830	24.936
12/09/2010 18:42	12.00	13.68	38.7	78711	55719	25.340
12/09/2010 18:43	12.10	16.56	38.7	78607	54237	24.666
12/09/2010 18:44	12.30	13.85	38.7	78711	56999	25.923
12/09/2010 18:45	12.50	13.85	38.7	78711	57926	26.344
12/09/2010 18:46	12.30	13.46	38.8	79019	57482	26.142
12/09/2010 18:47	11.80	15.70	38.6	78716	53512	24.336
Period Average =	11.99	13.97	38.7	78760	55504	25.243
Period Avg Dry =				67758		

Date/Time Printed: 01/13/2011 13:44

U3 CO2 #/Hr RATA Run ___10____

COVANTA ENERGY

Lee County Solid Waste Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Fort Myers, FL 33905

Data Group: U3_1 MIN DATA
Report Name: U3 RATA CO2
Start of Report: 12/09/2010 18:52
End of Report: 12/09/2010 19:15

Validation: All Available Data

	CO2	H2O	VELOCITY	FLOW	CO2 #/Hr	CO2 MT/Hr
Group#-Channel#	G7-C46	G7-C24	G7-C47	G7-C49	G7-C50	G7-C51
Long Descrip.	U3 1Min S	U3 1 MIN	U-3 1Min	U-3 1 Min	U-3 Outle	U-3 Outle
Short Descrip.	CO2s	H2O-FTIR	VELOCITYs	OutFlow	CO2s#	CO2s MT
Units	%	ppm	Ft/Sec	scfm	#/hr	MTon/hr
Range	0-20	0-100	0-132	0-500000	0-100000	0-50
12/09/2010 18:52	11.90	16.59	38.7	78815	53462	24.314
12/09/2010 18:53	11.60	15.94	38.7	78920	52591	23.917
12/09/2010 18:54	11.80	15.94	38.7	78815	53426	24.297
12/09/2010 18:55	12.20	17.13	38.6	78612	54315	24.702
12/09/2010 18:56	12.10	16.71	38.5	78408	54002	24.560
12/09/2010 18:57	12.20	13.50	38.6	78612	56694	25.784
12/09/2010 18:58	12.50	13.18	38.6	78508	58226	26.480
12/09/2010 18:59	12.10	13.27	38.6	78508	56305	25.606
12/09/2010 19:00	11.90	12.85	38.5	78512	55645	25.306
12/09/2010 19:01	11.90	15.62	38.4	78308	53736	24.438
12/09/2010 19:02	11.80	15.62	38.4	78204	53214	24.201
12/09/2010 19:03	11.60	16.78	38.4	78204	51593	23.464
12/09/2010 19:04	11.50	16.38	38.3	77898	51193	23.282
12/09/2010 19:05	12.00	12.28	38.4	78101	56184	25.552
12/09/2010 19:06	11.70	13.66	38.3	78001	53848	24.489
12/09/2010 19:07	11.60	13.59	38.3	78001	53431	24.300
12/09/2010 19:08	11.50	17.09	38.3	78001	50825	23.115
12/09/2010 19:09	12.30	13.47	38.3	77898	56660	25.768
12/09/2010 19:10	12.30	13.47	38.4	77998	56732	25.801
12/09/2010 19:11	12.80	13.12	38.3	77692	59045	26.853
12/09/2010 19:12	12.80	12.67	38.4	77998	59584	27.098
12/09/2010 19:13	12.30	17.04	38.4	78101	54463	24.769
12/09/2010 19:14	12.20	16.03	38.2	77797	54466	24.770
12/09/2010 19:15	12.10	16.61	38.2	77900	53717	24.430
Period Average =	**12.03**	**14.94**	38.4	78242	**54723**	**24.887**
Period Avg Dry =				66553		

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APPENDIX D

Source Seven-day Drift Data

CO_2

Calibration Report

COVANTA ENERGY

Lee County Solid Waste
Resource Recovery Facility

Company: Covanta Lee, Inc.
10500 Buchingham Road
Suite 400
Fort Myers, FL

Stack Designation: UNIT #3
Parameter: CO2s 3
Units: %
Serial #: N2L1462T
Start of Report: 12/09/10 00:00
End of Report: 12/16/10 08:00

ZERO READINGS

SPAN READINGS

START	STOP	EXPECT.	ACTUAL	ERROR	%	START	STOP	EXPECT.	ACTUAL	ERROR	%	STATUS
12/09/10 13:27	12/09/10 13:32	0.00	0.00	0.00	0.0	12/09/10 13:37	12/09/10 13:42	10.99	11.10	0.11	0.5	OK
12/10/10 06:48	12/10/10 06:53	0.00	0.00	0.00	0.0	12/10/10 06:58	12/10/10 07:03	10.99	10.90	-0.09	-0.4	OK
12/11/10 06:48	12/11/10 06:53	0.00	0.00	0.00	0.0	12/11/10 06:58	12/11/10 07:03	10.99	10.90	-0.09	-0.4	OK
12/12/10 06:48	12/12/10 06:53	0.00	-0.10	-0.10	-0.5	12/12/10 06:58	12/12/10 07:03	10.99	10.80	-0.19	-0.9	OK
12/13/10 06:48	12/13/10 06:53	0.00	-0.10	-0.10	-0.5	12/13/10 06:58	12/13/10 07:03	10.99	10.70	-0.29	-1.4	OK
12/14/10 06:48	12/14/10 06:53	0.00	-0.10	-0.10	-0.5	12/14/10 06:58	12/14/10 07:03	10.99	10.80	-0.19	-0.9	OK
12/15/10 06:48	12/15/10 06:53	0.00	-0.10	-0.10	-0.5	12/15/10 06:58	12/15/10 07:03	10.99	10.90	-0.09	-0.4	OK
12/16/10 06:48	12/16/10 06:53	0.00	-0.10	-0.10	-0.5	12/16/10 06:58	12/16/10 07:03	10.99	10.80	-0.19	-0.9	OK

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APPENDIX E

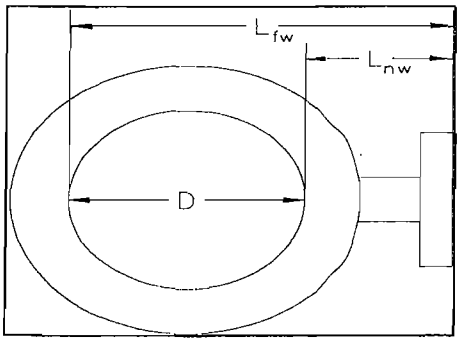
REFERENCE METHOD FIELD DATA

Flow Rate, Moisture

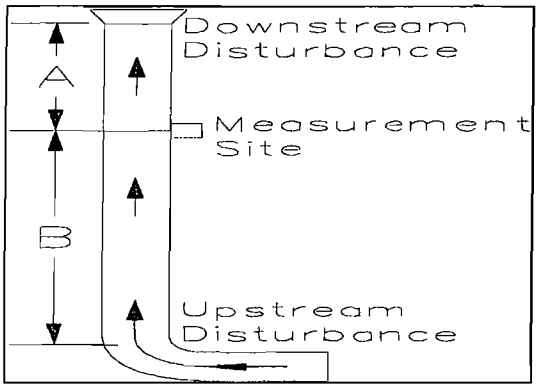
EPA Method 1 for Circular Ducts or Stacks

Client Name	Covanta Projects, Inc.	**Operator**	Chris Wrenn
Plant Name	Lee County SWRRF	**Date**	12/07/10
Plant City, State	Ft. Myers, FL	**Project #**	10748
Sampling Location	Units 1 & 2 Stacks	**# of Ports Available**	2
Stack Type	Circular	**# of Ports Used**	2
Stack Size	Large	**Port Inside Diam.**	6 inches

Rectangular Stacks or Ducts			
Distance to Far Wall of Stack	(L_{fw})	84.50	in
Distance to Near Wall of Stack	(L_{nw})	6.50	in
Diameter of Stack (=L_{fw} - L_{nw})	(D)	78.00	in
Area of Stack (=3.14(D/2/C_{units})^2)	(A_s)	33.183	ft^2



Distance from Port to Disturbances				
Distance Upstream	FEET =>	43		<= IN
Diameters Upstream (=DU/D_e)		(B_D)	6.62	diameters
Distance Downstream	FEET =>	236		<= IN
Diameters Downstream (=DD/D_e)		(A_D)	36.31	diameters



Number of Traverse Points Required			
Diameters to Flow Disturbance		**Minimum Number of[1] Traverse Points**	
Up Stream	**Down Stream**	**Particulate Points**	**Velocity Points**
2.00-4.99	0.50-1.24	24	16
5.00-5.99	1.25-1.49	20	16
6.00-6.99	1.50-1.74	16	12
7.00-7.99	1.75-1.99	12	12
>= 8.00	>=2.00	8 or 12[2]	8 or 12[2]
Upstream Spec		12	
Downstream Spec		12	
Traverse Pts Required		12	0

[1] Check Minimum Number of Points for the Upstream and Downstream conditions, then use the largest.

[2] 8 for Circular Stacks 12 to 24 inches

12 for Circular Stacks over 24 inches

Number of Traverse Points Used			
12	**Input Traverse Points Required**		
2	**Ports by**	6	**Points In**
12	**Total Points to be Measured**		

Location of Traverse Points in Circular Stacks						
Traverse Point Number	(Fraction of Stack Diameter from Inside Wall to Traverse Point) Number of Traverse Points on a Diameter					
	2	4	6	8	10	12
1	.146	.067	.044	.032	.026	.021
2	.854	.250	.146	.105	.082	.067
3		.750		.194		.118
4		.933	.296	.323	.146 .226	.177
5			.704 .854	.677	.342	.250
6			.956	.806	.658	.356
7				.895	.774	.644
8				.968	.854	.750
9					.918	.823
10					.974	.882
11						.933
12						.979

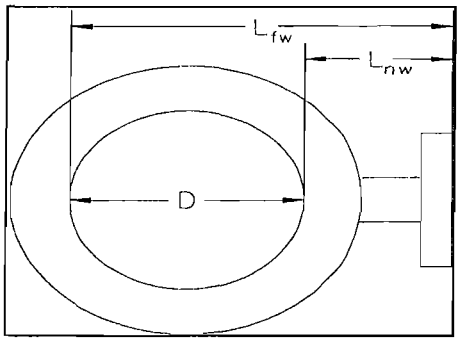
Traverse Point Locations			
Traverse Point Number	**Fraction of Stack Diameter**	**Distance from Inside Wall**	**Distance Including Nipple Length**
		in	in
1	0.044	3 3/8	9 7/8
2	0.146	11 3/8	17 7/8
3	0.296	23 1/8	29 5/8
4	0.704	54 7/8	61 3/8
5	0.854	66 5/8	73 1/8
6	0.956	74 5/8	81 1/8
7			
8			
9			
10			
11			
12			

Signature:	On File
Checked:	D.M. Britt

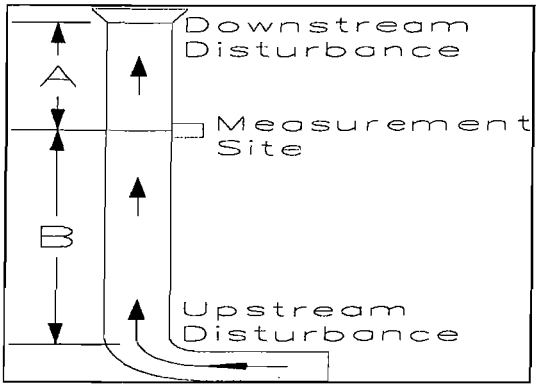
EPA Method 1 for Circular Ducts or Stacks

