# FINAL DETERMINATION

## PERMITTEE

Lee County Department of Solid Waste Management
10500 Buckingham Road, Suite 200
Fort Myers, Florida 33905

## PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

## PROJECT

Final Permit Nos. 0710119-007-AV & 0710119-008-AC/PSD-FL-151E
Lee County Resource Recovery Facility

The purpose of this project is to renew the Title V air operation permit for the above referenced facility and to incorporate minor revisions from Permit No. 0710119-008-AC, issued concurrently with this permit.

The Title V air operation permit was processed using a parallel review.

## PUBLIC NOTICE

A Written Notice of Intent to Issue Air Permits to Lee County Department of Solid Waste Management for the Lee County Resource Recovery Facility located in Lee County at 10500 Buckingham Road, in Fort Myers, Florida, was clerked on November 18, 2011. The Public Notice of Intent to Issue Air Permits was published in the News-Press on December 2, 2011. The draft/proposed Title V air operation permit and the draft AC/PSD permit revision were available for public inspection at the permitting authority's office in Tallahassee. Proof of publication of the Public Notice of Intent to Issue Air Permits was received on December 9, 2011.

## COMMENTS

On December 12, 2011, the Department informed US EPA Region 4 that the Title V air operation permit was being processed using a parallel review. US EPA Region 4 was notified of the publication date of the Public Notice on November 18, 2011.

No comments on the permits were received from the public during the 30-day public comment period. Comments on the permits were received from the Applicant during the 30-day public comment period. The comments are addressed below. Additions to the permit are indicated below by double underline. Deletions from the permit are indicated below by ~~strike through~~. All changes are emphasized with yellow highlight in the electronic document.

Letter from the Applicant (Lee County Department of Solid Waste Management) dated and received via e-mail on December 16, 2011

### Comments

1. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 2. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.A.13.b. The applicant requested that the cadmium (Cd) limits to be removed because the original AC/PSD permit did not limit cadmium emissions.

***Response*:** The original AC/PSD permit did not limit Cd emissions from the MWC Unit Nos. 1 & 2. Cd emissions are limited by the 40 CFR 60, Subparts Cb/Eb only.

Specific Condition 2. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**2.** Air pollutant emissions from each MWC unit shall not exceed the following emission standards and limits using the specified test methods and procedures:

| Pollutant | Emission Standard/Limit [1] | lbs/hour [2] | Comparison Result [3] |
|---|---|---|---|
| … | … | … | … |
| ~~Cadmium (Cd)~~ | ~~35 µg/dscm~~ | ~~9 x 10-3~~ | ~~Subpart Cb~~ |
| … | … | … | … |

…"

Specific Condition III.A.13.b. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"**A.13.** Cadmium.

~~a.~~ The emission limit for cadmium (Cd) contained in the gases discharged to the atmosphere is 35 micrograms per dry standard cubic meter (µg/dscm), corrected to 7 percent oxygen. [Rule 62-204.800(9)(b)3.c., F.A.C.; and, 40 CFR 60.33b(a)(2)(i).]

~~b. Cd emissions shall not exceed 9 x 10$^{-3}$ lbs/hour per unit. [Permit No. 0710119-008-AC/PSD-FL-151E, Condition 2.]~~"

The correction is also made in Table 1, Summary of Air Pollutant Standards and Terms.

2. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 2., Footnote 2. The applicant pointed out that the steam production rate for Units 1 and 2 cited in the footnote 2 is 186,200 lbs/hour, not 197,400 lbs/hour.

***Response*:** The applicant is correct, the nominal steam production for each MWC is 186,200 lbs/hour.

Specific Condition 2. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**2.** Air pollutant emissions from each MWC unit shall not exceed the following emission standards and limits using the specified test methods and procedures:

| Pollutant | Emission Standard/Limit [1] | lbs/hour [2] | Comparison Result [3] |
|---|---|---|---|
| … | … | … | … |

[1] All concentration values are corrected to 7% $O_2$: µg/dscm = micrograms per dry standard cubic meter; mg/dscm = milligrams per dry standard cubic meter; ng/dscm = nanograms per dry standard cubic meter; and, ppmvd = parts per million volume dry. The value(s) listed is/are the most stringent emission standard(s)/limit(s).

[2] Mass emission limits in "lbs/hour" were based on a steam production limit of ~~197,400~~186,200 lb steam/hr for each MWC and were from the original PSD-FL-151, A& B permit and BACT determination.

