



**Covanta Lee, Inc.**  
A Covanta Energy Corporation  
10500 Buckingham Road  
Fort Myers, FL 33905  
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**RECEIVED**  
JUN 01 2012  
DIVISION OF AIR  
RESOURCE MANAGEMENT

May 31, 2012

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**  
2012 Stack Test Report with Biosolid Introduction

Mr. Satyal,

Covanta Lee, Inc., on behalf of Lee County Solid Waste Division, is hereby submitting the Environmental Test report (including Testar, Inc.'s report) for the stack test with biosolids performed at the Lee County Solid Waste Resource Recovery Facility. Stack testing was conducted March 28, 2012, in accordance with PSD-FL-151F Specific Conditions 8, 9, & 10.

If you have any questions regarding the enclosed reports, 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 (w/1 CD)  
D. Castro (HDR) (w/1 CD)  
L. Sampson, LC-SWMD (w/ 1 CD)  
File (w/ 1 CD)

**ENVIRONMENTAL TEST REPORT**

**VOLUME I**

**SPECIAL REPORT – COV REPORT NO.3698**

MAY 31, 2012

PREPARED FOR: Covanta Lee, Inc.  
10500 Buckingham Road  
Suite 400  
Ft. Myers, FL 33905

REGULATORY AGENCY: Florida Department of Environmental Protection  
Title V Permit No. 0710119-007-AV  
Air Construction Permit No. 0710119-009-AC/PSD-FL-151F

TEST DATES: March 28, 2012

ASSOCIATED REPORT: COV Report No. 3698

PREPARED BY: Covanta Lee, Inc.

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## 1.0 INTRODUCTION

The Lee County Solid Waste Energy Recovery Facility (LCRRF) processes a nominal 1,800 tons of municipal solid waste each day, designed to generate approximately 60 megawatts of electricity. The facility is operated by Covanta Lee, Inc, and consists of three (3) substantially similar Martin GmbH waterwall furnaces. 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 spray dryer absorbers (SDA), aqueous ammonia injection, carbon injection, and fabric filter baghouses.

Testar, Inc., on behalf of Covanta Lee, Inc., performed a special compliance test to determine the effects of combusting biosolids. The objective of the test program was to demonstrate compliance with the emission limit provisions of the Florida Department of Environmental Protection (FLDEP), Bureau of Air Quality Management Title V Air Operation Permit No. 0710119-007-AV and compare the results to the previous stack test performed in January 2012.

The procedures conducted during the test program are listed in Section 2.0, Schedule of Activities (Table 2.2).

This test report presents the data collected during the test program, which demonstrates compliance with permit emission limits. A summary of emission test results for Unit 1 is presented in Section 3.0, Table 3.1. A summary of visible emissions is presented in Section 3.0, Table 3.2. And a comparison of stack test results between the January 2012 stack test and the March 2012 stack test with biosolids is presented in Section 3.0, Table 3.3. All values from the March 2012 stack test with biosolids were less than or similar to those collected during the 2012 Annual Compliance Test conducted in January 2012. The effects of biosolids are therefore considered negligible on the emission indices tested.

The testing Contractor Report (Volume 2) includes all data gathered at the site and all laboratory analytical data. A review of both the Environmental Test Report and Contractor Report is recommended for a complete understanding of the test program.

### 1.1 BIOSOLIDS COMBUSTION PROCEDURE

All combusted biosolids were from the City of Cape Coral and were designated as "Class B" sludge. At 160 Klbs of steam load, Units 1 averages approximately 23 tons per hour of MSW throughput given the typical HHV in February 2012. To combust 5% of biosolids with the same approximate mass throughput required 1.1 tons of biosolids with 21.9 tons of MSW per hour ( $1.1 \div 21.9 = 5\%$ ).

MSW and biosolids material were established for two 13-hour periods for combustion unit 1. One period in the day and one during the evening. The mixing and feeding procedure for the day period started at about 5:30 AM and the test period began at 6:00 AM and continued until 6:00 PM. The mixing and feeding procedure for the evening test began at about 6:30 PM and the test period was continuous from 7:00 PM to 7:00 AM. The day test coincided with specific stack testing that was conducted for PM, Pb, Hg, and Cd. CEM and COM data were monitored and recorded for opacity, SO<sub>2</sub>, NO<sub>x</sub> and CO during both test periods. Carbon and ammonia feed rates were also monitored and recorded during the test periods.

#### Operator Procedure for the Two Test Periods

The following was taken directly from the operator's procedure for the introduction of biosolids.

"Place a uniform bed of yard waste at least 2-3 feet thick in the trench area of one designated bay. The yard waste will be the indicator for the lower level of the initial MSW/biosolids mixture. Place approximately 20 tons of MSW on top of the yard waste, then approximately 14.3 tons of biosolids on top of the MSW. Finally, place another 20 tons of MSW on top of the biosolids. This provides all of the biosolids required for 13 hours of combustion and a portion of the MSW

required. Mix the MSW and biosolids in the trench with the grapple. If yard waste is brought to the surface during mixing, then the grapple is digging too deep.

Establish the designated test furnace at a control set-point of 160 Klbs of steam. The objective is to combust approximately 299 tons of combined MSW and biosolids during a 13 hour continuous period beginning at 5:30 AM. The actual test period will begin at 6:00 AM and continue for 12 hours.

Each hour, approximately 4.2 tons of MSW/biosolids mixture from the trench (2 grapples at about 2 tons each) should be distributed over a designated area on the back-stack pile. The crane scale can be used for this purpose. This MSW/biosolids mix should then be mixed with MSW from the back-stack pile to feed approximately 23 tons per hour to the test furnace.

Continue this furnace charging procedure during the 13 hour period and all of the MSW/biosolids mixture from the trench should be removed down to the layer of yard waste.”

**TABLE 2.1  
TEST PROGRAM**

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Parameter	Method
Particulate Matter (PM) <sup>(1)</sup>	EPA Method 5
Opacity	EPA Method 9
Multi-metals (MMTL) <sup>(2)</sup>	EPA Method 29
Mercury (Hg)	EPA Method 29

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Notes:

- 1.) One compliance test run was conducted under normal soot blowing conditions. A 1-hour visible emission run was conducted simultaneously with one particulate test run on the unit.
- 2.) Multi-Metals consist of mercury, lead and cadmium.