Client Name	Covanta Projects, Inc.	**Operator**	Chris Wreath
Plant Name	Lee County SWRRF	**Date**	12/07/10
Plant City, State	Ft. Myers, FL	**Project #**	10748
Sampling Location	Unit 3 Stack	**# of Ports Available**	2
Stack Type	Circular	**# of Ports Used**	2
Stack Size	Large	**Port Inside Diam.**	6 inches

Rectangular Stacks or Ducts			
Distance to Far Wall of Stack	(L_{fw})	80.00	in
Distance to Near Wall of Stack	(L_{nw})	6.00	in
Diameter of Stack (=L_{fw} - L_{nw})	(D)	74.00	in
Area of Stack (=3.14(D/2/C_{units})^2)	(A_s)	29.87	ft^2



Distance from Port to Disturbances				
Distance Upstream	FEET =>	51.5		<= IN
Diameters Upstream (=DU/D_e)		(B_D)	8.35	diameters
Distance Downstream	FEET =>	236		<= IN
Diameters Downstream (=DD/D_e)		(A_D)	38.27	diameters



Number of Traverse Points Required			
Diameters to Flow Disturbance		**Minimum Number of[1] Traverse Points**	
Up Stream	**Down Stream**	**Particulate Points**	**Velocity Points**
2.00-4.99	0.50-1.24	24	16
5.00-5.99	1.25-1.49	20	16
6.00-6.99	1.50-1.74	16	12
7.00-7.99	1.75-1.99	12	12
>= 8.00	>=2.00	8 or 12[2]	8 or 12[2]
Upstream Spec		12	
Downstream Spec		12	
Traverse Pts Required		12	0

[1] Check Minimum Number of Points for the Upstream and Downstream conditions, then use the largest.

[2] *8 for Circular Stacks 12 to 24 inches*

12 for Circular Stacks over 24 inches

Number of Traverse Points Used			
12	**Input Traverse Points Required**		
2	**Ports by**	6	**Points In**
12	**Total Points to be Measured**		

Location of Traverse Points in Circular Stacks						
Traverse Point Number	(Fraction of Stack Diameter from Inside Wall to Traverse Point) Number of Traverse Points on a Diameter					
	2	4	6	8	10	12
1	.146	.067	.044	.032	.026	.021
2	.854	.250	.146	.105	.082	.067
3		.750	.296	.194	.146	.118
4		.933	.704	.323	.226	.177
5			.854	.677	.342	.250
6			.956	.806	.658	.356
7				.895	.774	.644
8				.968	.854	.750
9					.918	.823
10					.974	.882
11						.933
12						.979

Traverse Point Locations			
Traverse Point Number	**Fraction of Stack Diameter**	**Distance from Inside Wall**	**Distance Including Nipple Length**
		in	in
1	0.044	3 2/8	9 2/8
2	0.146	10 6/8	16 6/8
3	0.296	21 7/8	27 7/8
4	0.704	52 1/8	58 1/8
5	0.854	63 2/8	69 2/8
6	0.956	70 6/8	76 6/8
7			
8			
9			
10			
11			
12			

Signature:	on file
Checked:	D. Y. Ruth

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			Operator	RBC		Tstd
Plant Name	Lee County Resource Recovery Facility			Date	12/8/10		68
Plant City, State	Ft. Myers, FL			Project #	10748		Pstd
Sampling Location	Unit 1 Stack			Pitot ID	P-150		29.92
Manometer ID #	T5	Umbilical ID #	U50-2	Pitot Coefficient (C_p)		0.84	TC Check
Diameter or Depth of Duct/Stack		78.00	in	Thermocouple ID #		P-150	Y
Width of Duct/Stack			in	Barometric Pressure		30.00	Pitot Check
Area of Duct/Stack		33.18	ft^2				Y

Velocity Traverse Data

Run #	1-S-M2-1		1-S-M2-2		1-S-M2-3		1-S-M2-4	
Run Time	936-942		1005-1011		1157-1203		1230-1235	
Traverse Point	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF
A - 6	1.10	292	1.15	291	1.10	291	1.10	291
A - 5	1.20	291	1.20	291	1.25	291	1.10	291
A - 4	1.30	291	1.30	291	1.20	292	1.00	291
A - 3	1.15	291	1.15	291	1.10	292	1.20	292
A - 2	0.89	291	1.05	292	0.90	292	1.05	292
A - 1	0.69	291	0.64	292	0.65	292	0.92	292
B - 6	1.10	287	1.15	290	1.15	287	1.10	287
B - 5	1.20	289	1.15	290	1.20	289	1.10	290
B - 4	0.98	290	1.10	291	1.10	290	1.20	291
B - 3	1.00	291	1.15	291	1.05	291	1.05	291
B - 2	0.91	291	0.80	292	0.89	291	0.96	292
B - 1	0.73	292	0.63	292	0.75	292	0.82	292
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
Averages	1.0123	290.6	1.0267	291.2	1.0196	290.8	1.0473	291.0

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	8.624	8.854	8.710	8.695
Oxygen Concentration	($\%O_2$)	%	10.905	10.969	10.829	10.974
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.5	80.2	80.5	80.3
Stack Moisture Content	(B_{ws})	%	14.20	14.2	14.2	16.9
Static Pressure	(Pg)	in Hg	-1.30	-1.3	-1.3	-1.3
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	29.90
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.82	29.86	29.83	29.83
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	28.14	28.17	28.15	27.83
Avg Stack Gas Velocity	(v_s)	ft/sec	68.2	68.7	68.5	69.8
Actual Wet Flow Rate	(Q_{aw})	ACFM	135,807	136,743	136,295	138,936
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	81,958	82,459	82,225	81,163

Signature:	on file	Approved By:	

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	RBC	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/8/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 1 Stack			**Pitot ID**	P-150	**29.92**
Manometer ID #	T5	**Umbilical ID #**	U50-2	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		78.00	in	**Thermocouple ID #**	P-150	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.00	**Pitot Check**
Area of Duct/Stack		33.18	ft^2			Y

Velocity Traverse Data

Run #	1-S-M2-5		1-S-M2-6		1-S-M2-7		1-S-M2-8	
Run Time	1307-1313		1330-1335		1418-1423		1508-1513	
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) In H_2O**	**Stack Temp, oF**
A - 6	1.20	292	1.20	293	1.05	292	0.96	293
A - 5	1.25	292	1.25	293	1.10	292	0.99	293
A - 4	1.20	292	1.15	293	0.95	292	1.10	293
A - 3	1.10	292	1.20	293	0.95	292	1.15	293
A - 2	0.92	292	0.95	293	0.86	292	0.83	293
A - 1	0.68	293	0.57	292	0.71	290	0.68	294
B - 6	1.15	290	1.15	289	0.95	288	0.93	291
B - 5	1.10	291	1.20	291	0.97	290	0.94	291
B - 4	1.15	292	1.20	292	1.10	291	1.00	292
B - 3	1.15	292	1.20	293	0.97	291	1.15	292
B - 2	0.81	292	0.83	293	0.91	292	0.75	290
B - 1	0.64	291	0.71	292	0.72	292	0.60	289
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
Averages	1.0180	291.8	1.0376	292.3	0.9326	291.2	0.9150	292.0

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	8.802	8.913	8.925	8.601
Oxygen Concentration	($\%O_2$)	%	10.765	10.621	10.655	10.888
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.4	80.5	80.4	80.5
Stack Moisture Content	(B_{ws})	%	16.90	16.9	14.6	14.6
Static Pressure	(Pg)	in Hg	-1.3	-1.3	-1.3	-1.3
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	29.90
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.84	29.85	29.85	29.81
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	27.84	27.85	28.12	28.09
Avg Stack Gas Velocity	(v_s)	ft/sec	68.9	69.5	65.5	65.0
Actual Wet Flow Rate	(Q_{aw})	ACFM	137,028	138,361	130,438	129,354
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	79,968	80,692	78,290	77,554

Signature:	on file	**Approved By:**	

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	RBC	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/8/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 1 Stack			**Pitot ID**	P-150	**29.92**
Manometer ID #	T5	**Umbilical ID #**	U50-2	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		78.00	in	**Thermocouple ID #**	P-150	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.00	**Pitot Check**
Area of Duct/Stack		33.18	ft^2			Y

Velocity Traverse Data

Run #	1-S-M2-9		1-S-M2-10		1-S-M2-11		1-S-M2-12	
Run Time	1534-1539		1605-1610		1635-1640			
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**
A - 6	1.10	293	0.95	294	1.10	293		
A - 5	1.10	293	0.94	294	1.15	293		
A - 4	0.95	293	1.00	294	1.10	293		
A - 3	1.06	293	1.10	294	1.10	293		
A - 2	1.00	293	0.93	295	0.95	293		
A - 1	0.65	293	0.77	295	0.59	293		
B - 6	1.05	291	1.00	293	0.99	291		
B - 5	1.20	291	0.99	293	1.05	292		
B - 4	1.15	292	1.20	294	1.25	293		
B - 3	1.10	293	1.10	295	1.15	293		
B - 2	0.85	293	0.88	295	0.93	293		
B - 1	0.68	293	0.69	295	0.71	294		
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
Averages	0.9827	292.6	0.9576	294.3	0.9964	292.8	#DIV/0!	ERRR

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	8.836	8.873	9.194	
Oxygen Concentration	($\%O_2$)	%	10.737	10.844	10.636	
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.4	80.3	80.2	
Stack Moisture Content	(B_{ws})	%	14.60	15.3	15.3	
Static Pressure	(Pg)	in Hg	-1.3	-1.3	-1.3	
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.84	29.85	29.90	
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	28.11	28.04	28.08	
Avg Stack Gas Velocity	(v_s)	ft/sec	67.4	66.6	67.9	
Actual Wet Flow Rate	(Q_{aw})	ACFM	134,046	132,643	135,092	
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	80,305	78,638	80,241	

Signature:	on file	**Approved By:**	

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	**Project #**	10748
Plant Name	Lee County Res Rec Facility	**Balance Type**	Electronic
Plant City, State	Ft. Myers, FL	**Balance ID**	EB1
Sampling Location	Unit 1 Stack	**Operator Name**	RBC, JA

Run Number	1-S-M4-1	1-S-M4-2	1-S-M4-3	1-S-M4-4
Test Date	12/8/2010	12/8/2010	12/8/2010	12/8/2010
Reagent Box ID				

Impinger Reagent	DI Water	mL	mL	mL	mL
Final Catch Weight	grams	423.2	436.5	425.5	346.3
Initial Tare Weight	grams	200.0	200.0	200.0	200.0
Net Moisture Caught	grams	223.2	236.5	225.5	146.3

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMNo4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	254.5	278.0	266.3	269.7
Initial Tare Weight	grams	247.4	263.3	254.5	256.2
Net Moisture Caught	grams	7.1	14.7	11.8	13.5

Total Catch	grams	230.3	251.2	237.3	159.8

Signature:	on file	**Checked By:**	Chris M. Lehn	

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	1-S-M4-1
Plant Name	Lee County Resource Recovery Facility	Project #	10748
Plant City, State	Ft. Myers, FL	Personnel	RBC
Test Location	Unit 1 Stack	Tester Signature	
Date of Test	12/8/2010	Checked By	