…

"

3. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 3.a. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.A.32. The applicant requested that the following statement be deleted: "NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test."

***Response*:** This statement is not included in the original PSD permits.

Specific Conditions 3.a. & III.B.10. in Permit No. 0710119-008-AC/PSD-FL-151E are corrected to read as follows:

**3.a.** & **III.B.10.** "…

| EPA Method(s) | Description of Method(s) and Comment(s) |
|---|---|
| … | … |
| 7, 7C, 7E or 19 | Determination of NOx Emissions (7E is Instrumental). ~~NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.~~ |

| | |
|---|---|
| … | … |

…"

Specific Conditions III.A.32. & III.B.33. in Title V Air Operation Permit No. 0710119-007-AV are corrected to read as follows:

**III.A.32.** & **III.B.33.** "Test Methods. Required tests shall be performed in accordance with the following reference methods:

| Method(s) | Description of Method(s) and Comment(s) |
|---|---|
| … | … |
| EPA Methods 7, 7C, 7E or 19 | Determination of NOx Emissions (7E is Instrumental). ~~NOx emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.~~ |
| … | … |

…"

4. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 3.a. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.A.37. The applicant requested that the following statement be deleted: "This protocol shall include details on how the weight percentage of used tires in the MSW stream will be accounted for during the compliance testing."

***Response*:** This statement from the PSD permit had applied during the initial compliance testing while burning tires. The quantity of tires burned is tracked on a monthly basis.

Specific Condition 3.a. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**3.a.** …

Test Protocol. A test protocol shall be submitted for approval to the Department's (DEP) South District (SD) Office and to the Office of Permitting & Compliance in Tallahassee at least 30 (thirty) days prior to testing. ~~This protocol shall include details on how the weight percentage of used tires in the MSW stream will be accounted for during the compliance testing.~~

Specific Conditions III.A.37. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"**A.37.** Test Protocol. A test protocol shall be submitted for approval to the Department's (DEP) South District (SD) Office and to the Bureau of Air Regulation at least 30 (thirty) days prior to testing. ~~This protocol shall include details on how the weight percentage of used tires in the MSW stream will be accounted for during the compliance testing.~~ [Permit No. 0710119-008-AC/PSD-FL-151E, Condition 3.c.]

5. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 3.c. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.C.4. & III.C.12. The applicant requested that the following statement in Specific Condition 3.c. in the Draft Permit No. 0710119-008-AC/PSD-FL-151E be deleted: "Compliance testing for visible emissions from the ash handling building shall be conducted annually." The applicant also requested Specific Conditions III.C.4. & III.C.12. in Permit No. 0710119-007-AV be deleted.

***Response*:** The requests pertain to the ash handling baghouse exhaust. The ash handling baghouse will no longer have stack gas exhausting to the atmosphere. The last sentence of Specific Condition 3.c. in Permit No. 0710119-008-AC/PSD-FL-151E is therefore no longer applicable. Specific Conditions III.C.4. & III.C.12. in Permit No. 0710119-007-AV are also no longer applicable.

Specific Condition 3.c. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**3.c.** … Testing Frequency Compliance with the emission limitations of specific condition 2. of this permit shall be determined by annual emissions testing, except that testing for ammonia shall be performed prior to renewal. Testing of the MWC units for particulate matter emissions shall be performed using three one-hour test

runs so that two one-hour runs are conducted during normal operation and one one-hour run is conducted during soot blowing conditions. ~~Compliance testing for visible emissions from the ash handling building shall be conducted annually.~~"

Specific Conditions III.C.4. & III.C.12. in Title V Air Operation Permit No. 0710119-007-AV are deleted:

"~~**C.4.** Visible Emissions. In no case shall visible emissions from the ash handling building exceed 5% opacity. [Rules 62-4.160(2), 62-210.200 (PTE), and 62-297.620(4), F.A.C.; and PSD-FL-151, as amended.]~~"

"~~**C.12.** VE - Ash Handling Building. At least one 30-minute run to be conducted for the ash handling building. The test method for visible emissions shall be EPA Method 22. [Rules 62-4.070(1)-(3) and 62-297.620(4), F.A.C.; and, PSD-FL-151 and PSD-FL-151E, Specific Condition 3.a.]~~"

6. Title V Air Operation Permit No. 0710119-007-AV - Table 1, Summary of Air Pollutant Standards and Terms, page 2 of 3 & Table 2, Summary of Compliance Requirements, page 2 of 3. The applicant requested that these pages be deleted in its entirety since the ash handling baghouse will no longer have stack gas exhausting to the atmosphere.