**TABLE 2.2**  
**SCHEDULE OF ACTIVITIES – Unit 1**

Test Location	Sampling Method	Flue Gas Parameter	Run Date	Run Time	Run Number
Unit 1 SDA Inlet	EPA M29	Mercury	03/28/12	0835-1057	1-I-M29-1
			03/28/12	1115-1339	1-I-M29-2
			03/28/12	1355-1614	1-I-M29-3
Unit 1 Stack	EPA 5/29	Particulate and Metals	03/28/12	0835-1057	1-S-M5/29-1
			03/28/12	1115-1340	1-S-M5/29-2
			03/28/12	1355-1614	1-S-M5/29-3

**TABLE 2.3**

**TEST PARTICIPANTS**

---

Covanta Lee, Inc.

Tyler Huffman  
Mike Duff

TESTAR, Inc.

Herb Dixon, PE  
Project Director

Jeff Aims  
Test Engineer

Charles Nahrebecki  
CEM Test Engineer

Sean Daley  
Test Engineer

Blake Cone  
Test Engineer

Will Snipes  
Test Engineer



Table 3.1  
SUMMARY OF SOURCE TEST RESULTS - UNIT 1

Parameter	Rep. 1	Rep. 2	Rep. 3	Average	Permit Limit
<b>Unit 1 SDA Inlet Concentrations</b>					
Mercury, mg/DSCM @ 7% O <sub>2</sub>	0.0228	0.0353	0.0646	0.0409	NA
<b>Unit 1 SDA Inlet Emission Rates, lb/hr</b>					
Mercury	0.00580	0.00860	0.0164	0.0103	NA
<b>Unit 1 Stack Concentrations</b>					
Mercury, mg/DSCM @ 7% O <sub>2</sub>	0.0000850	0.000376	0.000314	0.000258	0.050
<b>Metals</b>					
Cadmium, mg/DSCM @ 7% O <sub>2</sub>	<0.000124	<0.000120	0.000146	<0.000130	0.035 <sup>a</sup>
Lead, mg/DSCM @ 7% O <sub>2</sub>	0.00106	0.000740	0.00217	0.00133	0.400 <sup>a</sup>
Particulate, Gr/DSCF @ 7% O <sub>2</sub>	0.0000271	0.0000524	<0.0000531	<0.0000442	0.010
<b>Unit 1 Stack Emission Rates, lb/hr</b>					
Mercury	0.0000199	0.0000908	0.0000757	0.0000621	0.0271
Particulate	0.0145	0.0290	<0.0293	<0.0242	5.34
<b>Unit 1 Stack Emission Rates, lb/MMBtu</b>					
Mercury	7.64E-08	3.37E-07	2.82E-07	2.32E-07	0.000138
<b>Metals</b>					
Cadmium	<1.12E-07	<1.08E-07	1.31E-07	<1.17E-07	NA
Lead	9.57E-07	6.65E-07	1.95E-06	1.19E-06	0.0006
<b>Unit 1 Stack Emission Rates, lb/hr ---- For Informational Purposes Only</b>					
<b>Metals</b>					
Cadmium	<2.90E-05	<2.90E-05	3.51E-05	<3.10E-05	9.4E-03
Lead	2.49E-04	1.79E-04	5.23E-04	3.17E-04	0.165
<b>Unit 1 Removal Efficiency %</b>					
Mercury RE%, mg/DSCM @ 7% O <sub>2</sub>	99.6	98.9	99.5	99.4	>85%
Mercury RE%, lb/hr	99.7	98.9	99.5	99.4	>85%

Notes:

- (1) Data presented as run number. Actual sample replicate number may differ.
- (2) Removal efficiencies are alternative compliance limits that can be satisfied to demonstrate compliance with a pollutant's emission standard.

**TABLE 3.2**  
**SUMMARY OF SOURCE TEST RESULTS – VISIBLE AND FUGITIVE EMISSIONS**

Permitted Pollutant	----- RUN -----			Average	Maximum Emission Limit
	1	2	3		
<u>MWC Unit 1</u> Opacity, %	0	0	0	0	10

**TABLE 3.3**

**DATA COMPARISON – JANUARY STACK TEST VS MARCH STACK TEST W/ BIOSOLIDS**

Parameter	January 2012 Stack <sup>(1)</sup> Concentrations	March 2012 Stack Test w/ Biosolids
Hg	0.000722 mg/dscm	0.000258 mg/dscm
Cd	<0.000117 mg/dscm	<0.000130 mg/dscm
Pb	0.00133 mg/dscm	0.00133 mg/dscm
Opacity <sup>(2)</sup>	0%	0%
CO <sup>(2)</sup>	12 ppm @ 7% O2	11 ppm @ 7% O2
SO2 <sup>(2)</sup>	8 ppm @ 7% O2	11 ppm @ 7% O2
NOx <sup>(2)</sup>	145 ppm @ 7% O2	151 ppm @ 7% O2

(1) Data from the facility's 2012 Annual Compliance Test.

(2) Data taken from the 24-hr averages by the CEMS during the Annual Compliance Stack Test for Unit #1.

**Discussion**

All values for the March 2012 stack test with biosolids were less than or similar to the January 2012 results. Therefore, the effect of biosolid combustion is considered to be negligible on emission indices.

#### 4.0 OPERATIONAL DATA DURING EMISSION TESTING

During the air pollutant emissions testing, plant process data was monitored and collected by COV personnel to ensure representative operation of the facility. The following operating parameters are included as an appendix to this Executive Summary report:

1. Steam Flow (k lb/hr)
2. Baghouse Inlet Temperature (degrees F)
3. Carbon Feed Rate (lbs/hr)
4. Crane Weigh Scale Print Outs (The crane weigh scale print outs will be kept on file for review, please note that copies of the scale print out are of poor quality.)
5. CO, SO<sub>2</sub>, NO<sub>x</sub>, and NH<sub>3</sub> injection CEMS data for the January 2012 compliance test.
6. CO, SO<sub>2</sub>, NO<sub>x</sub>, and NH<sub>3</sub> injection CEMS data for the March 2012 compliance test.
7. Biosolid Analysis from the City of Cape Coral.