Run Start	934
Run End	1223

Isokinetic Factor Setup		Pressures		Sampling Equipment		Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.739	Pbar	30.0	Meter Console #	T5			CO_2
Meter Calibration Factor	1.0028	Pstatic	-1.30	Ideal Nozzle Diameter	0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID # 7'	150			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material	BG	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #	NA	0.9846		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #	CB22	1.82%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #	U50-4	PASS		H_20
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s	150			230.3

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		55	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	5					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
B - 2	934	0.0	107.000	NA		1.30	1	58	61	NA		55	NA
-		10.0	113.440	NA		1.30	1	61	58	NA		50	NA
-		20.0	119.745	NA		1.30	1	66	59	NA		56	NA
-		30.0	125.465	NA		1.30	2	68	61	NA		55	NA
-		40.0	132.655	NA		1.30	2	71	62	NA		51	NA
-		50.0	139.100	NA		1.30	2	72	64	NA		48	NA
-		60.0	145.565	NA		1.30	2	73	65	NA		47	NA
-	1043/	70.0	152.163	NA		1.30	2	74	66	NA		47	NA
-	1154	80.0	158.595	NA		1.30	2	68	65	NA		50	NA
-		90.0	165.025	NA		1.30	2	72	66	NA		55	NA
-	1223	100.0	171.523										
						MAX =>	2						
Average Values		100.0	64.523			1.30		66					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	1-S-M4-2		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1230
Plant City, State	Ft. Myers, FL	Personnel	RBC	Run End	1400
Test Location	Unit 1 Stack	Tester Signature	on file		
Date of Test	12/8/2010	Checked By	[signature]		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.739	Pbar	30.0	Meter Console #		T5			CO_2
Meter Calibration Factor	1.0028	Pstatic	-1.30	Ideal Nozzle Diameter		0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #		NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter		NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID #	7'	150			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material		BG	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #		NA	0.9872		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #		CB22	1.56%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #		U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s		150			251.2

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	5					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
B - 2	1230	0.0	171.700	NA		1.30	2	71	68	NA		62	NA
-		10.0	178.190	NA		1.30	2	74	68	NA		62	NA
-		20.0	184.650	NA		1.30	2	77	69	NA		59	NA
-		30.0	191.010	NA		1.30	2	78	70	NA		59	NA
-		40.0	197.500	NA		1.30	2	79	71	NA		57	NA
-		50.0	203.392	NA		1.30	2	80	72	NA		58	NA
-		60.0	210.515	NA		1.30	2	80	72	NA		59	NA
-		70.0	217.712	NA		1.30	2	81	73	NA		59	NA
-		80.0	223.635	NA		1.30	2	81	73	NA		60	NA
-	1400	90.0	230.100										
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						MAX =>	2						
Average Values		90.0	58.400			1.30		74					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	1-S-M4-3		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1417
Plant City, State	Ft. Myers, FL	Personnel	RBC	Run End	1557
Test Location	Unit 1 Stack	Tester Signature	on file		
Date of Test	12/8/2010	Checked By	[signature]		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.739	Pbar	30.0	Meter Console #		T5			CO_2
Meter Calibration Factor	1.0028	Pstatic	-1.30	Ideal Nozzle Diameter		0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #		NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter		NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID #	7'	150			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material		BG	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #		NA	0.9746		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #		CB20	2.81%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #		U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s		150			237.3

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	5					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
B - 2	1417	0.0	230.300	NA		1.30	2	74	73	NA		63	NA
-		10.0	236.850	NA		1.30	2	77	73	NA		55	NA
-		20.0	243.211	NA		1.30	2	80	74	NA		56	NA
-		30.0	249.311	NA		1.30	2	81	74	NA		56	NA
-		40.0	256.410	NA		1.30	2	82	75	NA		58	NA
-		50.0	263.305	NA		1.30	2	83	76	NA		59	NA
-		60.0	269.806	NA		1.30	2	83	76	NA		60	NA
-		70.0	276.485	NA		1.30	2	83	76	NA		60	NA
-		80.0	282.308	NA		1.30	2	83	77	NA		60	NA
-		90.0	288.864	NA		1.30	2	83	77	NA		61	NA
-	1557	100.0	296.257										
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						MAX =>	2						
Average Values		100.0	65.957			1.30		78					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	**Run #**	1-S-M4-4		
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748	Run Start	1604
Plant City, State	Ft. Myers, FL	**Personnel**	RBC	Run End	1704
Test Location	Unit 1 Stack	**Tester Signature**	(signature)		
Date of Test	12/8/2010	**Checked By**	(signature)		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.739	Pbar	30.0	Meter Console #		T5			CO_2
Meter Calibration Factor	1.0028	Pstatic	-1.30	Ideal Nozzle Diameter		0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #		NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter		NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID #	7'	150			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material		BG	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #		NA	0.9807		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #		CB20	2.20%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #		U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s		150			159.8

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	5					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
B - 2	1604	0.0	296.677	NA		1.50	3	79	76	NA		63	NA
-		10.0	303.715	NA		1.50	3	82	76	NA		63	NA
-		20.0	310.730	NA		1.50	3	83	76	NA		64	NA
-		30.0	317.730	NA		1.50	3	84	77	NA		60	NA
-		40.0	324.750	NA		1.50	3	84	77	NA		61	NA
-		50.0	331.910	NA		1.50	3	84	77	NA		60	NA
-	1704	60.0	338.972										
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-						ADJUST DELTA H AND LENGTH OF RUN FOR TIME REMAINING							
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						MAX =>	3						
Average Values		60.0	42.295			1.50		80					

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD M4

Client Name	Covanta Projects, Inc.	**Operator**	RBC
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748
Sampling Location	Unit 1 Stack	**Standard Temperature, °F**	**68**

USE IN AVERAGE OF RUN SET? 1 or 0 =>		**1**	**1**	**1**	**1**	**SET AVERAGE**
Run Number		1-S-M4-1	1-S-M4-2	1-S-M4-3	1-S-M4-4	
Run Date		12/8/10	12/8/10	12/8/10	12/8/10	
Run Start Time	hh:mm	934	1230	1417	1604	
Run Stop Time	hh:mm	1223	1400	1557	1704	
Sampling Parameters						
Meter Calibration Factor	Y	1.0028	1.0028	1.0028	1.0028	
Y_{QA} Calculated by Test Run	Y_{QA}	0.9846	0.9872	0.9746	0.9807	
Y_{QA} PASS/FAIL by Test Run	Check	PASS	PASS	PASS	PASS	PASS
Stack/Duct Static Pressure	in H_2O	-1.30	-1.30	-1.30	-1.30	-1.30
Barometric Pressure	in Hg	30.0	30.0	30.0	30.0	30.0
Total Water Volume Collected	mL	230.3	251.2	237.3	159.8	219.7
Sample Volume	ft^3	64.523	58.400	65.957	42.295	57.794
Average Meter Temperature	°F	66	74	78	80	74
Average Delta H	in H_2O	1.30	1.30	1.30	1.50	1.35
Total Sampling Time	min	100	90	100	60	88
Air Flow Parameters						
Volume of Water vapor @ STP	SCF	10.840	11.824	11.170	7.522	10.339
Volume Metered @ STP	DSCF	65.367	58.192	65.267	41.750	57.644
Absolute Meter Pressure	in Hg	30.1	30.1	30.1	30.1	30.1
Calculated Stack Moisture	% H_2O	14.2	16.9	14.6	15.3	15.2

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/8/10	68
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 2 Stack			**Pitot ID**	P-195	29.92
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		78.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.00	**Pitot Check**
Area of Duct/Stack		33.18	ft^2			Y

Velocity Traverse Data

Run #	2-S-M2-1		2-S-M2-2		2-S-M2-3		2-S-M2-4	
Run Time	943-948		1012-1017		1203-1208		1243-1248	
Traverse Point	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF
A - 6	0.99	292	0.81	293	0.73	291	0.87	291
A - 5	1.05	292	0.99	293	0.85	291	1.02	291
A - 4	0.98	293	0.80	294	0.77	291	0.90	291
A - 3	0.94	293	0.93	294	0.89	292	0.92	291
A - 2	0.83	293	0.90	295	0.84	292	0.79	291
A - 1	0.67	292	0.77	295	0.72	291	0.71	290
B - 6	0.92	292	0.97	294	0.97	291	0.91	290
B - 5	1.12	293	0.97	294	0.99	292	0.97	291
B - 4	1.02	293	1.02	295	1.02	292	0.93	291
B - 3	0.93	293	0.96	294	0.92	292	0.86	291
B - 2	0.88	294	0.86	295	0.77	291	0.78	290
B - 1	0.77	294	0.63	295	0.68	291	0.71	290
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Averages	0.9210	292.8	0.8806	294.3	0.8423	291.4	0.8615	290.7

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	8.795	8.907	8.895	8.896
Oxygen Concentration	($\%O_2$)	%	11.108	10.904	10.848	10.837
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.1	80.2	80.3	80.3
Stack Moisture Content	(B_{ws})	%	13.4	13.4	13.4	14.9
Static Pressure	(Pg)	in Hg	-1.30	-1.30	-1.30	-1.30
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	29.90
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.85	29.86	29.86	29.86
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	28.26	28.27	28.27	28.09
Avg Stack Gas Velocity	(v_s)	ft/sec	65.0	63.6	62.1	63.0
Actual Wet Flow Rate	(Q_{aw})	ACFM	129,444	126,672	123,666	125,402
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	78,611	76,783	75,244	75,053

Signature:	on file	**Approved By:**	David H. Smith

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/8/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 2 Stack			**Pitot ID**	P-195	**29.92**
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		78.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.00	**Pitot Check**
Area of Duct/Stack		33.18	ft^2			Y

Velocity Traverse Data

Run #	2-S-M2-5		2-S-M2-6		2-S-M2-7		2-S-M2-8	
Run Time	1314-1319		1336-1341		1424-1429		1514-1519	
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**
A - 6	0.73	294	0.87	295	0.98	296	0.77	295
A - 5	0.97	293	0.98	295	0.95	296	0.82	294
A - 4	0.80	293	0.96	295	0.94	296	0.77	295
A - 3	0.92	293	0.93	295	0.98	296	0.87	294
A - 2	0.86	293	0.86	295	0.85	296	0.82	295
A - 1	0.76	293	0.77	295	0.70	295	0.76	294
B - 6	0.89	293	0.95	295	0.91	295	0.82	294
B - 5	0.82	293	0.97	295	0.98	295	0.87	294
B - 4	0.78	293	0.93	295	0.96	296	0.82	295
B - 3	0.93	293	0.89	295	0.92	296	0.84	295
B - 2	0.87	293	0.83	295	0.89	296	0.79	294
B - 1	0.79	293	0.74	295	0.82	295	0.71	294
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Averages	0.8418	293.1	0.8884	295.0	0.9048	295.7	0.8044	294.4

