



**LEE COUNTY**  
SOUTHWEST FLORIDA

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October 14, 2011

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Mr. Scott M. Sheplak, P.E.  
DEP – Office of Permitting and Compliance  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399

**RE: Lee County Resource Recovery Facility (RRF)**  
**File Numbers: 710119-007-AV, Title V Air Operating Permit Renewal**

**Application**

**0710119-008-AC/PSD-FL-151-E, Air Construction Permit**

**Revision**

**0710119-009-AC, Air Construction Permit, Biosolids Request**

**Additional Information Requested by FDEP Letter Dated August 15, 2011**

Dear Mr. Sheplak:

On August 15, 2011, the Florida Department of Environmental Protection (FDEP) issued a letter to the Lee County RRF (Facility) stating that review of the Facility's request to modify several previously issued PSD permits (PSD-FL-151-B&D), submitted on July 22, 2011, had begun. The letter stated that FDEP needs additional information in order to continue processing the application. The purpose of this letter is to submit the additional information requested by the FDEP.

**A. Request to Modify Miscellaneous underlying AC/PSD Permit Conditions Project (PSD permit "clean up" project)**

1. Fluoride, Sulfuric Acid Mist and VOC Emissions from MWC Units 1 & 2 and Hydrogen Fluoride Emissions from MWC Unit 3: The modification request stated that "historical test data" indicates these air pollutants have been emitted at levels less than the PSD "significant emission rates" defined in Rule 62-210.200, Florida Administrative Code (F.A.C.). Please provide the supporting stack test data in the form of a summary.

**Answer**

Attached is a summary of test data performed at the facility, for each of the requested pollutants, since 1995. Following is a discussion of the attached test result summary as they pertain to the July 22, 2011 application. As a note, ton per year (TPY) values were calculated using the tested hourly emission rates and full time (i.e., 8760 hours per year) operation of each MWC unit.

**MWC Units 1 & 2**

Since MWC Units 1 & 2 were permitted as a single project, the sum of their emissions must be compared to the PSD “significant emission rates”. Table 1 shows the maximum tested emissions total for Units 1 & 2 for each pollutant.

**Table 1 – MWC Units 1 & 2 Emissions (tpy)**

	Fluoride <sup>a</sup>	Sulfuric Acid Mist <sup>b</sup>	VOC <sup>c</sup>
Unit 1	< 0.3	<0.3	< 3.5
Unit 2	< 0.1	<0.1	< 3.1
Sum	< 0.4	<0.4	< 6.6
PSD Threshold	3	7	40

<sup>a</sup> Based on 2010 test results.

<sup>b</sup> Based on 2010 test results. See discussion below regarding SAM testing and results.

<sup>c</sup> Based on 1996 test results.

Review of Table 1 shows that combined MWC Units 1 & 2 Fluoride and VOC emissions are well below the applicable PSD “significant emission rates”. Therefore, the related permit limits can be removed from the PSD permit and Title V permit.

The sulfuric acid mist (SAM) results shown in Table 1 are less than the PSD “significant emission rates”. However, review of all of the test results presented in the attachment shows that SAM emissions vary from below detection to well above the PSD “significant emission rates”. This large variation in test results raises questions about the accuracy of the results of test conducted prior to 2010. Research and discussions with stack testing personnel have revealed that SAM emissions may have been overestimated in the past for the following reasons.

- Section 4.1 of Reference Method 8 indicates that possible interfering agents of the method are fluorides, free ammonia, and dimethyl aniline. Of these, free ammonia is present in the exhaust stream. Similarly, free ammonia is a listed interfering agent for EPA Reference Method 6. According to a paper published in February 1988 and available from EPA (<http://www.epa.gov/ttn/emc/methods/Method6AmmoniaInterference.pdf>), free ammonia biases SO<sub>2</sub> test results high and the same is expected for SAM.
- Reference Method 8 for SAM testing is a titration-based method. Covanta’s stack testing vendor has indicated that the endpoint is difficult to determine because the color change is very subtle. If the sample is over-titrated (because the technician

missed the endpoint), it will bias the sample high. To account for this, Covanta recently started using ion chromatography to “augment” the titration result. This practice started a couple of years ago and it has resulted in mostly non-detects for SAM.

Based on this discussion and the 2010 test results, Lee County asserts that combined MWC Units 1 & 2 SAM emissions are below the PSD “significant emission rates”. Therefore, the related permit limit should be removed from the PSD permit as requested.

MWC Unit 3

The summary of test results attached to this letter shows that the maximum tested HF emissions for Unit 3 was < 0.1 tpy in 2007. This is well below the applicable PSD “significant emission rate” of 3 tpy for HF. Therefore, the Unit 3 HF limit can be removed from the PSD permit and Title V permit.

The remainder of the Item A. of the Additional Information Request was informational and is not addressed further.