**TABLE 5.0 METHODOLOGY**

**REFERENCES**

Parameter	Test Method	Reference
Particulate Matter (PM)	EPA Method 5	40 CFR 60, App. A
Multi-metals (MMTL)	EPA Method 29 40 CFR 60, App. A	
Mercury (Hg)	EPA Method 29 40 CFR 60, App. A	

APPENDIX A:

January 2012 CEM Process Data

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

**Data Group:** U1\_1 HOUR DATA

**Report Name:** No Title

**Start of Report:** 01/25/2012 00:00

**End of Report:** 01/25/2012 23:59

**Validation:** Valid Data Only

Group#-Channel#	G65-C35	G65-C37
<b>Long Descrip.</b>	U-1 Steam	U-1 Bagho
<b>Short Descrip.</b>	SteamFl	BagHTemp
<b>Units</b>	K#/Hr	deg F
<b>Range</b>	0-250	100-600
01/25/2012 00:00	141.8	290
01/25/2012 01:00	142.4	290
01/25/2012 02:00	138.5	289
01/25/2012 03:00	140.5	290
01/25/2012 04:00	140.2	290
01/25/2012 05:00	152.4	290
01/25/2012 06:00	158.1	290
01/25/2012 07:00	156.6	289
01/25/2012 08:00	160.1	290
01/25/2012 09:00	159.8	290
01/25/2012 10:00	159.6	290
01/25/2012 11:00	159.9	290
01/25/2012 12:00	159.8	290
01/25/2012 13:00	161.1	289
01/25/2012 14:00	159.2	290
01/25/2012 15:00	159.8	290
01/25/2012 16:00	147.7	300
01/25/2012 17:00	141.7	290
01/25/2012 18:00	142.4	290
01/25/2012 19:00	141.3	290
01/25/2012 20:00	140.1	290
01/25/2012 21:00	141.9	290
01/25/2012 22:00	142.1	290
01/25/2012 23:00	141.4	290
<b>Period Average =</b>	149.5	290
<b>Period Max Value =</b>	161.1	300
<b>Period Min Value =</b>	138.5	289
<b>Period Totals =</b>	3.5884E+3	6.9670E+3
<b>Period % Recovery =</b>	100.0	100.0

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

Data Group: U1\_1 HOUR DATA

Report Name: No Title

Start of Report: 01/26/2012 00:00

End of Report: 01/26/2012 23:59

Validation: Valid Data Only

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Group#-Channel#	G65-C35	G65-C37
-----------------	---------	---------

---

Long Descrip.	U-1 Steam	U-1 Bagho
---------------	-----------	-----------

Short Descrip.	SteamFl	BagHTemp
----------------	---------	----------

Units	K#/Hr	deg F
-------	-------	-------

Range	0-250	100-600
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01/26/2012 00:00	140.7	290
01/26/2012 01:00	137.6	290
01/26/2012 02:00	136.1	289
01/26/2012 03:00	139.8	290
01/26/2012 04:00	132.7	290
01/26/2012 05:00	146.9	291
01/26/2012 06:00	150.1	290
01/26/2012 07:00	152.5	290
01/26/2012 08:00	160.4	290
01/26/2012 09:00	159.3	290
01/26/2012 10:00	160.1	290
01/26/2012 11:00	160.4	289
01/26/2012 12:00	159.1	290
01/26/2012 13:00	158.1	289
01/26/2012 14:00	161.1	291
01/26/2012 15:00	156.4	290
01/26/2012 16:00	148.4	294
01/26/2012 17:00	142.9	294
01/26/2012 18:00	143.1	295
01/26/2012 19:00	140.5	295
01/26/2012 20:00	145.4	295
01/26/2012 21:00	149.7	295
01/26/2012 22:00	151.9	294
01/26/2012 23:00	152.7	295

---

Period Average =	149.4	292
Period Max Value =	161.1	295
Period Min Value =	132.7	289
Period Totals =	3.5859E+3	6.9960E+3
Period % Recovery =	100.0	100.0



# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

Data Group: U1\_1 HOUR DATA  
Report Name: No Title  
Start of Report: 01/25/2012 00:00  
End of Report: 01/25/2012 23:59

Validation: Valid Data Only

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Group#-Channel#	G65-C40
Long Descrip.	U-1 Carbo
Short Descrip.	CarbInj
Units	#/hr
Range	0-75

---

01/25/2012 00:00	20.8
01/25/2012 01:00	20.5
01/25/2012 02:00	20.6
01/25/2012 03:00	20.6
01/25/2012 04:00	20.6
01/25/2012 05:00	20.6
01/25/2012 06:00	20.3
01/25/2012 07:00	20.1
01/25/2012 08:00	20.1
01/25/2012 09:00	20.1
01/25/2012 10:00	20.0
01/25/2012 11:00	19.9
01/25/2012 12:00	19.7
01/25/2012 13:00	20.2
01/25/2012 14:00	20.0
01/25/2012 15:00	20.4
01/25/2012 16:00	27.0
01/25/2012 17:00	27.0
01/25/2012 18:00	26.8
01/25/2012 19:00	26.9
01/25/2012 20:00	26.8
01/25/2012 21:00	26.8
01/25/2012 22:00	26.9
01/25/2012 23:00	26.9

---

Period Average =	22.5
Period Max Value =	27.0
Period Min Value =	19.7
Period Totals =	5.3960E+2
Period % Recovery =	100.0