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	9.048	9.099	8.137	8.874
Oxygen Concentration	($\%O_2$)	%	10.561	10.696	10.778	10.808
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.4	80.2	81.1	80.3
Stack Moisture Content	(B_{ws})	%	14.90	14.9	13.8	13.8
Static Pressure	(Pg)	*in Hg*	-1.3	-1.3	-1.3	-1.3
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	29.90
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.87	29.88	29.73	29.85
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	28.10	28.11	28.11	28.22
Avg Stack Gas Velocity	(v_s)	ft/sec	62.4	64.1	64.8	60.9
Actual Wet Flow Rate	(Q_{sw})	ACFM	124,133	127,654	128,885	121,199
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	74,055	75,962	77,618	73,110

Signature:	on file	**Approved By:**	

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/8/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 2 Stack			**Pitot ID**	P-195	**29.92**
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		78.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.00	**Pitot Check**
Area of Duct/Stack		33.18	ft^2			Y

Velocity Traverse Data

Run #	2-S-M2-9		2-S-M2-10		2-S-M2-11		2-S-M2-12	
Run Time	1540-1545		1619-1624		1641-1646			
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) In H_2O**	**Stack Temp, oF**
A - 6	0.83	295	0.89	295	1.10	296		
A - 5	0.90	295	0.90	295	1.15	296		
A - 4	0.97	294	0.84	295	0.97	296		
A - 3	0.91	294	0.97	295	1.00	296		
A - 2	0.78	294	0.94	295	0.93	296		
A - 1	0.68	294	0.81	294	0.86	296		
B - 6	0.76	294	0.90	294	1.10	295		
B - 5	0.82	294	0.93	294	1.08	296		
B - 4	0.83	294	0.97	295	1.15	296		
B - 3	0.85	294	1.02	295	1.08	295		
B - 2	0.85	294	0.88	294	0.90	295		
B - 1	0.76	294	0.75	294	0.71	295		
-								
-								
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-								
Averages	0.8266	294.2	0.8985	294.6	0.9981	295.7	#DIV/0!	ERRR

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	8.850	8.802	9.041	
Oxygen Concentration	($\%O_2$)	%	10.995	11.255	10.752	
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.2	79.9	80.2	
Stack Moisture Content	(B_{ws})	%	13.80	15.1	15.1	
Static Pressure	(Pg)	in Hg	-1.3	-1.3	-1.3	
Absolute Stack Pressure	(Ps)	in Hg	29.90	29.90	29.90	
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	29.86	29.86	29.88	
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	28.22	28.07	28.08	
Avg Stack Gas Velocity	(v_s)	ft/sec	61.7	64.5	68.1	
Actual Wet Flow Rate	(Q_{aw})	ACFM	122,839	128,452	135,443	
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	74,124	76,300	80,337	

Signature:	on file	**Approved By:**	

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	**Project #**	10748
Plant Name	Lee County Res Rec Facility	**Balance Type**	Electronic
Plant City, State	Ft. Myers, FL	**Balance ID**	EB1
Sampling Location	Unit 2 Stack	**Operator Name**	RBC, JA

Run Number	2-S-M4-1	2-S-M4-2	2-S-M4-3	2-S-M4-4
Test Date	12/8/2010	12/8/2010	12/8/2010	12/8/10
Reagent Box ID				

Impinger Reagent	DI Water	mL	mL	mL	mL
Final Catch Weight	grams	417.7	410.2	407.8	351.6
Initial Tare Weight	grams	200.0	200.0	200.0	200.0
Net Moisture Caught	grams	217.7	210.2	207.8	151.6

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMNo4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	262.7	244.7	279.3	260.9
Initial Tare Weight	grams	252.8	233.8	262.7	250.5
Net Moisture Caught	grams	9.9	10.9	16.6	10.4

Total Catch	grams	227.6	221.1	224.4	162.0

Signature:	on file	**Checked By:**	

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	**Run #**	2-S-M4-1		
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748	Run Start	934
Plant City, State	Ft. Myers, FL	**Personnel**	JMA	Run End	1224
Test Location	Unit 2 Stack	**Tester Signature**	on file		
Date of Test	12/8/2010	**Checked By**	[illegible]		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	**Pbar**	30.0	**Meter Console #**		T4			CO_2
Meter Calibration Factor	1.0058	**Pstatic**	-1.30	**Ideal Nozzle Diameter**		0.242			
Pitot Tube Coefficient	0.84	**Tstd, °F**	68	**Nozzle #**		NA			O_2
Estimated DGM Temp	85	**Pstd**	29.92	**Actual Nozzle Diameter**		NA	**XAD ID & Tares**		
Estimated Stack Temp or M2 Avg.	300	*Diluent*		**Probe Lgth/ID #**	7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		**Liner Material**		NA	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	**Filter Box #**		NA	0.9559		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	**Cold Box ID #**		CB20	4.96%		**100.0**
Estimated Velocity, ft/sec	68.7	CO	0.0	**Umbilical ID #**		U50-4	**PASS**		H_20
K Factor (delta H/delta P)	######	N_2	**80.5**	**TC ID #s**		P-195			**227.6**

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		55	60	**DGM initial**							0.000
Thermocouples		Y	Y	**Vacuum**	15	7					15
Pitots		Y	Y	**Leak Rate**	0.001	0.001					**OK**
Tedlar Bag	NA	Y	Y	**DGM final**							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	934	0.0	836.300	NA		1.30	5	57	56	NA	NA	50	NA
-		10.0	843.172	NA		1.30	5	61	56	NA	NA	41	NA
-		20.0	850.004	NA		1.30	5	65	57	NA	NA	43	NA
-		30.0	856.789	NA		1.30	5	69	59	NA	NA	45	NA
-		40.0	863.542	NA		1.30	5	71	61	NA	NA	45	NA
-		50.0	870.350	NA		1.30	5	72	62	NA	NA	46	NA
-		60.0	877.271	NA		1.30	5	73	63	NA	NA	47	NA
-	1044/	70.0	884.161	NA		1.30	5	74	64	NA	NA	47	NA
-	1154	80.0	891.091	NA		1.30	5	66	63	NA	NA	44	NA
-		90.0	897.961	NA		1.30	5	71	64	NA	NA	48	NA
-	1224	100.0	904.467										
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						MAX =>	5						
Average Values		100.0	68.167			1.30		64					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	2-S-M4-2		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1230
Plant City, State	Ft. Myers, FL	Personnel	JMA	Run End	1400
Test Location	Unit 2 Stack	Tester Signature	on file		
Date of Test	12/8/2010	Checked By	[illegible]		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.0	Meter Console #		T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter		0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #		NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter		NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID #	7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material		NA	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #		NA	0.9932		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #		CB20	1.26%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #		U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s		P-195			221.1

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	7					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1230	0.0	904.750	NA		1.30	5	69	66	NA	NA	62	NA
-		10.0	911.435	NA		1.30	5	74	66	NA	NA	58	NA
-		20.0	918.133	NA		1.30	5	76	67	NA	NA	56	NA
-		30.0	924.757	NA		1.30	5	77	68	NA	NA	50	NA
-		40.0	931.382	NA		1.30	5	78	69	NA	NA	48	NA
-		50.0	938.011	NA		1.30	5	78	70	NA	NA	47	NA
-		60.0	944.630	NA		1.30	5	79	70	NA	NA	47	NA
-		70.0	951.208	NA		1.30	5	79	71	NA	NA	47	NA
-		80.0	957.762	NA		1.30	5	79	71	NA	NA	48	NA
-	1400	90.0	964.268										
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						MAX =>	5						
Average Values		90.0	59.518			1.30		73					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	2-S-M4-3
Plant Name	Lee County Resource Recovery Facility	Project #	10748
Plant City, State	Ft. Myers, FL	Personnel	JMA
Test Location	Unit 2 Stack	Tester Signature	
Date of Test	12/8/2010	Checked By	

Isokinetic Factor Setup		Pressures		Sampling Equipment		Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.0	Meter Console #	T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter	0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID # 7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material	NA	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #	NA	0.9979		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #	CB20	0.78%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #	U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s	P-195			224.4

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	65	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	7					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1417	0.0	964.500	NA		1.30	5	72	71	NA	NA	58	NA
-		10.0	971.080	NA		1.30	5	76	71	NA	NA	50	NA
-		20.0	978.133	NA		1.30	5	78	71	NA	NA	52	NA
-		30.0	984.765	NA		1.30	5	79	71	NA	NA	52	NA
-		40.0	991.374	NA		1.30	5	80	72	NA	NA	54	NA
-		50.0	997.921	NA		1.30	5	80	72	NA	NA	55	NA
-		60.0	1004.485	NA		1.30	5	81	73	NA	NA	53	NA
-		70.0	1011.021	NA		1.30	5	81	73	NA	NA	53	NA
-		80.0	1017.544	NA		1.30	5	81	73	NA	NA	53	NA
-		90.0	1024.033	NA		1.30	5	81	74	NA	NA	53	NA
-	1557	100.0	1030.493	NA									
						MAX =>	5						
Average Values		100.0	65.993			1.30		76					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	2-S-M4-4		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1604
Plant City, State	Ft. Myers, FL	Personnel	JMA	Run End	1704
Test Location	Unit 2 Stack	Tester Signature	[signature]		
Date of Test	12/8/2010	Checked By	[signature]		

Isokinetic Factor Setup		Pressures		Sampling Equipment		Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.0	Meter Console #	T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter	0.242			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID # 7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material	NA	Y_{qa}		0.0
Estimated Moisture Content	18.0	CO_2	9.5	Filter Box #	NA	0.9894		N_2
Estimated Dry Molecular Weight	29.92	O_2	10.0	Cold Box ID #	CB20	1.63%		100.0
Estimated Velocity, ft/sec	68.7	CO	0.0	Umbilical ID #	U50-4	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s	P-195			162.0

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		65	65	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	8					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1604	0.0	30.800	NA		1.50	6	76	74	NA	NA	64	NA
-		10.0	38.049	NA		1.50	6	80	74	NA	NA	52	NA
-		20.0	45.200	NA		1.50	6	82	74	NA	NA	48	NA
-		30.0	52.720	NA		1.50	6	82	74	NA	NA	47	NA
-		40.0	59.769	NA		1.50	6	82	74	NA	NA	47	NA
-		50.0	66.767	NA		1.50	6	82	74	NA	NA	48	NA
-	1704	60.0	73.763										
-													
-													
-													
-						ADJUST DELTA H AND LENGTH OF RUN FOR TIME REMAINING							
						MAX =>	6						
Average Values		60.0	42.963			1.50		77					

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD M4

Client Name	Covanta Projects, Inc.	**Operator**	JMA
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748
Sampling Location	Unit 2 Stack	**Standard Temperature, °F**	68

USE IN AVERAGE OF RUN SET? 1 or 0 =>		**1**	**1**	**1**	**1**	**SET AVERAGE**
Run Number		2-S-M4-1	2-S-M4-2	2-S-M4-3	2-S-M4-4	
Run Date		12/8/10	12/8/10	12/8/10	12/8/10	
Run Start Time	hh:mm	934	1230	1417	1604	
Run Stop Time	hh:mm	1224	1400	1557	1704	
Sampling Parameters						
Meter Calibration Factor	Y	1.0058	1.0058	1.0058	1.0058	
Y_{QA} Calculated by Test Run	Y_{QA}	0.9559	0.9932	0.9979	0.9894	
Y_{QA} PASS/FAIL by Test Run	Check	PASS	PASS	PASS	PASS	PASS
Stack/Duct Static Pressure	in H_2O	-1.30	-1.30	-1.30	-1.30	-1.30
Barometric Pressure	in Hg	30.0	30.0	30.0	30.0	30.0
Total Water Volume Collected	mL	227.6	221.1	224.4	162.0	208.8
Sample Volume	ft^3	68.167	59.518	65.993	42.963	59.160
Average Meter Temperature	°F	64	73	76	77	72
Average Delta H	in H_2O	1.30	1.30	1.30	1.50	1.35
Total Sampling Time	min	100	90	100	60	88
Air Flow Parameters						
Volume of Water vapor @ STP	SCF	10.713	10.407	10.563	7.625	9.827
Volume Metered @ STP	DSCF	69.437	59.669	65.804	42.715	59.406
Absolute Meter Pressure	in Hg	30.1	30.1	30.1	30.1	30.1
Calculated Stack Moisture	% H_20	13.4	14.9	13.8	15.1	14.3