***Response*:** This emissions unit, the Ash Handling System, still has an emission limit. The emission limit applicable to the Ash Handling System from 40 CFR 60.36b is 5 percent of the observation period (see Specific Conditions III.C.5.a. & b.). Table 1 summarizes emission limits from emissions units. Table 1 is updated to reflect this emission limit along with the federal regulatory citation. Table 2 summarizes compliance requirements for emissions units. Table 2 is updated to reflect the corresponding compliance requirements for the Ash Handling System.

7. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition III.B.8. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.B.21.b. The applicant requested that the 23 lbs/hour value to be removed as there is no regulatory reason for it and it is based on the annual 80 ppm average limit for CO emissions.

***Response*:** The lbs/hour value had been included in the applicant's original request. The Department agrees with the comment, the 23 lbs/hour value is not necessary.

Specific Condition III.B.8. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**III.B.8.** Air pollutant emissions from the MWC unit shall not exceed the following emission standards and limits using the specified test methods and procedures:

| Pollutant | Emission Standard/Limit [1] | lbs/hour [2] | Comparison Result [3] |
|---|---|---|---|
| … | … | … | … |
| Carbon Monoxide (CO) | 100 ppmvd - 4-hour block average *<br>80 ppmvd - 12-month rolling average * | 28.73<br>~~23~~ | BACT < Subpart Eb |
| … | … | … | … |

…"

Specific Condition III.B.21.b. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"**B.21.** Carbon Monoxide.

a. …

b. CO emissions shall not exceed ~~23.0 lbs/hour (based on the 80 ppmvd limit) and~~ 28.73 lbs/hour (based on the 100 ppmvd limit). [Permit No. PSD-FL-151E/0710119-008-AC, Condition B.8.]"

Table 1, Summary of Air Pollutant Standards and Terms is updated to reflect this correction also.

8. Title V Air Operation Permit No. 0710119-007-AV - Emissions Unit Description, page III.A.-1. The applicant indicated that each of the MWC Units 1 & 2 is equipped with two auxiliary natural gas/propane fired burners, not one.

***Response*:** The Department accepts the comment.

The emissions unit description on page III.A.-1. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"Emissions Unit ID Nos. 001 and 002 are Distral Termica manufactured municipal solid waste (MSW) combustors designated as "Unit 1" and "Unit 2," respectively. The units are identical in configuration. The serial numbers are A2900 and A2901. Each unit consists of a mass burn water wall boiler with ~~one~~two auxiliary natural gas/propane fired burners. …"

9. Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.A.4.a. & b. The applicant stated that the values contained in Specific Condition III.A.4.a. & b. are design related and they cannot demonstrate compliance with them at any snapshot in time. The applicant requested the following statement to be added to Specific Condition III.A.4. - "d. Compliance with each of the mass and energy throughput limitations in a. and b. of Specific Condition A.4. above shall be demonstrated by complying with the 186,200 lb/hour (4-hr average) steam production limitation."

***Response*:** PSD-FL-151, Condition 4.i. contains limitations on the mass and energy throughputs for MWC Units 1 & 2, specifically, a throughput limit of 55,000 lb/hour per unit (which is equivalent to 660 TPD per unit) and a heat input limit of 275 MMBtu/hr per unit. The mass and energy throughputs for MWC Units 1 & 2 were included in Specific Condition III.A.4. of the Title V air operation permit. PSD-FL-151, Condition 3.e.ii. requires records to be kept for MSW input rate. The recordkeeping requirement for MSW input rate was added into the Title V air operation permit in Specific Condition III.A.47.b.

The Department considers changing the MWC waste tonnage (TPD) and heat input demonstrations to be based upon steam production to be a change to an underlying PSD applicable requirement. Changes to an underlying applicable requirement cannot be made in a Title V air operation permit. Also, the draft/proposed permit has already been public noticed. To make this requested change you need to submit a request to revise the underlying PSD applicable requirement along with detailed justification.

No changes are made.

10. Title V Air Operation Permit No. 0710119-007-AV - Emissions Unit Description, page III.B.-1. The applicant indicated that MWC Unit 3 has a nominal design rated capacity of 197,400 lbs/hour steam production, not 186,200 lbs/hour steam production as stated in the 2nd paragraph of the emissions unit description.