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

**Data Group:** U1\_1 HOUR DATA

**Report Name:** No Title

**Start of Report:** 01/26/2012 00:00

**End of Report:** 01/26/2012 23:59

**Validation:** Valid Data Only

---

Group#-Channel#	G65-C40
Long Descrip.	U-1 Carbo
Short Descrip.	CarbInj
Units	#/hr
Range	0-75
01/26/2012 00:00	27.0
01/26/2012 01:00	26.8
01/26/2012 02:00	26.9
01/26/2012 03:00	27.0
01/26/2012 04:00	26.9
01/26/2012 05:00	26.8
01/26/2012 06:00	26.8
01/26/2012 07:00	26.9
01/26/2012 08:00	26.9
01/26/2012 09:00	26.9
01/26/2012 10:00	26.9
01/26/2012 11:00	26.6
01/26/2012 12:00	26.7
01/26/2012 13:00	26.8
01/26/2012 14:00	27.0
01/26/2012 15:00	26.7
01/26/2012 16:00	26.2
01/26/2012 17:00	26.3
01/26/2012 18:00	26.3
01/26/2012 19:00	26.5
01/26/2012 20:00	26.9
01/26/2012 21:00	26.6
01/26/2012 22:00	26.7
01/26/2012 23:00	26.7
<b>Period Average =</b>	26.7
<b>Period Max Value =</b>	27.0
<b>Period Min Value =</b>	26.2
<b>Period Totals =</b>	6.4180E+2
<b>Period % Recovery =</b>	100.0

---

# Data Summary Report



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: No Title

Start of Report: 01/26/2012 00:00

End of Report: 01/26/2012 23:59

Validation: Valid Data Only

Group#-Channel#	G66-C2	G65-C18	G65-C20	G65-C42
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Ammon
Short Descrip.	COsc	SO2sc	NOXsc	NH3Inj
Units	ppmc	ppmc	ppmc	scfm
Range	0-10000	0-2000	0-2500	0-100
01/26/2012 00:00	14	0	141	3.3
01/26/2012 01:00		0	139	3.4
01/26/2012 02:00		0	140	3.0
01/26/2012 03:00		6	139	3.3
01/26/2012 04:00	13	57	142	2.9
01/26/2012 05:00		9	143	4.1
01/26/2012 06:00		1	132	4.6
01/26/2012 07:00		3	142	5.0
01/26/2012 08:00	10	12	148	7.1
01/26/2012 09:00		3	143	6.3
01/26/2012 10:00		1	143	6.2
01/26/2012 11:00		2	142	5.5
01/26/2012 12:00	11	0	143	5.7
01/26/2012 13:00		1	140	6.1
01/26/2012 14:00		12	144	6.9
01/26/2012 15:00		9	145	5.5
01/26/2012 16:00	10	1	150	4.1
01/26/2012 17:00		3	151	3.5
01/26/2012 18:00		4	151	3.8
01/26/2012 19:00		2	151	3.5
01/26/2012 20:00	11	4	152	3.5
01/26/2012 21:00		25	154	3.7
01/26/2012 22:00		23	153	4.5
01/26/2012 23:00		3	151	4.5
<b>Period Average =</b>	12	8	145	4.6
<b>Period Max Value =</b>	14	57	154	7.1
<b>Period Min Value =</b>	10	0	132	2.9
<b>Period Totals =</b>	6.9000E+1	1.8100E+2	3.4790E+3	1.1000E+2
<b>Period % Recovery =</b>	100.0	100.0	100.0	100.0

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

**Data Group:** U1\_6 MIN OPACITY

**Report Name:** No Title

**Start of Report:** 01/26/2012 00:00

**End of Report:** 01/26/2012 23:59

**Validation:** Valid Data Only

---

Group#-Channel#	G43-C1
Long Descrip.	U-1 Opaci
Short Descrip.	Opacity
Units	%
Range	0-100

---

01/26/2012 00:00	0
01/26/2012 00:06	0
01/26/2012 00:12	0
01/26/2012 00:18	0
01/26/2012 00:24	0
01/26/2012 00:30	0
01/26/2012 00:36	0
01/26/2012 00:42	0
01/26/2012 00:48	0
01/26/2012 00:54	0
01/26/2012 01:00	0
01/26/2012 01:06	0
01/26/2012 01:12	0
01/26/2012 01:18	0
01/26/2012 01:24	0
01/26/2012 01:30	0
01/26/2012 01:36	0
01/26/2012 01:42	0
01/26/2012 01:48	0
01/26/2012 01:54	0
01/26/2012 02:00	0
01/26/2012 02:06	0
01/26/2012 02:12	0
01/26/2012 02:18	0
01/26/2012 02:24	0
01/26/2012 02:30	0
01/26/2012 02:36	0
01/26/2012 02:42	0
01/26/2012 02:48	0
01/26/2012 02:54	0
01/26/2012 03:00	0
01/26/2012 03:06	0
01/26/2012 03:12	0
01/26/2012 03:18	0
01/26/2012 03:24	0
01/26/2012 03:30	0
01/26/2012 03:36	0
01/26/2012 03:42	0
01/26/2012 03:48	0

<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

01/26/2012 03:54	0
01/26/2012 04:00	0
01/26/2012 04:06	0
01/26/2012 04:12	0
01/26/2012 04:18	0
01/26/2012 04:24	0
01/26/2012 04:30	0
01/26/2012 04:36	0
01/26/2012 04:42	0
01/26/2012 04:48	0
01/26/2012 04:54	0
01/26/2012 05:00	0
01/26/2012 05:06	0
01/26/2012 05:12	0
01/26/2012 05:18	0
01/26/2012 05:24	0
01/26/2012 05:30	0
01/26/2012 05:36	0
01/26/2012 05:42	0
01/26/2012 05:48	0
01/26/2012 05:54	0
01/26/2012 06:00	0
01/26/2012 06:06	0
01/26/2012 06:12	0
01/26/2012 06:18	0
01/26/2012 06:24	0
01/26/2012 06:30	0
01/26/2012 06:36	0
01/26/2012 06:42	0
01/26/2012 06:48	0
01/26/2012 06:54	0
01/26/2012 07:12	0
01/26/2012 07:18	0
01/26/2012 07:24	0
01/26/2012 07:30	0
01/26/2012 07:36	0
01/26/2012 07:42	0
01/26/2012 07:48	0
01/26/2012 07:54	0
01/26/2012 08:00	0
01/26/2012 08:06	0
01/26/2012 08:12	0
01/26/2012 08:18	0
01/26/2012 08:24	0
01/26/2012 08:30	0
01/26/2012 08:36	0
01/26/2012 08:42	0
01/26/2012 08:48	0
01/26/2012 08:54	0
01/26/2012 09:00	0