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/9/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 3 Stack			**Pitot ID**	P-195	**29.92**
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		74.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.10	**Pitot Check**
Area of Duct/Stack		29.87	ft^2			Y

Velocity Traverse Data

Run #	3-S-M2-1		3-S-M2-2		3-S-M2-3		3-S-M2-4	
Run Time	1435-1440		1505-1510		1531-1536		1612-1617	
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**
A - 6	0.88	295	0.90	299	0.83	300	0.83	300
A - 5	0.92	296	0.94	298	0.90	300	0.91	300
A - 4	0.88	297	0.96	299	0.95	299	0.97	300
A - 3	0.87	297	0.98	299	0.98	300	1.05	299
A - 2	0.91	297	0.95	299	0.97	299	1.00	299
A - 1	0.69	298	0.73	299	0.73	299	0.76	299
B - 6	0.78	297	0.82	299	0.83	299	0.84	299
B - 5	0.87	297	0.86	299	0.85	299	0.93	300
B - 4	0.95	297	0.95	299	0.90	300	0.99	300
B - 3	0.99	297	0.98	299	0.94	299	1.02	299
B - 2	1.01	297	1.05	298	0.89	299	0.99	299
B - 1	0.77	297	0.78	298	0.68	299	0.68	299
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Averages	0.8743	296.8	0.9061	298.8	0.8684	299.3	0.9107	299.4

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	12.195	12.063	12.008	12.126
Oxygen Concentration	($\%O_2$)	%	6.789	6.950	7.145	6.945
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	81.0	81.0	80.8	80.9
Stack Moisture Content	(B_{ws})	%	22.00	22.0	22.0	22.4
Static Pressure	(Pg)	in Hg	-1.3	-1.3	-1.3	-1.3
Absolute Stack Pressure	(Ps)	in Hg	30.00	30.00	30.00	30.00
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	30.22	30.21	30.21	30.22
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	27.53	27.52	27.52	27.48
Avg Stack Gas Velocity	(v_s)	ft/sec	64.3	65.5	64.2	65.8
Actual Wet Flow Rate	(Q_{aw})	ACFM	115,127	117,369	114,954	117,811
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	62,850	63,912	62,548	63,767

Signature:	on file	**Approved By:**	

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/9/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 3 Stack			**Pitot ID**	P-195	**29.92**
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		74.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.10	**Pitot Check**
Area of Duct/Stack		29.87	ft^2			Y

Velocity Traverse Data

Run #	3-S-M2-5		3-S-M2-6		3-S-M2-7		3-S-M2-8	
Run Time	1637-1642		1702-1707		1733-1738		1800-1805	
Traverse Point	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF	(Δp) in H_2O	Stack Temp, oF
A - 6	0.82	300	0.87	300	0.93	301	0.88	301
A - 5	0.92	300	0.93	300	0.97	301	0.90	301
A - 4	1.00	300	0.97	300	1.00	301	1.00	300
A - 3	1.07	300	0.96	300	1.05	301	1.02	300
A - 2	1.03	300	1.06	300	1.10	301	1.01	300
A - 1	0.73	299	0.75	300	0.75	300	0.72	300
B - 6	0.84	299	0.81	300	0.93	300	0.92	300
B - 5	0.87	300	0.83	300	1.03	301	0.98	300
B - 4	0.91	300	0.90	300	1.05	301	1.04	300
B - 3	0.97	300	0.95	300	1.12	301	1.10	300
B - 2	1.01	300	0.99	300	1.08	300	1.06	300
B - 1	0.74	299	0.67	300	0.77	300	0.78	300
-								
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Averages	0.9059	299.8	0.8876	300.0	0.9781	300.7	0.9475	300.2

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	12.315	12.271	12.114	11.862
Oxygen Concentration	($\%O_2$)	%	6.839	6.852	7.015	7.121
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	80.8	80.9	80.9	81.0
Stack Moisture Content	(B_{ws})	%	22.40	22.4	22.9	22.9
Static Pressure	(Pg)	in Hg	-1.3	-1.3	-1.3	-1.3
Absolute Stack Pressure	(Ps)	in Hg	30.00	30.00	30.00	30.00
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	30.24	30.24	30.22	30.18
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	27.50	27.50	27.42	27.39
Avg Stack Gas Velocity	(v_s)	ft/sec	65.6	64.9	68.3	67.2
Actual Wet Flow Rate	(Q_{sw})	ACFM	117,484	116,316	122,325	120,419
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	63,562	62,910	65,676	64,695

Signature:	Jon Cole	**Approved By:**	

EPA Method 2 for Air Flow Rate Determination

Client Name	Covanta Projects, Inc.			**Operator**	JMA	**Tstd**
Plant Name	Lee County Resource Recovery Facility			**Date**	12/9/10	**68**
Plant City, State	Ft. Myers, FL			**Project #**	10748	**Pstd**
Sampling Location	Unit 3 Stack			**Pitot ID**	P-195	**29.92**
Manometer ID #	T4	**Umbilical ID #**	ORANGE 1	**Pitot Coefficient (C_p)**	0.84	**TC Check**
Diameter or Depth of Duct/Stack		74.00	in	**Thermocouple ID #**	P-195	Y
Width of Duct/Stack			in	**Barometric Pressure**	30.10	**Pitot Check**
Area of Duct/Stack		29.87	ft^2			Y

Velocity Traverse Data

Run #	3-S-M2-9		3-S-M2-10		3-S-M2-11		3-S-M2-12	
Run Time	1825-1830		1855-1900					
Traverse Point	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**	**(Δp) in H_2O**	**Stack Temp, oF**
A - 6	0.89	300	0.81	300				
A - 5	0.92	300	0.82	299				
A - 4	0.98	300	0.89	299				
A - 3	1.00	299	0.93	299				
A - 2	1.00	299	0.92	299				
A - 1	0.73	299	0.62	299				
B - 6	0.80	299	0.81	299				
B - 5	0.84	299	0.87	299				
B - 4	0.87	299	0.93	299				
B - 3	0.94	299	0.97	299				
B - 2	0.96	299	0.98	299				
B - 1	0.65	299	0.78	299				
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Averages	0.8783	299.3	0.8579	299.1	#DIV/0!	ERRR	#DIV/0!	ERRR

Results

Carbon Dioxide Concentration	($\%CO_2$)	%	12.060	12.070		
Oxygen Concentration	($\%O_2$)	%	6.949	6.994		
Carbon Monoxide Concentration	(%CO)	%				
Nitrogen Concentration	($\%N_2$)	%	81.0	80.9		
Stack Moisture Content	(B_{ws})	%	22.90	23.6		
Static Pressure	(Pg)	in Hg	-1.3	-1.3		
Absolute Stack Pressure	(Ps)	in Hg	30.00	30.00		
Stack Dry Molecular Weight	(M_d)	lb/lb-mole	30.21	30.21		
Stack Wet Molecular Weight	(M_s)	lb/lb-mole	27.41	27.33		
Avg Stack Gas Velocity	(v_s)	ft/sec	64.7	64.0		
Actual Wet Flow Rate	(Q_{aw})	ACFM	115,828	114,638		
Stack Dry Std Flow Rate	(Q_{sd})	DSCFM	62,304	61,117		

Signature:	On file	**Approved By:**	

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	**Project #**	10748
Plant Name	Lee County Res Rec Facility	**Balance Type**	Electronic
Plant City, State	Ft. Myers, FL	**Balance ID**	EB1
Sampling Location	Unit 3 Stack	**Operator Name**	RBC

Run Number	3-S-M4-1	3-S-M4-2	3-S-M4-3	3-S-M4-4
Test Date	12/9/10	12/9/10	12/9/10	12/9/10
Reagent Box ID				

Impinger Reagent	DI Water	mL	mL	mL	mL
Final Catch Weight	grams	538.0	507.7	518.0	330.0
Initial Tare Weight	grams	200.0	200.0	200.0	200.0
Net Moisture Caught	grams	338.0	307.7	318.0	130.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMNo4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	268.9	270.2	278.3	275.1
Initial Tare Weight	grams	255.4	257.1	268.9	257.1
Net Moisture Caught	grams	13.5	13.1	9.4	18.0

Total Catch	grams	351.5	320.8	327.4	148.0

Signature:		on file	**Checked By:**	

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	3-S-M4-1		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1434
Plant City, State	Ft. Myers, FL	Personnel	JMA	Run End	1604
Test Location	Unit 3 Stack	Tester Signature			
Date of Test	12/9/10	Checked By			

Isokinetic Factor Setup		Pressures		Sampling Equipment		Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.1	Meter Console #	T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter	0.247			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent Estimates		Probe Lgth/ID # 7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00			Liner Material	BG	Y_{qa}		0.0
Estimated Moisture Content	22.0	CO_2	11.0	Filter Box #	NA	1.0129		N_2
Estimated Dry Molecular Weight	30.10	O_2	8.5	Cold Box ID #	CB20	-0.71%		100.0
Estimated Velocity, ft/sec	69.0	CO	0.0	Umbilical ID #	U50-2	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s	P-195			351.5

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		60	60	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	6					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1434	0.0	89.000	NA		1.30	4	63	63	NA	NA	64	NA
-		10.0	95.548	NA		1.30	4	66	63	NA	NA	54	NA
-		20.0	101.920	NA		1.30	4	71	64	NA	NA	49	NA
-		30.0	108.352	NA		1.30	4	74	65	NA	NA	50	NA
-		40.0	114.900	NA		1.30	4	76	67	NA	NA	47	NA
-		50.0	121.339	NA		1.30	4	77	68	NA	NA	44	NA
-		60.0	127.900	NA		1.30	4	78	69	NA	NA	44	NA
-		70.0	134.169	NA		1.30	4	78	70	NA	NA	44	NA
-		80.0	140.492	NA		1.30	4	79	70	NA	NA	45	NA
-	1604	90.0	146.947										
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						MAX =>	4						
Average Values		90.0	57.947			1.30		70					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	3-S-M4-2		
Plant Name	Lee County Resource Recovery Facility	Project #	10748	Run Start	1607
Plant City, State	Ft. Myers, FL	Personnel	JMA	Run End	1727
Test Location	Unit 3 Stack	Tester Signature	on file		
Date of Test	12/9/10	Checked By	[signature]		

Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.1	Meter Console #		T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter		0.247			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #		NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter		NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID #	7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material		BG	Y_{qa}		0.0
Estimated Moisture Content	22.0	CO_2	11.0	Filter Box #		NA	1.0003		N_2
Estimated Dry Molecular Weight	30.10	O_2	8.5	Cold Box ID #		CB20	0.55%		100.0
Estimated Velocity, ft/sec	69.0	CO	0.0	Umbilical ID #		U50-2	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s		P-195			320.8