In Item B of the Additional Information Request, DEP indicated that the request to burn biosolids was not in the Title V air operating permit renewal application received by the Department and so will be processed separately under File Number 0710119-009-AC. As such, the information requested under Item b of the Additional Information Request will be provided under separate cover.

Attached is a Responsible Official Certification as required by Rule 62-213.420(4) of the Florida Administrative Code for any document submitted to the Department for a Title V facility. In addition, a registered Professional Engineer certification is attached, per Department policy regarding the submittal of additional information of an engineering nature. Should you have any questions, please contact me at (239-338-3302) or Mr. M. Kirk Dunbar of HDR Engineering, Inc. at (763-591-5476).

Sincerely,



Lindsey J. Sampson  
Lee County Solid Waste Division Director

Attachments

- cc: D. Castro - HDR Engineering, Inc.
- K. Dunbar - HDR Engineering, Inc.
- M. Halpin, P.E. - DEP-Siting
- A. Satyal - DEP-SD
- J. Gorrie - Covanta Energy Corporation

# Attachment

## Summary of Historic Test Results

### Unit 1

	1995	1996	1997	1998	1999	2000	2005	2010
Total Fluoride	ppm @ 7% O <sub>2</sub>	<0.0303	0.18	<0.104	<0.11	<0.10	<0.162	<0.446
	lb/hr	<0.00541	0.034	<0.0199	<0.020	<0.018	<0.037	<0.0776
	ton/yr	<0.02	0.1	<0.09	<0.09	<0.08	<0.2	<0.3
Sulfuric Acid Mist	ppm @ 7% O <sub>2</sub>						1.85	<0.0275
	lb/hr	<0.0368	0.50	0.390	5.23	4.25	<0.008	<0.0233
	ton/yr	<0.2	2.2	1.7	22.9	18.6	<0.04	<0.1
VOC	ppm @ 7% O <sub>2</sub>	1.91	<1.7	<0.335	<0.366	1.1	0.6	0.2
	lb/hr	0.2	<0.8	<0.0536	<0.060	0.14	0.3	0.1
	ton/yr	0.9	<3.5	<0.23	<0.3	0.6	1.4	0.4

### Unit 2

	1995	1996	1997	1998	1999	2000	2005	2010
Total Fluoride	ppm @ 7% O <sub>2</sub>	<0.0311	<0.048	<0.116	<0.11	<0.09	<0.167	<0.173
	lb/hr	<0.00531	<0.009	<0.0209	<0.02	<0.02	<0.037	<0.0312
	ton/yr	<0.02	<0.04	<0.09	<0.09	<0.09	<0.2	<0.1
Sulfuric Acid Mist	ppm @ 7% O <sub>2</sub>						1.85	<0.0302
	lb/hr	<0.0358	0.68	0.469	3.65	3.39	<0.012	<0.029
	ton/yr	<0.2	3.0	2.1	16.0	14.8	<0.05	<0.1
VOC	ppm @ 7% O <sub>2</sub>	2.04	<1.6	<0.351	<0.378	4.0	0.6	0.5
	lb/hr	0.222	<0.7	<0.0523	<0.060	0.49	0.3	0.2
	ton/yr	1.0	<3.1	<0.2	<0.3	2.1	1.2	0.9

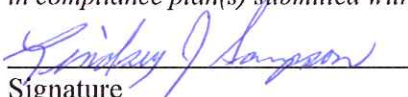
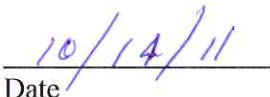
### Unit 3

	2007	2008	2009	2010
Hydrogen Fluoride	ppm @ 7% O <sub>2</sub>	<0.146	<0.135	<0.110
	lb/hr	<0.0291	<0.0260	<0.0207
	ton/yr	<0.1	<0.1	<0.09

## APPLICATION INFORMATION

### Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: LINDSEY SAMPSON
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input checked="" type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: LEE COUNTY Street Address: 10500 BUCKINGHAM ROAD SUITE 200 City: FORT MEYERS State: FL Zip Code: 33905
4. Application Responsible Official Telephone Numbers... Telephone: ( 239 ) 338 - 3302 ext. Fax: ( 239 ) 461 - 5871
5. Application Responsible Official E-mail Address: sampsolj@leegov.com
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  Signature  Date

**APPLICATION INFORMATION**

**Professional Engineer Certification**

1. Professional Engineer Name: DONALD CASTRO Registration Number: 44569
2. Professional Engineer Mailing Address... Organization/Firm: HDR ENGINEERING, INC. Street Address: 5426 Bay Center Drive, Suite 400 City: TAMPA State: FL Zip Code: 33609-3444
3. Professional Engineer Telephone Numbers... Telephone: ( 813 ) 282 - 2404 ext. Fax: ( ) -
4. Professional Engineer E-mail Address: DON.CASTRO@HDRINC.COM
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> <i>Donald J. Castro</i> Signature Date 10/13/11 (seal)

\* Attach any exception to certification statement.