Group#-Channel#	G43-C1
Long Descrip.	U-1 Opaci
Short Descrip.	Opacity
Units	%
Range	0-100

01/26/2012 09:06	0
01/26/2012 09:12	0
01/26/2012 09:18	0
01/26/2012 09:24	0
01/26/2012 09:30	0
01/26/2012 09:36	0
01/26/2012 09:42	0
01/26/2012 09:48	0
01/26/2012 09:54	0
01/26/2012 10:00	0
01/26/2012 10:06	0
01/26/2012 10:12	0
01/26/2012 10:18	0
01/26/2012 10:24	0
01/26/2012 10:30	0
01/26/2012 10:36	0
01/26/2012 10:42	0
01/26/2012 10:48	0
01/26/2012 10:54	0
01/26/2012 11:00	0
01/26/2012 11:06	0
01/26/2012 11:12	0
01/26/2012 11:18	0
01/26/2012 11:24	0
01/26/2012 11:30	0
01/26/2012 11:36	0
01/26/2012 11:42	0
01/26/2012 11:48	0
01/26/2012 11:54	0
01/26/2012 12:00	0
01/26/2012 12:06	0
01/26/2012 12:12	0
01/26/2012 12:18	0
01/26/2012 12:24	0
01/26/2012 12:30	0
01/26/2012 12:36	0
01/26/2012 12:42	0
01/26/2012 12:48	0
01/26/2012 12:54	0
01/26/2012 13:00	0
01/26/2012 13:06	0
01/26/2012 13:12	0
01/26/2012 13:18	0
01/26/2012 13:24	0
01/26/2012 13:30	0
01/26/2012 13:36	0
01/26/2012 13:42	0
01/26/2012 13:48	0
01/26/2012 13:54	0
01/26/2012 14:00	0

Group#-Channel#	G43-C1
Long Descrip.	U-1 Opaci
Short Descrip.	Opacity
Units	%
Range	0-100

01/26/2012 14:06	0
01/26/2012 14:12	0
01/26/2012 14:18	0
01/26/2012 14:24	0
01/26/2012 14:30	0
01/26/2012 14:36	0
01/26/2012 14:42	0
01/26/2012 14:48	0
01/26/2012 14:54	0
01/26/2012 15:00	0
01/26/2012 15:06	0
01/26/2012 15:12	0
01/26/2012 15:18	0
01/26/2012 15:24	0
01/26/2012 15:30	0
01/26/2012 15:36	0
01/26/2012 15:42	1
01/26/2012 15:48	0
01/26/2012 15:54	0
01/26/2012 16:00	0
01/26/2012 16:06	0
01/26/2012 16:12	0
01/26/2012 16:18	0
01/26/2012 16:24	0
01/26/2012 16:30	0
01/26/2012 16:36	0
01/26/2012 16:42	0
01/26/2012 16:48	0
01/26/2012 16:54	0
01/26/2012 17:00	0
01/26/2012 17:06	0
01/26/2012 17:12	0
01/26/2012 17:18	0
01/26/2012 17:24	0
01/26/2012 17:30	0
01/26/2012 17:36	0
01/26/2012 17:42	0
01/26/2012 17:48	0
01/26/2012 17:54	0
01/26/2012 18:00	0
01/26/2012 18:06	0
01/26/2012 18:12	0
01/26/2012 18:18	0
01/26/2012 18:24	0
01/26/2012 18:30	0
01/26/2012 18:36	0
01/26/2012 18:42	0
01/26/2012 18:48	0
01/26/2012 18:54	0
01/26/2012 19:00	0

---

<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

---

01/26/2012 19:06	0
01/26/2012 19:12	0
01/26/2012 19:18	0
01/26/2012 19:24	0
01/26/2012 19:30	0
01/26/2012 19:36	0
01/26/2012 19:42	0
01/26/2012 19:48	0
01/26/2012 19:54	0
01/26/2012 20:00	0
01/26/2012 20:06	0
01/26/2012 20:12	0
01/26/2012 20:18	0
01/26/2012 20:24	0
01/26/2012 20:30	0
01/26/2012 20:36	0
01/26/2012 20:42	0
01/26/2012 20:48	0
01/26/2012 20:54	0
01/26/2012 21:00	0
01/26/2012 21:06	0
01/26/2012 21:12	0
01/26/2012 21:18	0
01/26/2012 21:24	0
01/26/2012 21:30	0
01/26/2012 21:36	0
01/26/2012 21:42	0
01/26/2012 21:48	0
01/26/2012 21:54	0
01/26/2012 22:00	0
01/26/2012 22:06	0
01/26/2012 22:12	0
01/26/2012 22:18	0
01/26/2012 22:24	0
01/26/2012 22:30	0
01/26/2012 22:36	0
01/26/2012 22:42	0
01/26/2012 22:48	0
01/26/2012 22:54	0
01/26/2012 23:00	0
01/26/2012 23:06	0
01/26/2012 23:12	0
01/26/2012 23:18	0
01/26/2012 23:24	0
01/26/2012 23:30	0
01/26/2012 23:36	0
01/26/2012 23:42	0
01/26/2012 23:48	0
01/26/2012 23:54	0



---

Period Average = 0  
Period Max Value = 1  
Period Min Value = 0  
Period Totals = 1.0000E+0  
Period % Recovery = 99.2

APPENDIX B:

March 2012 CEM Process Data w/ Biosolids

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

**Data Group:** U1\_1 HOUR DATA  
**Report Name:** No Title  
**Start of Report:** 03/28/2012 06:00  
**End of Report:** 03/29/2012 06:59

**Validation:** Valid Data Only

Group#-Channel#	G65-C35	G65-C37
<b>Long Descrip.</b>	U-1 Steam	U-1 Bagho
<b>Short Descrip.</b>	SteamFl	BagHTemp
<b>Units</b>	K#/Hr	deg F
<b>Range</b>	0-250	100-600