***Response*:** The Department agrees with the comment, an error was made in the description. Specific Condition B.5.c. contains the correct steam production of 197,400 lbs/hr.

The emissions unit description on page III.B.-1. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"This municipal waste combustor (MWC) has a nominal design rated capacity of 660 tons MSW per day and ~~186,200~~197,400 lbs/hour steam production with MSW having a heating value of 5,000 Btu/lb. Short term capacity is restricted by limiting steam production to ~~186,200~~197,400 lbs/hour, which effectively limits heat input. …"

11. Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.B.5. The applicant stated that the charging and heat input rates for Unit 2 identified in Specific Condition III.B.5. are design related and they cannot demonstrate compliance with them at any snapshot in time. The applicant requested the following statement to be added to Specific Condition III.B.5. - "d. Compliance with each of the mass and energy throughput limitations in a. and b. of Specific Condition B.5. above shall be demonstrated by complying with the 186,200 lb/hour (4-hr average) steam production limitation."

***Response*:** PSD-FL-151D, Condition B.2. contains limitations on the mass and energy throughputs for MWC Unit 3, specifically, a throughput limit of 660 TPD per unit and a heat input limit of 291.5 MMBtu/hr per unit. The mass and energy throughputs for MWC Unit 3 were included in Specific Condition III.B.5. of the Title V air operation permit. PSD-FL-151D, Condition B.15. requires records to be kept for MSW charging rate. The recordkeeping requirement for MSW input rate was added into the Title V air operation permit in Specific Condition III.B.32.

The Department considers changing the MWC waste tonnage (TPD) and heat input demonstrations to be based upon steam production to be a change to an underlying PSD applicable requirement. Changes to an underlying applicable requirement cannot be made in a Title V air operation permit. Also, the draft/proposed permit has

already been public noticed. To make this requested change you need to submit a request to revise the underlying PSD applicable requirement along with detailed justification.

No changes are made.

12. Title V Air Operation Permit No. 0710119-007-AV - Specific Conditions III.A.6.f.(1) & III.B.7.f.(1). The applicant requested the previous language from the PSD permit to be included in the Title V air operation permit.

***Response*:** The requested language is in the PSD permit, PSD-FL-151D, Condition B.6.7(a). Specific Conditions III.A.6.f.(1) & III.B.7.f.(1) in Title V Air Operation Permit No. 0710119-007-AV are corrected to read as follows:

"(1) ~~Construction and demolition debris~~Unsorted mixtures of construction and demolition debris, or that fraction of sorted construction and demolition debris that is predominantly non-combustible. Non-combustible construction and demolition debris shall include concrete, metals, gypsum products, plaster, rock, brick, and masonry.[1]

…

[{Added to the regulatory citations for MWC Units 1 &2: [1] PSD-FL-151B, specific condition 4.f. Added to the regulatory citations for MWC Unit 3: [2] PSD-FL-151D, Condition B.6.7(a)}]"

13. Permit No. 0710119-008-AC/PSD-FL-151E - Specific Condition 2. & Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.A.17. The applicant had originally requested that all "lb/MMBtu" limits be removed.

***Response*:** The Department agrees with the comment, an error was made. The Department removed the "lb/MMBtu" limits for the other air pollutants.

Specific Condition 2. in Permit No. 0710119-008-AC/PSD-FL-151E is corrected to read as follows:

"**2.** Air pollutant emissions from each MWC unit shall not exceed the following emission standards and limits using the specified test methods and procedures:

| Pollutant | Emission Standard/Limit [1] | lbs/hour [2] | Comparison Result [3] |
|---|---|---|---|
| … | … | … | … |
| Sulfuric Acid Mist (SAM) | ~~0.036 lb/MMBtu~~9.85 lbs/hour | 9.85 | BACT solely ~~($SO_2$)~~ |
| … | … | … | … |

Specific Condition III.A.17. in Title V Air Operation Permit No. 0710119-007-AV is corrected to read as follows:

"**A.17.** Sulfuric Acid Mist. Sulfuric acid mist (SAM) emissions shall not exceed ~~0.036 lb/MMBtu and~~ 9.85 lbs/hour per unit. [Permit No. 0710119-008-AC/PSD-FL-151E, Condition 2.i.]"

Table 1, Summary of Air Pollutant Standards and Terms is updated to reflect this correction also. The duplicate row for SAM is also deleted in Table 1.