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		65	65	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	6					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft³	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1607	0.0	147.200	NA		1.30	5	75	71	NA	NA	56	NA
-		10.0	153.923	NA		1.30	5	79	71	NA	NA	52	NA
-		20.0	160.623	NA		1.30	5	80	72	NA	NA	50	NA
-		30.0	167.246	NA		1.30	5	81	72	NA	NA	51	NA
-		40.0	173.790	NA		1.30	5	80	73	NA	NA	53	NA
-		50.0	180.278	NA		1.30	5	80	73	NA	NA	55	NA
-		60.0	186.760	NA		1.30	5	80	73	NA	NA	50	NA
-		70.0	193.233	NA		1.30	5	80	73	NA	NA	48	NA
-	1727	80.0	199.643										
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						MAX =>	5						
Average Values		80.0	52.443			1.30		76					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	Run #	3-S-M4-3
Plant Name	Lee County Resource Recovery Facility	Project #	10748 — Run Start 1730
Plant City, State	Ft. Myers, FL	Personnel	JMA — Run End 1850
Test Location	Unit 3 Stack	Tester Signature	[signature]
Date of Test	12/9/10	Checked By	[signature]

Isokinetic Factor Setup		Pressures		Sampling Equipment		Filter ID & Tares		Actuals
ΔH @ 0.75 SCFM	1.649	Pbar	30.1	Meter Console #	T4			CO_2
Meter Calibration Factor	1.0058	Pstatic	-1.30	Ideal Nozzle Diameter	0.247			
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O_2
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		
Estimated Stack Temp or M2 Avg.	300	Diluent		Probe Lgth/ID # 7'	P-195			CO
Estimated Delta P or M2 Avg.	1.00	Estimates		Liner Material	BG	Y_{qa}		0.0
Estimated Moisture Content	22.0	CO_2	11.0	Filter Box #	NA	1.0088		N_2
Estimated Dry Molecular Weight	30.10	O_2	8.5	Cold Box ID #	CB20	-0.30%		100.0
Estimated Velocity, ft/sec	69.0	CO	0.0	Umbilical ID #	U50-2	PASS		H_2O
K Factor (delta H/delta P)	######	N_2	80.5	TC ID #s	P-195			327.4

Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status
Tambient		65	65	DGM initial							0.000
Thermocouples		Y	Y	Vacuum	15	6					15
Pitots		Y	Y	Leak Rate	0.001	0.001					OK
Tedlar Bag	NA	Y	Y	DGM final							0.000

Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft³	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
C - 2	1730	0.0	199.900	NA		1.30	4	76	73	NA	NA	56	NA
-		10.0	206.552	NA		1.30	4	80	73	NA	NA	51	NA
-		20.0	213.163	NA		1.30	4	81	73	NA	NA	51	NA
-		30.0	219.676	NA		1.30	4	80	73	NA	NA	51	NA
-		40.0	226.144	NA		1.30	4	80	73	NA	NA	50	NA
-		50.0	232.560	NA		1.30	4	80	73	NA	NA	47	NA
-		60.0	238.973	NA		1.30	4	80	73	NA	NA	47	NA
-		70.0	245.413	NA		1.30	4	80	73	NA	NA	48	NA
-	1850	80.0	251.922										NA
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						MAX =>	4						
Average Values		80.0	52.022			1.30		76					

130

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD M4

Client Name	Covanta Projects, Inc.	**Run #**	3-S-M4-4		
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748	Run Start	1852
Plant City, State	Ft. Myers, FL	**Personnel**	JMA	Run End	1922
Test Location	Unit 3 Stack	**Tester Signature**	On file		
Date of Test	12/9/10	**Checked By**	[illegible]		

Isokinetic Factor Setup		**Pressures**		**Sampling Equipment**			**Filter ID & Tares**		**Actuals**
ΔH @ 0.75 SCFM	1.649	**Pbar**	30.1	**Meter Console #**		T4			**CO_2**
Meter Calibration Factor	1.0058	**Pstatic**	-1.30	**Ideal Nozzle Diameter**		0.247			
Pitot Tube Coefficient	0.84	**Tstd, °F**	68	**Nozzle #**		NA			**O_2**
Estimated DGM Temp	85	**Pstd**	29.92	**Actual Nozzle Diameter**		NA	**XAD ID & Tares**		
Estimated Stack Temp or M2 Avg.	300	**Diluent**		**Probe Lgth/ID #**	7'	P-195			**CO**
Estimated Delta P or M2 Avg.	1.00	**Estimates**		**Liner Material**		BG	Y_{qa}		**0.0**
Estimated Moisture Content	22.0	**CO_2**	11.0	**Filter Box #**		NA	0.9969		**N_2**
Estimated Dry Molecular Weight	30.10	**O_2**	8.5	**Cold Box ID #**		CB20	0.88%		**100.0**
Estimated Velocity, ft/sec	69.0	**CO**	0.0	**Umbilical ID #**		U50-2	**PASS**		**H_2O**
K Factor (delta H/delta P)	######	**N_2**	**80.5**	**TC ID #s**		P-195			**148.0**

Equipment Checks		**PRE**	**POST**	**Leak Checks**	**1**	**2**	**3**	**4**	**5**	**6**	**Status**
Tambient		65	65	**DGM initial**							0.000
Thermocouples		Y	Y	**Vacuum**	15	7					15
Pitots		Y	Y	**Leak Rate**	0.001	0.001					**OK**
Tedlar Bag	NA	Y	Y	**DGM final**							0.000

Point #	**Clock Time**	**Test Time**	**Dry Gas Meter Reading**	**Velocity Head**	**Desired Orifice ΔH**	**Actual Orifice ΔH**	**Pump Vac.**	**DGM Inlet Temp**	**DGM Outlet Temp**	**Stack Temp**	**Filter Temp**	**Imp. Exit Temp**	**Cond. Exit Temp**
	24 hr	min	ft^3	in H_2O	in H_2O	in H_2O	in Hg	°F	°F	°F	°F	°F	°F
B - 2	1852	0.0	252.100	NA		1.70	5	77	72	NA	NA	55	NA
-		10.0	259.700	NA		1.70	5	80	72	NA	NA	51	NA
-		20.0	267.151	NA		1.70	5	80	72	NA	NA	52	NA
-	1922	30.0	274.647										
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-						ADJUST DELTA H AND LENGTH OF RUN FOR TIME REMAINING							
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						MAX =>	5						
Average Values		30.0	22.547			1.70		76					

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD M4

Client Name	Covanta Projects, Inc.	**Operator**	JMA
Plant Name	Lee County Resource Recovery Facility	**Project #**	10748
Sampling Location	Unit 3 Stack	**Standard Temperature, °F**	**68**

USE IN AVERAGE OF RUN SET? 1 or 0 =>		**1**	**1**	**1**	**1**	**SET AVERAGE**
Run Number		3-S-M4-1	3-S-M4-2	3-S-M4-3	3-S-M4-4	
Run Date		12/9/10	12/9/10	12/9/10	12/9/10	
Run Start Time	hh:mm	1434	1607	1730	1852	
Run Stop Time	hh:mm	1604	1727	1850	1922	
Sampling Parameters						
Meter Calibration Factor	Y	1.0058	1.0058	1.0058	1.0058	
Y_{QA} Calculated by Test Run	Y_{QA}	1.0129	1.0003	1.0088	0.9969	
Y_{QA} PASS/FAIL by Test Run	Check	PASS	PASS	PASS	PASS	PASS
Stack/Duct Static Pressure	in H_2O	-1.30	-1.30	-1.30	-1.30	-1.30
Barometric Pressure	in Hg	30.1	30.1	30.1	30.1	30.1
Total Water Volume Collected	mL	351.5	320.8	327.4	148.0	286.9
Sample Volume	ft^3	57.947	52.443	52.022	22.547	46.240
Average Meter Temperature	°F	70	76	76	76	74
Average Delta H	in H_2O	1.30	1.30	1.30	1.70	1.40
Total Sampling Time	min	90	80	80	30	70
Air Flow Parameters						
Volume of Water vapor @ STP	SCF	16.545	15.100	15.411	6.966	13.506
Volume Metered @ STP	DSCF	58.568	52.436	51.966	22.579	46.387
Absolute Meter Pressure	in Hg	30.2	30.2	30.2	30.2	30.2
Calculated Stack Moisture	% H_20	22.0	22.4	22.9	23.6	22.7

APPENDIX F

Reference Method Calibration Data

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

METER CONSOLE #: T4
DGM SERIAL #: 12834628

DATE: 07/05/10 CRITICAL ORIFICE SET SERIAL #: 1345 BAROMETRIC PRESSURE (in Hg): INITIAL 29.5 FINAL 29.5 AVG (P_{bar}) 29.5

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	FINAL	NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y CHECK < 0.02 VAR.	$\Delta H_@$	ΔH CHECK < 0.2 VAR.
23	1	0.6385	18	556.000	561.012	5.012	80	80	81	76	76	78.3	6.00	2.100	4.874	4.865	0.9982	OK	1.75	OK
23	2	0.6385	18	561.012	566.023	5.011	80	81	82	76	77	79.0	6.00	2.100	4.866	4.865	0.9997	OK	1.74	OK
23	3	0.6385	18	566.023	571.043	5.020	81	82	83	77	78	80.0	6.00	2.100	4.866	4.860	0.9989	OK	1.74	OK
															AVERAGES =>		0.9989		1.7457	
18	1	0.4913	19	571.500	576.650	5.150	81	83	84	78	79	81.0	8.00	1.200	4.971	4.986	1.0030	OK	1.68	OK
18	2	0.4913	19	576.650	581.818	5.168	82	84	85	79	80	82.0	8.00	1.200	4.980	4.982	1.0004	OK	1.68	OK
18	3	0.4913	19	581.818	586.995	5.177	82	85	86	80	81	83.0	8.00	1.200	4.979	4.982	1.0006	OK	1.67	OK
															AVERAGES =>		1.0013		1.6762	
12	1	0.3080	19	588.000	593.182	5.182	83	85	85	81	82	83.3	13.00	0.430	4.972	5.070	1.0198	OK	1.53	OK
12	2	0.3080	19	593.182	598.390	5.208	84	85	86	82	83	84.0	13.00	0.430	4.990	5.066	1.0152	OK	1.53	OK
12	3	0.3080	19	598.390	603.603	5.213	84	86	87	83	84	85.0	13.00	0.430	4.986	5.066	1.0161	OK	1.52	OK
															AVERAGES =>		1.0170		1.5251	

ALL VOLUMES GREATER THAN 5 ACF? OK

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.0058

AVERAGE $\Delta H_@$ = 1.649

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

(1) $V_m(std) = K_1 V_m \frac{P_{bar} + (\Delta H/13.6)}{T_m}$ = Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $V_{cr}(std) = K' \sqrt{\frac{P_{bar}\,\theta}{T_{amb}}}$ = Volume of gas sample passed *through* the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $Y = \frac{V_{cr}(std)}{V_m(std)}$ = DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \left(\frac{\Delta H\ V_m(std)}{V_m}\right)$$

ORIFICE CHECKS:	GAMMA	RESULT	STATUS
IF Y VARIATION EXCEEDS 2.00%,	GAMMA 1	-0.68	OK
RECALIBRATE ORIFICE	GAMMA 2	-0.44	OK
	GAMMA 3	1.12	OK

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings below, shaded columns are automatically calculated.