03/28/2012 06:00	159.8	299
03/28/2012 07:00	161.2	299
03/28/2012 08:00	160.9	298
03/28/2012 09:00	159.2	298
03/28/2012 10:00	160.1	299
03/28/2012 11:00	160.5	299
03/28/2012 12:00	159.2	299
03/28/2012 13:00	158.2	298
03/28/2012 14:00	161.2	299
03/28/2012 15:00	159.9	299
03/28/2012 16:00	159.4	299
03/28/2012 17:00	160.0	298
03/28/2012 18:00	161.3	298
03/28/2012 19:00	159.9	299
03/28/2012 20:00	159.0	298
03/28/2012 21:00	160.4	298
03/28/2012 22:00	160.3	298
03/28/2012 23:00	159.9	298
03/29/2012 00:00	160.9	298
03/29/2012 01:00	160.7	299
03/29/2012 02:00	160.2	299
03/29/2012 03:00	157.4	299
03/29/2012 04:00	160.5	300
03/29/2012 05:00	160.1	299
03/29/2012 06:00	160.0	300

<b>Period Average =</b>	160.0	299
<b>Period Max Value =</b>	161.3	300
<b>Period Min Value =</b>	157.4	298
<b>Period Totals =</b>	4.0002E+3	7.4670E+3
<b>Period % Recovery =</b>	100.0	100.0

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

Data Group: U1\_1 HOUR DATA  
Report Name: No Title  
Start of Report: 03/28/2012 06:00  
End of Report: 03/29/2012 06:59

Validation: Valid Data Only

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Group#-Channel#	G65-C40
Long Descrip.	U-1 Carbo
Short Descrip.	CarbInj
Units	#/hr
Range	0-75

---

03/28/2012 06:00	20.2
03/28/2012 07:00	20.3
03/28/2012 08:00	20.3
03/28/2012 09:00	20.2
03/28/2012 10:00	20.3
03/28/2012 11:00	20.3
03/28/2012 12:00	20.2
03/28/2012 13:00	20.2
03/28/2012 14:00	20.3
03/28/2012 15:00	20.2
03/28/2012 16:00	21.3
03/28/2012 17:00	22.1
03/28/2012 18:00	22.0
03/28/2012 19:00	22.1
03/28/2012 20:00	22.0
03/28/2012 21:00	22.0
03/28/2012 22:00	22.0
03/28/2012 23:00	22.1
03/29/2012 00:00	22.0
03/29/2012 01:00	22.0
03/29/2012 02:00	21.5
03/29/2012 03:00	21.7
03/29/2012 04:00	21.7
03/29/2012 05:00	21.6
03/29/2012 06:00	21.7

---

Period Average =	21.2
Period Max Value =	22.1
Period Min Value =	20.2
Period Totals =	5.3030E+2
Period % Recovery =	100.0

---

# Data Summary Report



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:** No Title

**Start of Report:** 03/28/2012 06:00

**End of Report:** 03/29/2012 06:59

**Validation:** Valid Data Only

Group#-Channel#	G66-C2	G65-C18	G65-C20	G65-C42
Long Descrip.	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Ammon
Short Descrip.	COsc	SO2sc	NOXsc	NH3Inj
Units	ppmc	ppmc	ppmc	scfm
Range	0-10000	0-2000	0-2500	0-100
03/28/2012 06:00		2	168	4.5
03/28/2012 07:00		3	151	5.0
03/28/2012 08:00	11	3	149	4.5
03/28/2012 09:00		2	142	5.1
03/28/2012 10:00		9	142	5.2
03/28/2012 11:00		13	142	6.1
03/28/2012 12:00	12	4	145	5.0
03/28/2012 13:00		8	144	5.6
03/28/2012 14:00		38	143	6.1
03/28/2012 15:00		21	144	5.9
03/28/2012 16:00	11	11	151	5.0
03/28/2012 17:00		7	152	5.2
03/28/2012 18:00		7	153	5.7
03/28/2012 19:00		4	153	5.2
03/28/2012 20:00	12	12	152	4.7
03/28/2012 21:00		17	152	4.8
03/28/2012 22:00		8	153	5.3
03/28/2012 23:00		28	155	4.8
03/29/2012 00:00	11	7	152	5.4
03/29/2012 01:00		10	153	5.5
03/29/2012 02:00		3	153	4.6
03/29/2012 03:00		32	152	4.7
03/29/2012 04:00	11	15	152	4.9
03/29/2012 05:00		9	154	4.6
03/29/2012 06:00		9	163	3.9
<b>Period Average =</b>	11	11	151	5.1
<b>Period Max Value =</b>	12	38	168	6.1
<b>Period Min Value =</b>	11	2	142	3.9
<b>Period Totals =</b>	6.8000E+1	2.8200E+2	3.7700E+3	1.2730E+2
<b>Period % Recovery =</b>	100.0	100.0	100.0	100.0

# Data Summary Report



Lee County Solid Waste  
Resource Recovery Facility

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

**Data Group:** UI\_6 MIN OPACITY

**Report Name:** No Title

**Start of Report:** 03/28/2012 06:00

**End of Report:** 03/29/2012 06:59

**Validation:** Valid Data Only

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<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

---

03/28/2012 06:00	0
03/28/2012 06:06	0
03/28/2012 06:12	0
03/28/2012 06:18	0
03/28/2012 06:24	0
03/28/2012 06:30	0
03/28/2012 06:36	0
03/28/2012 06:42	0
03/28/2012 06:48	0
03/28/2012 06:54	0
03/28/2012 07:12	0
03/28/2012 07:18	0
03/28/2012 07:24	0
03/28/2012 07:30	0
03/28/2012 07:36	0
03/28/2012 07:42	0
03/28/2012 07:48	0
03/28/2012 07:54	0
03/28/2012 08:00	0
03/28/2012 08:06	0
03/28/2012 08:12	0
03/28/2012 08:18	0
03/28/2012 08:24	0
03/28/2012 08:30	0
03/28/2012 08:36	0
03/28/2012 08:42	0
03/28/2012 08:48	0
03/28/2012 08:54	0
03/28/2012 09:00	0
03/28/2012 09:06	0
03/28/2012 09:12	0
03/28/2012 09:18	0
03/28/2012 09:24	0
03/28/2012 09:30	0
03/28/2012 09:36	0
03/28/2012 09:42	0
03/28/2012 09:48	0
03/28/2012 09:54	0
03/28/2012 10:00	0