14. Title V Air Operation Permit No. 0710119-007-AV - Specific Conditions III.A.24. & III.B.24. The applicant requested the safety-related allowances from the 40 CFR 60 Subparts Cb/Eb to be included in the body of the permit.

***Response*:** Specific Conditions III.A.24. & III.B.24. are related to excess emissions regarding emissions standards specified in state rules and permits. In response to the applicant's request, the Department added the following two specific provisions verbatim from the Appendices Cb and Eb previously provided in the draft/proposed permit. These excess emissions provisions apply only to the NSPS emissions standards. The new text is inserted just after Specific Conditions III.A.24. & III.B.24. as follows:

"**[ .]25.** NSPS Startup, Shutdown and Malfunction Provisions.

a. For the purpose of compliance with the carbon monoxide emission limits in 40 CFR 60.53b(a), if a loss of boiler water level control (*e.g.*, boiler waterwall tube failure) or a loss of combustion air control

(*e.g.*, loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence. During such periods of malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7). [40 CFR 60.38b & 40 CFR 60.58b(a)(1)(iii)]

b. During a loss of boiler water level control or loss of combustion air control malfunction period as specified in paragraph (a)(1)(iii) of 40 CFR 60.58b, a diluent cap of 14 percent for oxygen or 5 percent for carbon dioxide may be used in the emissions calculations for sulfur dioxide and nitrogen oxides. [40 CFR 60.38b & 40 CFR 60.58b(b)(8)]

*{Permitting note: See Appendices Cb and Eb.}*"

15. Title V Air Operation Permit No. 0710119-007-AV - Specific Conditions III.B.7.e. & III.B.44.b. The applicant referenced the test submission dated March 18, 2008 where compliance with 5% waste tires had been demonstrated. The applicant requested the waste tire percentage be changed from 3% to 5% for MWC Unit 3.

***Response*:** The Department agrees with the comment. Also, the authority from PSD-FL-151D, Condition B.24 allowing the change from 3% to 5% for MWC Unit 3 is added to the regulatory citations.

Specific Conditions III.B.7.e. & III.B.44.b. in Permit No. 0710119-007-AV are corrected to read as follows:

"**B.7.** ...

e. *Waste Tires.* Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed ~~3~~5%, by weight, of the facility's total fuel.[3] Compliance with this limitation shall be determined on a calendar month basis.

…

[{Added to the regulatory citations: [3] PSD-FL-151D, Condition B.24.}]"

"**B.43.** ...

b. *Waste Tires*. Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous days in the current calendar month. At the end of each calendar month, the resultant monthly total weight of tires shall be divided by the total weight of all waste materials received in the same calendar month, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the ~~3~~5% limitation.[1]

…

[{Added to the regulatory citations: [1] PSD-FL-151D, Condition B.24.}]"

16. Title V Air Operation Permit No. 0710119-007-AV - Specific Condition III.B.38. Permitting Note. The applicant indicated that the current federal Hg limit for MWC Unit 3 is 0.050 mg/dscm. In a 01/19/2011 follow up e-mail the applicant stated that the current federal Hg limit for MWC Unit 3 is 0.080 mg/dscm pursuant to 40 CFR 60.52b(a)(5)(i).

***Response*:** The Department agrees with the comment. No change is necessary.

17. Title V Air Operation Permit No. 0710119-007-AV - Table 1, Summary of Air Pollutant Standards and Terms. The applicant stated that the NOx limit shown in Table 1 is incorrect, it is "80 lbs/hour" not "80.0 lbs/hour."

***Response*:** The Department agrees with the comment. The lbs/hour NOx limit shown in Table 1 is corrected from 80.0 to 80.

Department Initiated Corrections

The Department made corrections in the final Title V air operation permit.

1. Title V Air Operation Permit No. 0710119-007-AV - Table of Contents. Inadvertently, an appendix which does not apply was included in the table of contents. This appendix does not apply to any of the existing engines at the LCRRF. The appendix was not included in the body of the permit.

The Table of Contents is corrected to read as follows:

"IV. Appendices. ..... IV.-1

…

~~Appendix 40 CFR 60 Subpart IIII "Generally Applicable Requirements," Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (version dated 07/11/2006).~~

…"

## CONCLUSION

The final action of the Department is to issue the final Title V air operation permit renewal and the final AC/PSD permit revision with the administrative corrections and/or clarifications as noted above.