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METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

METER CONSOLE #: T5
DGM SERIAL #: 13276859

DATE: 07/08/10 CRITICAL ORIFICE SET SERIAL #: 1345 BAROMETRIC PRESSURE (in Hg): INITIAL 29.3 FINAL 29.3 AVG (P_{bar}) 29.3

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y CHECK < 0.02 VAR.	$\Delta H_@$	ΔH CHECK < 0.2 VAR.
23	1	0.6385	19	769.500	774.520	5.020	85	82	84	81	82	82.3	6.00	2.200	4.814	4.810	0.9991	OK	1.85	OK
23	2	0.6385	19	774.520	779.534	5.014	86	84	85	82	82	83.3	6.00	2.200	4.799	4.805	1.0012	OK	1.85	OK
23	3	0.6385	19	779.534	784.563	5.029	86	85	86	82	83	84.0	6.00	2.200	4.807	4.805	0.9996	OK	1.84	OK
															AVERAGES =>		0.9999		1.8460	
18	1	0.4913	19	785.500	790.686	5.186	86	86	87	83	84	85.0	8.00	1.250	4.936	4.930	0.9987	OK	1.76	OK
18	2	0.4913	19	790.686	795.860	5.174	87	87	88	84	85	86.0	8.00	1.250	4.916	4.925	1.0019	OK	1.76	OK
18	3	0.4913	19	795.860	801.053	5.193	87	88	89	85	86	87.0	8.00	1.250	4.925	4.925	1.0001	OK	1.76	OK
															AVERAGES =>		1.0002		1.7614	
12	1	0.3080	19	801.500	806.546	5.046	88	89	90	86	87	88.0	12.50	0.450	4.767	4.820	1.0111	OK	1.61	OK
12	2	0.3080	19	806.546	811.600	5.054	90	90	91	87	88	89.0	12.50	0.450	4.766	4.811	1.0095	OK	1.61	OK
12	3	0.3080	19	811.600	816.690	5.090	90	91	91	88	89	89.8	12.50	0.450	4.794	4.811	1.0037	OK	1.61	OK
															AVERAGES =>		1.0081		1.6095	

ALL VOLUMES GREATER THAN 5 ACF? OK

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.0028

AVERAGE $\Delta H_@$ = 1.739

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

(1) $V_m(std) = K_1 V_m \frac{P_{bar} + (\Delta H/13.6)}{T_m}$ = Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $V_{cr}(std) = K' \sqrt{\frac{P_{bar}\,\theta}{T_{amb}}}$ = Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $Y = \frac{V_{cr}(std)}{V_m(std)}$ = DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \left(\frac{\Delta H\ V_m(std)}{V_m}\right)$$

ORIFICE CHECKS:	GAMMA	RESULT	STATUS
IF Y VARIATION EXCEEDS 2.00%,	GAMMA 1	-0.28	OK
RECALIBRATE ORIFICE	GAMMA 2	-0.25	OK
	GAMMA 3	0.53	OK

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings below, shaded columns are automatically calculated.

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ONSITE METHOD 5 DRY GAS METER AUDIT AND POSTTEST CALIBRATION USING CRITICAL ORIFICE

Client Name	Covanta Projects, Inc.
Plant Name	Lee County Resource Recovery Facility
Plant City, State	Ft. Myers, FL
Test Location	Units 1, 2, and 3 Stacks
Project Number	10748
Date of Pre-Test	12/7/10
Date of Post-Test	
Tester Signature	on file

Meterbox ID	T4	
Meter Y	1.0058	
Meter Delta Ha	1.649	
Reference Pressure	30.1	STATUS
Barometric Pressure	30.1	PASS
Pbar Pretest	30.1	
Pbar Posttest		

ORIFICE ID# INCLUDING SET-#	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	TEMPERATURES °F AMB	DGM INLET INIT	DGM INLET FINAL	DGM OUTLET INIT	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	QA STATUS
PRETEST ONSITE 10 MINUTE AUDIT						PRE												
NA	1	NA	NA	821.500	829.047	NA	60	64	52	55	57.75	10.00	1.65	7.7708	NA	0.9815	2.41	PASS
POSTTEST CHECK		AVERAGE DELTA H =				POST												
	1	#N/A									0			0.0	#N/A	#N/A		
0	2	#N/A	0	0.000		0	0		0		0		0.00	0.0	#N/A	#N/A		
0	3	#N/A	0	0.000		0	0		0		0		0.00	0.0	#N/A	#N/A		
FINAL - INITIAL VOLUMES > 5 CUBIC FEET? FAIL															AVG =	#N/A	#N/A	#N/A

PRETEST PROCEDURES:

1) Record barometric pressure and temperatures before calibration.
2) Run 10 minute audit at Delta Ha without an orifice.
3) Record ambient temperature and compare all thermocouple readings.
4) Record thermocouple IDs and readings in table.

POSTTEST PROCEDURES:

1) Record barometric pressure before calibration.
2) Select one critical orifice to calibrate the dry gas meter which best approximates the operating range. Compare the average Delta H from your results page with the Delta H in the orifice table. Input orifice number.
3) Run at 18" Hg vacuum for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Perform three repititions for the posttest, record readings, shaded columns are automatically calculated.
5) Compare thermocouples to ambient and record as posttest calibration check.

ONSITE METHOD 5 DRY GAS METER AUDIT AND POST-TEST CALIBRATION USING CRITICAL ORIFICE

Client Name	Covanta Projects, Inc.
Plant Name	Lee County Resource Recovery Facility
Plant City, State	Ft. Myers, FL
Test Location	Units 1, 2, and 3 Stacks
Project Number	10748
Date of Pre-Test	12/7/10
Date of Post-Test	
Tester Signature	on file

Meterbox ID	T5	
Meter Y	1.0028	
Meter Delta Ha	1.739	
Reference Pressure	30.1	STATUS
Barometric Pressure	30.1	PASS
Pbar Pretest	30.1	
Pbar Posttest		

ORIFICE ID# INCLUDING SET-#	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	TEMPERATURES °F AMB	DGM INLET INIT	DGM INLET FINAL	DGM OUTLET INIT	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	QA STATUS
PRETEST ONSITE 10 MINUTE AUDIT						PRE												
NA	1	NA	NA	94.500	101.932	NA	59	64	53	55	57.75	10.00	1.74	7.6541	NA	0.9967	0.61	PASS
POSTTEST CHECK		AVERAGE DELTA H =				POST												
	1	#N/A									0			0.0	#N/A	#N/A		
0	2	#N/A	0	0.000		0	0		0		0		0.00	0.0	#N/A	#N/A		
0	3	#N/A	0	0.000		0	0		0		0		0.00	0.0	#N/A	#N/A		
FINAL - INITIAL VOLUMES > 5 CUBIC FEET? FAIL															AVG =	#N/A	#N/A	#N/A

PRETEST PROCEDURES:

1) Record barometric pressure and temperatures before calibration.
2) Run 10 minute audit at Delta Ha without an orifice.
3) Record ambient temperature and compare all thermocouple readings.
4) Record thermocouple IDs and readings in table.

POSTTEST PROCEDURES:

1) Record barometric pressure before calibration.
2) Select one critical orifice to calibrate the dry gas meter which best approximates the operating range. Compare the average Delta H from your results page with the Delta H in the orifice table. Input orifice number.
3) Run at 18" Hg vacuum for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Perform three repititions for the posttest, record readings, shaded columns are automatically calculated.
5) Compare thermocouples to ambient and record as posttest calibration check.

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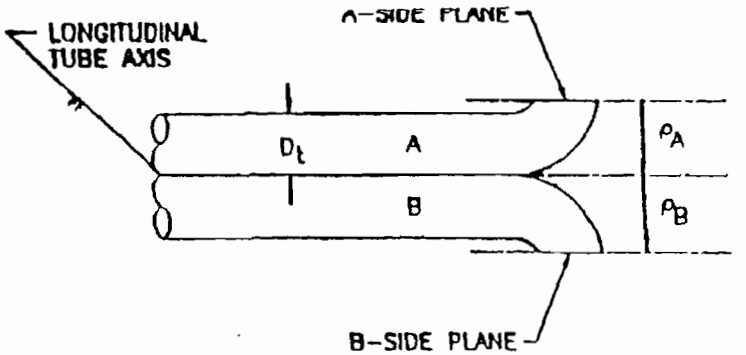
(782-2575)

PITOT TUBE CALIBRATION – VERIFICATION OF CONSTRUCTION SPECIFICATIONS

Pitot ID: P-195 Date: 3/14/99

Technician: B. ALLEN

8' PISTOL GRIP W-T/C



1. D_t external tubing diameter — D_t = .375 inches

   0.188" < D_t 0.375" •

2. $p = \frac{p_A + p_B}{2}$ — $p_A + p_B$ = .933 inches; p = .4665 inches

3. $Z = (p_A + p_B) \sin \gamma$ — γ = 0.05°; Z = 0.001 inches

   Z < 0.125" ••

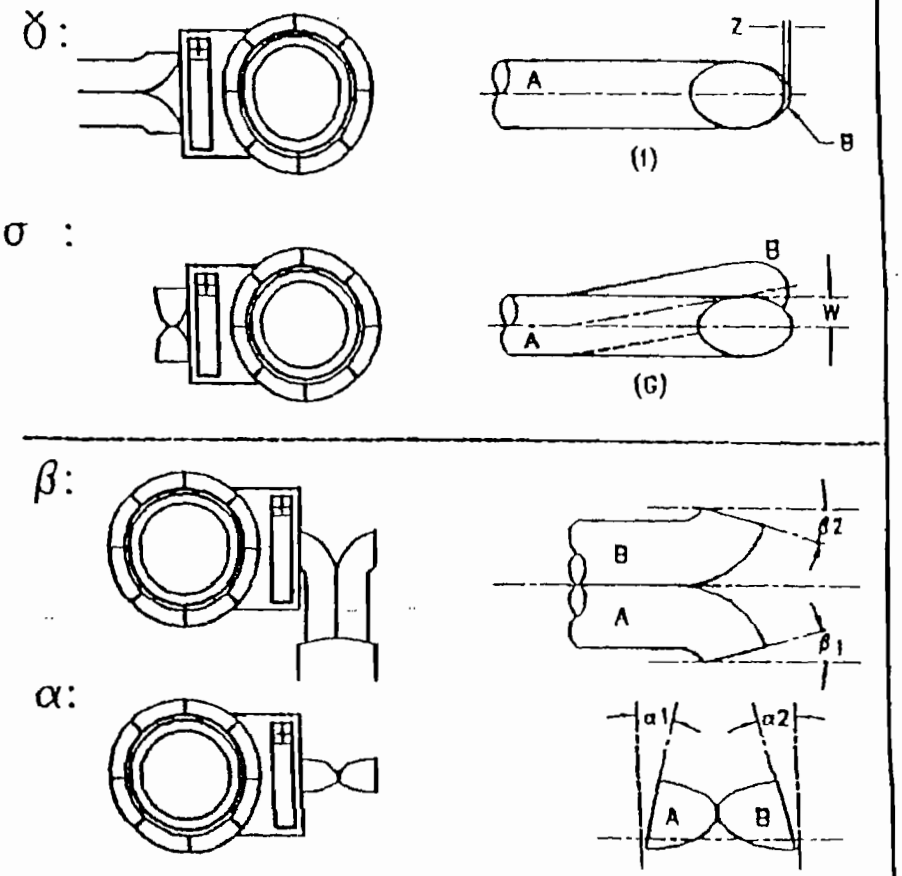
4. $W = (p_A + p_B) \sin \sigma$ — σ = 1.7°; W = 0.028 inches

   W < 0.031" ••

5. β_A, β_B < 5° •• — β_A = 0.2°; β_B = 0.0°

6. α_A, α_B < 10° •• — α_A = 1°; α_B = 1°

•, •• Acceptable Limits.