Group#-Channel#	G43-C1
Long Descrip.	U-1 Opaci
Short Descrip.	Opacity
Units	%
Range	0-100

03/28/2012 10:06	0
03/28/2012 10:12	0
03/28/2012 10:18	0
03/28/2012 10:24	0
03/28/2012 10:30	0
03/28/2012 10:36	0
03/28/2012 10:42	0
03/28/2012 10:48	0
03/28/2012 10:54	0
03/28/2012 11:00	0
03/28/2012 11:06	0
03/28/2012 11:12	0
03/28/2012 11:18	0
03/28/2012 11:24	0
03/28/2012 11:30	0
03/28/2012 11:36	0
03/28/2012 11:42	0
03/28/2012 11:48	0
03/28/2012 11:54	0
03/28/2012 12:00	0
03/28/2012 12:06	0
03/28/2012 12:12	0
03/28/2012 12:18	0
03/28/2012 12:24	0
03/28/2012 12:30	0
03/28/2012 12:36	0
03/28/2012 12:42	0
03/28/2012 12:48	0
03/28/2012 12:54	0
03/28/2012 13:00	0
03/28/2012 13:06	0
03/28/2012 13:12	0
03/28/2012 13:18	0
03/28/2012 13:24	0
03/28/2012 13:30	0
03/28/2012 13:36	0
03/28/2012 13:42	0
03/28/2012 13:48	0
03/28/2012 13:54	0
03/28/2012 14:00	0
03/28/2012 14:06	0
03/28/2012 14:12	0
03/28/2012 14:18	0
03/28/2012 14:24	0
03/28/2012 14:30	0
03/28/2012 14:36	0
03/28/2012 14:42	0
03/28/2012 14:48	0
03/28/2012 14:54	0
03/28/2012 15:00	0

<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

03/28/2012 15:06	0
03/28/2012 15:12	0
03/28/2012 15:18	0
03/28/2012 15:24	0
03/28/2012 15:30	0
03/28/2012 15:36	0
03/28/2012 15:42	0
03/28/2012 15:48	0
03/28/2012 15:54	0
03/28/2012 16:00	0
03/28/2012 16:06	0
03/28/2012 16:12	0
03/28/2012 16:18	0
03/28/2012 16:24	0
03/28/2012 16:30	0
03/28/2012 16:36	0
03/28/2012 16:42	0
03/28/2012 16:48	0
03/28/2012 16:54	0
03/28/2012 17:00	0
03/28/2012 17:06	0
03/28/2012 17:12	0
03/28/2012 17:18	0
03/28/2012 17:24	0
03/28/2012 17:30	0
03/28/2012 17:36	0
03/28/2012 17:42	0
03/28/2012 17:48	0
03/28/2012 17:54	0
03/28/2012 18:00	0
03/28/2012 18:06	0
03/28/2012 18:12	0
03/28/2012 18:18	0
03/28/2012 18:24	0
03/28/2012 18:30	0
03/28/2012 18:36	0
03/28/2012 18:42	0
03/28/2012 18:48	0
03/28/2012 18:54	0
03/28/2012 19:00	0
03/28/2012 19:06	0
03/28/2012 19:12	0
03/28/2012 19:18	0
03/28/2012 19:24	0
03/28/2012 19:30	0
03/28/2012 19:36	0
03/28/2012 19:42	0
03/28/2012 19:48	0
03/28/2012 19:54	0
03/28/2012 20:00	0



<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

03/28/2012 20:06	0
03/28/2012 20:12	0
03/28/2012 20:18	0
03/28/2012 20:24	0
03/28/2012 20:30	0
03/28/2012 20:36	0
03/28/2012 20:42	0
03/28/2012 20:48	0
03/28/2012 20:54	0
03/28/2012 21:00	0
03/28/2012 21:06	0
03/28/2012 21:12	0
03/28/2012 21:18	0
03/28/2012 21:24	0
03/28/2012 21:30	0
03/28/2012 21:36	0
03/28/2012 21:42	0
03/28/2012 21:48	0
03/28/2012 21:54	0
03/28/2012 22:00	0
03/28/2012 22:06	0
03/28/2012 22:12	0
03/28/2012 22:18	0
03/28/2012 22:24	0
03/28/2012 22:30	0
03/28/2012 22:36	0
03/28/2012 22:42	0
03/28/2012 22:48	0
03/28/2012 22:54	0
03/28/2012 23:00	0
03/28/2012 23:06	0
03/28/2012 23:12	0
03/28/2012 23:18	0
03/28/2012 23:24	0
03/28/2012 23:30	0
03/28/2012 23:36	0
03/28/2012 23:42	0
03/28/2012 23:48	0
03/28/2012 23:54	0
03/29/2012 00:00	0
03/29/2012 00:06	0
03/29/2012 00:12	0
03/29/2012 00:18	0
03/29/2012 00:24	0
03/29/2012 00:30	0
03/29/2012 00:36	0
03/29/2012 00:42	0
03/29/2012 00:48	0
03/29/2012 00:54	0
03/29/2012 01:00	0