• Standards of Performance for New Stationary Sources, Federal Register, 36 (247), December 23, 1971.

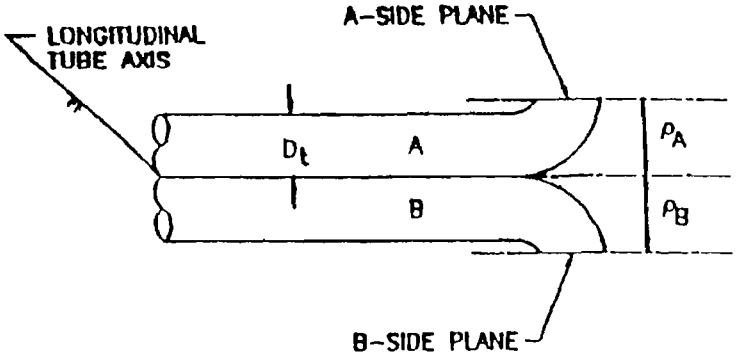
•• Valbra, R.F., "The Effects of Impact Opening Misalignment on the Value of the Type-S Pitot Tube Coefficient". U.S. EPA Emission Measurement Branch, Research Triangle Park, N.C., October 1976

Environmental Supply Co, Inc
ES
800-STACKS-5
(782-2575)

PITOT TUBE CALIBRATION – VERIFICATION OF CONSTRUCTION SPECIFICATIONS

Pitot ID: P-150 Date: 3/27/98

Technician: BJH



1. D_t external tubing diameter — D_t = .375 inches

   0.188" < D_t 0.375" •

2. $P = \frac{P_A + P_B}{2}$ — $P_A + P_B$ = .949 inches; P = .4745 inches

3. $Z = (P_A + P_B) \sin \gamma$ — γ = 2°; Z = .033 inches

   Z < 0.125" ••

4. $W = (P_A + P_B) \sin \sigma$ — σ = 1°; W = 0.017 inches

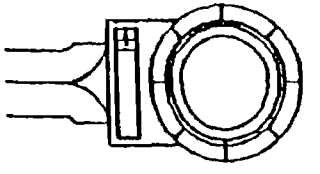
   W < 0.031" ••

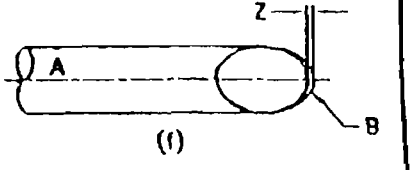
5. β_A, β_B < 5° •• — β_A = 1°; β_B = 0°

6. α_A, α_B < 10° •• — α_A = 3°; α_B = 2°

•, •• Acceptable Limits.

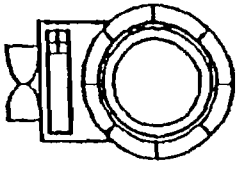
γ:

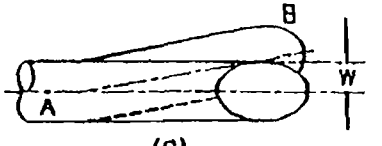




(f)

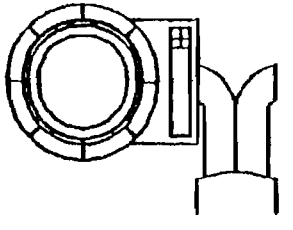
σ :

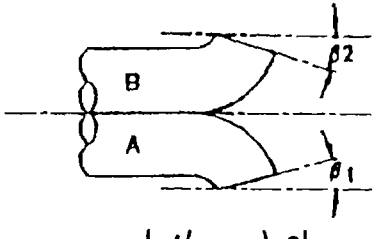




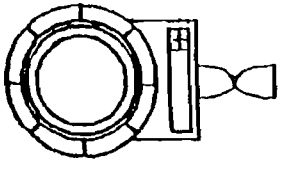
(G)

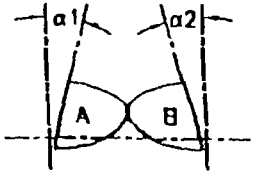
β:





α:





* Standards of Performance for New Stationary Sources, Federal Register, 36 (247), December 23, 1971.

** Valbra, R.F., "The Effects of Impact Opening Misalignment on the Value of the Type-S Pitot Tube Coefficient", U.S. EPA Emission Measurement Branch, Research Triangle Park, N.C., October 1976

THERMOCOUPLE CALIBRATION DATA, °F

DATE	THERMOCOUPLE ID NUMBER	THERMOCOUPLE TEMPERATURE	REFERENCE TEMPERATURE	< or = 2 degrees F DIFFERENCE ??
Dry Gas Meters:				
7/8/10	T1 IN	91	91	YES
7/8/10	T1 OUT	91	91	YES
7/8/10	T2 IN	90	91	YES
7/8/10	T2 OUT	91	91	YES
7/8/10	T3 IN	89	91	YES
7/8/10	T3 OUT	90	91	YES
7/8/10	T4 IN	89	91	YES
7/8/10	T4 OUT	89	91	YES
7/8/10	T5 IN	91	91	YES
7/8/10	T5 OUT	90	91	YES
7/8/10	T6 IN	90	91	YES
7/8/10	T6 OUT	90	91	YES
7/8/10	T7 IN	90	91	YES
7/8/10	T7 OUT	90	91	YES
7/8/10	T8 IN	91	91	YES
7/8/10	T8 OUT	91	91	YES
7/8/10	T9 IN	89	91	YES
7/8/10	T9 OUT	89	91	YES
7/14/10	TLF-1 IN	90	91	YES
7/14/10	TLF-1 OUT	90	91	YES
7/14/10	TLF-2 IN	91	91	YES
7/14/10	TLF-2 OUT	90	91	YES
Umbilical Arm Connectors				
7/7/10	G-0	88	89	YES
7/7/10	G-1	89	89	YES
7/7/10	G-2	88	89	YES
7/7/10	G-3	88	89	YES
7/7/10	G-4	88	89	YES
7/7/10	G-5	89	89	YES
7/7/10	G-6	89	89	YES
7/7/10	G-7	88	89	YES
7/7/10	G-8	88	89	YES
7/7/10	G-9	89	89	YES
7/7/10	G-10	88	89	YES
7/7/10	G-11	87	89	YES
7/7/10	G-12	87	89	YES

Probe Stack Thermocouples:

DATE	THERMOCOUPLE ID NUMBER	THERMOCOUPLE TEMPERATURE	REFERENCE TEMPERATURE	< or = 2 degrees F DIFFERENCE ??
7/14/10	141	81	81	YES
7/14/10	142	81	81	YES
7/14/10	143	81	81	YES
7/14/10	144	81	81	YES
7/14/10	145	82	82	YES
7/14/10	146	82	82	YES
7/14/10	148	82	82	YES
7/14/10	149	82	82	YES
7/14/10	150	82	82	YES
7/14/10	151	82	82	YES
7/14/10	152	82	82	YES
7/14/10	153	82	82	YES
7/14/10	154	82	82	YES
7/14/10	155	82	82	YES
7/14/10	156	82	82	YES
7/14/10	157	82	82	YES
7/14/10	158	82	82	YES
7/14/10	159	82	82	YES
7/14/10	160	82	82	YES
7/14/10	161	82	82	YES
7/14/10	162	83	83	YES
7/14/10	163	83	83	YES
7/14/10	164	83	83	YES
7/14/10	165	82	82	YES
7/14/10	166	83	83	YES
7/14/10	167	83	83	YES
7/14/10	168	83	83	YES
7/14/10	169	83	83	YES
7/14/10	170	83	83	YES
7/14/10	171	83	83	YES
7/14/10	173	83	83	YES
7/14/10	174	83	83	YES
7/14/10	197	79	81	YES
7/14/10	198	79	81	YES
7/14/10	199	83	82	YES
7/14/10	200	83	82	YES
7/14/10	201	83	83	YES
7/14/10	233	80	81	YES
7/14/10	234	80	81	YES
7/14/10	238	81	81	YES
7/14/10	538	81	81	YES
7/14/10	539	81	81	YES
7/14/10	595	81	81	YES
7/14/10	600	82	81	YES
7/14/10	601	81	81	YES

Interference Test

Analyzer Type: CALIF ANALYTICAL ZRH
Serial Number: A6J836T

Span: 20
Date: 20-Jul-07

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	95.0	ppm	0.0	0.0
SO2/N2	487.0	ppm	0.0	0.0
NOx/N2	486.0	ppm	0.0	0.0
O2	22.0	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed 2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: California Analytical 100P
Serial Number: 8K12007

Span: 25
Date: 1-Jun-09

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	92.08	ppm	0.0	0.0
SO2/N2	487	ppm	0.0	0.0
NOx/N2	244.9	%	0.0	0.0
CO2/N2	17.79	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed 2% of Span

TESTAR, INC.

Airgas

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Airgas Specialty Gases
630 United Drive
Durham, NC 27713
Phone (919) 544-3773
Fax (919) 544-3774
www.airgas.com

Part Number:	E03NI81E15A37P2	Reference Number:	122-124231187-3
Cylinder Number:	CC7638	Cylinder Volume:	150 Cu.Ft.
Laboratory:	ASG - Durham - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Aug 17, 2010	Valve Outlet:	590

Expiration Date: Aug 17, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	9.000%	8.941%	G1	+/- 1% NIST Traceable
OXYGEN	10.00%	10.01%	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	061201	CC195749	9.898% OXYGEN/NITROGEN	Oct 02, 2012
NTRM	090606	CC262359	9.921% CARBON DIOXIDE/NITROGEN	Apr 10, 2013

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Horiba VIA-510 CO2	Infrared	Jul 22, 2010
Horiba MPA-510 O2 (0-25%)	Paramagnetic	Jul 21, 2010

Triad Data Available Upon Request

Notes:ANW Part # 781221

Amber Mains

Approved for Release

#5000

Airgas

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Part Number:	E03NI60E15A02E6	Reference Number:	122-124174756-1
Cylinder Number:	CC252375	Cylinder Volume:	158 Cu.Ft.
Laboratory:	ASG - Durham - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Apr 15, 2009	Valve Outlet:	590

Expiration Date: Apr 15, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	18.00%	18.05%	G1	+/- 1% NIST Traceable
OXYGEN	22.00%	20.90%	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	060608	CC207968	22.51% OXYGEN/NITROGEN	May 01, 2010
NTRM	080613	CC254471	20.09% CARBON DIOXIDE/NITROGEN	Jul 15, 2012

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Horiba VIA-510 CO2 (0.5-20%)	Infrared	Mar 31, 2009
Horiba MPA-510 O2 (0.5-25%)	Paramagnetic	Mar 31, 2009

Triad Data Available Upon Request

Notes:ANW Part#781381

QA Approval