<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

03/29/2012 01:06	0
03/29/2012 01:12	0
03/29/2012 01:18	0
03/29/2012 01:24	0
03/29/2012 01:30	0
03/29/2012 01:36	0
03/29/2012 01:42	0
03/29/2012 01:48	0
03/29/2012 01:54	0
03/29/2012 02:00	0
03/29/2012 02:06	0
03/29/2012 02:12	0
03/29/2012 02:18	0
03/29/2012 02:24	0
03/29/2012 02:30	0
03/29/2012 02:36	0
03/29/2012 02:42	0
03/29/2012 02:48	0
03/29/2012 02:54	0
03/29/2012 03:00	0
03/29/2012 03:06	0
03/29/2012 03:12	0
03/29/2012 03:18	0
03/29/2012 03:24	0
03/29/2012 03:30	0
03/29/2012 03:36	0
03/29/2012 03:42	0
03/29/2012 03:48	0
03/29/2012 03:54	0
03/29/2012 04:00	0
03/29/2012 04:06	0
03/29/2012 04:12	0
03/29/2012 04:18	0
03/29/2012 04:24	0
03/29/2012 04:30	0
03/29/2012 04:36	0
03/29/2012 04:42	0
03/29/2012 04:48	0
03/29/2012 04:54	0
03/29/2012 05:00	0
03/29/2012 05:06	0
03/29/2012 05:12	0
03/29/2012 05:18	0
03/29/2012 05:24	0
03/29/2012 05:30	0
03/29/2012 05:36	0
03/29/2012 05:42	0
03/29/2012 05:48	0
03/29/2012 05:54	0
03/29/2012 06:00	0

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<b>Group#-Channel#</b>	G43-C1
<b>Long Descrip.</b>	U-1 Opaci
<b>Short Descrip.</b>	Opacity
<b>Units</b>	%
<b>Range</b>	0-100

---

03/29/2012 06:06	0
03/29/2012 06:12	0
03/29/2012 06:18	0
03/29/2012 06:24	0
03/29/2012 06:30	0
03/29/2012 06:36	0
03/29/2012 06:42	0
03/29/2012 06:48	0
03/29/2012 06:54	0

---

<b>Period Average =</b>	0
<b>Period Max Value =</b>	0
<b>Period Min Value =</b>	0
<b>Period Totals =</b>	0.0000E+0
<b>Period % Recovery =</b>	99.2

APPENDIX C:

Sludge Analysis- Laboratory Test Report



# Laboratory Test Report

Lab Project #: F1203126

Page 1 of 3

All subsequent pages are identified by: F1203126 . These pages may include, but are not limited to: Analytical Data, Chains of Custodys, Subcontracted Data and Case Narratives.

Questions regarding this report should be directed to your **Laboratory Contact:**

Tami Bright

**Client:** City of Cape Coral  
PO Box 150027  
Cape Coral, FL 33915  
**Phone:** 239-574-0784  
**Fax:** 239-574-0861  
**E-mail:**  
**Project Name:** 503 Sludge Analysis

*Class "B"*

### QUALIFIER DEFINITIONS

- B: Results based upon colony counts outside the acceptable range.
  - I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.
  - J: Estimated Value.
  - J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.
  - K: Off scale low, actual value is known to be less than the value given.
  - L: Off scale high, actual value is known to be greater than the value given.
  - Q: Sample held beyond acceptable holding time.
  - U: The compound was analyzed for, but not detected.
  - V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.
  - Y: The laboratory analysis was from an improperly preserved sample.
  - Z: Too many colonies were present for accurate counting.
- HACH results may not meet NELAC standards.

A statement of estimated uncertainty of results is available upon request.

Analytical results provided relate only to the samples received for this project.

Test results meet all the requirements of the NELAC standards, unless otherwise noted.

Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.

Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Laboratory PQL's are available upon request.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of \$25.00 per report. Reports older than 1 year are available for a fee of \$50.00 per report. Copies will be provided within 1 week of the time of the request.

Approved by:

Radica Koutselas/QA Officer  
Jeff Walsh/Project Manager

### Comments:

The MPN sample was originally ran on 3/8/2012 however the results were erroneously high it was then reran twice with higher dilutions and Q is needed for rerun.

**SANDERS LABORATORIES, INC.**

**Laboratory Test Report**

**Client:** City of Cape Coral  
**Client Project:** 503 Sludge Analysis

**Page:** Page 1 of 1  
**Lab Project:** F1203126  
**Report Date:** 03/22/12

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F1203126-01	503 SLUDGE	Sludge	COMPOSITE	3/8/12 8:45	3/1/12 9:00

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Batch #</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Lab ID</u>
pH (solid)	6.23	Q	0.01	0.01	std units	EPA9040	NB120309065	3/9/12 11:00	WC	E84380
Total Solids %	13.4		0.01	0.01	%	SM2540G	NB120313020	3/9/12 9:10	DM	E84380

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F1203126-02	503 SLUDGE	Sludge	COMPOSITE	3/8/12 8:45	3/5/12 9:05

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Batch #</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Lab ID</u>
Nitrogen, Total %	7.50		0.01	0.01	% dry wt	EPA351.2/353.2	NB120320029	3/16/12 13:13	JPW	E84380
Phosphorus, Total %	2.73		0.01	0.01	% dry wt	EPA365.4	NB120320025	3/16/12 13:13	JPW	E84380

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F1203126-03	503 SLUDGE	Sludge	COMPOSITE	3/8/12 8:45	3/7/12 8:40

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Batch #</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Lab ID</u>
Arsenic	4.78	U	4.78	19.1	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Cadmium	0.90	I	0.90	3.58	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Copper	149		1.87	7.46	mg/Kg dry	6010B	NB120320059	3/16/12 18:03	HBEL	E96080
Lead	9.70	I	4.03	16.1	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Mercury, Total (solid)	0.82		0.13	0.51	mg/Kg dry	EPA7470	NB120320060	3/19/12 15:37	HBEL	E96080
Molybdenum	7.31	I	2.91	11.6	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Nickel	9.70	I	2.69	10.8	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Potassium, Total %	0.68		0.01	0.01	% dry wt	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Selenium	5.30	U	5.30	21.2	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080
Zinc	1490		26.9	107	mg/Kg dry	6010B	NB120320059	3/14/12 17:22	HBEL	E96080

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F1203126-04	503 SLUDGE	Sludge	COMPOSITE	3/8/12 8:45	3/8/12 7:50

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Batch #</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Lab ID</u>
Fecal Coliform, MPN	1490	Q	200	200	MPN/g	SM9221E	FB120322006	3/20/12 15:20	LV	E85457

Class "B"

