Golder Associates Inc.

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Golder Associates

January 3, 2005

043-7630

RECEIVED

JAN 10 2006

BUREAU OF AIR REGULATION

Mr. A. A. Linero, P.E.
Program Administrator, Permitting South Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Title V Application for Miami-Dade County Resource Recovery Facility
Response to November 9, 2005, incompleteness letter from FDEP

Combined AC/AV

Dear Mr. Linero:

Following is a description of our response to the letter from the Florida Department of Environmental Protection (FDEP) dated November 9, 2005, which states that Title V Permit Application for the facility is still incomplete. This response is being submitted by MPC, as the Responsible Official under the Title V permit, on behalf of the facility's owner, Miami-Dade County Department of Solid Waste Management (MDSWM) and Golder Associates Inc.

Compliance Plan Update

FDEP requested an update on the discussions with the U.S. Environmental Protection Agency (EPA) regarding the carbon monoxide (CO) emission limits – On December 19 2005, EPA published proposed revisions to the maximum available control technology (MACT) rules of 40 CFR 60 Subpart Cb – see FR 75348. The proposed amendment allows for the CO limit at the Miami-Dade Resources Recovery Facility (DRRF) to be amended to 250 ppm corrected to 7 percent oxygen, with the averaging time based on a 24-hour block average, geometric mean, because the facility falls within the classification of "Semi-suspension RDF combustor/wet RDF process conversion". As such, we are requesting an amendment of the Compliance Plan to include the proposed limit. The amended Compliance Plan is included with the permit application forms that are attached hereto.

Warm-up Period

FDEP's letter requested emissions data on the warm-up period. That data was submitted to FDEP in October 2005 (probably at the time that the letter from FDEP was being prepared). In a conversation with Tom Casio to clarify this request, he further requested that we add to our previous submittal by stating the maximum number of hours that natural gas would be fired in the boilers during warm-up. MPC proposed that the maximum hours of gas usage during a routine (i.e. hot or cold) start-up event be 6 hours. As, stated in the description that was provided to FDEP, the average time is expected to be less than 6 hours. For non-routine start-up events, which occur only once or twice each year when major equipment replacements are made, the maximum time that is being proposed is 20 hours for an event on any unit. As described in the attached description, the average time is typically less than this; however, a maximum of 20 hours is being requested to allow for changes in material by suppliers.

As such we request that the permit condition that describes the warm-up period be amended as follows in Condition B 45 of the permit:

(1) Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing:

> (a) Best operational practices to minimize emissions are adhered to and (b) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. As referenced below, and provided for by the NSPS, the Department specifically authorizes longer durations.

(2) The emission limitations for this unit shall apply at all times, except during periods of warm-up, startup, shutdown, or malfunctions (SSM), provided that the duration of startup, shutdown, or malfunction periods do not exceed 3 hours per occurrence. The duration of warm-up periods is not limited. The startup period commences when the affected unit begins the continuous burning of waste and does not include any warm-up period when the affected unit is combusting only natural gas or propane and waste is not being introduced to the combustor. The use of waste solely to provide thermal protection to the grate during the warm-up periods when waste is not being fed to the combustor is not considered to be continuous burning. During all startups, shutdowns, and malfunctions, the owner/operator shall use best operational practices to minimize air pollutant emissions.

(3) For DRRF the commencement of startup is programmed into the Data Acquisition System (DAS) as a steam flow of 70,000 lbs/hr and 13.5 % flue gas oxygen. (That is, when the unit's steam flow is greater than or equal to 70,000 lbs/hr and flue gas oxygen is less than or equal to13.5% the DAS receives a 'unit on line' signal.)

(4) For DRRF shutdown commences with the cessation of charging municipal waste to the boiler and ends when steam flow decreases to 70,000 lbs/hr and 13.5 % flue gas oxygen, as programmed into the DAS. (That is, when the unit's steam flow is less than 70,000 lbs/hr and flue gas oxygen is greater than 13.5%, the DAS receives a 'unit off line' signal.

(5) During warm-up - RDF shall be fired in the unit for a period of no longer than 2 hours, while propane shall be used for longer periods in order to protect the equipment from damage and operate the unit consistent with manufacturer's instructions [as specified in (6) of this Condition].

(6) During a routine warm-up event[1] propane shall be used for a maximum period of 6 hours. During non-routine warm-up events[2] propane shall be used for a maximum of 20 hours.

As stated in the previous transmittal, similar revisions should also be made to the identical conditions that were proposed for Condition D2 of the PSD Permit.

[1] A routine warm-up event has been described in the attached submittal to FDEP as a "hot startup" or "routine cold start-up".

[2] A non-routine warm-up event has been described in the attached submittal to FDEP as an "extended cold startup"

Consent Order

Although FDEP's letter did not request an update to the Consent Order for carbon monoxide and other incidents which was submitted in October 2005, we are attaching a copy of the signed document, which we have since received, for the file.

Professional Engineer Signature

This submittal is being certified by a Professional Engineer as specified in FDEP's letter.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E. Q.E.P.
Principal Engineer

DAB/all

Enclosures

Cc: A. Lue, Montenay
T. Morrelo, Montenay
G. Aleman, Montenay
Lee Casey, Dade County DSWM

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ATTACHMENT 1

REVISED COMPLIANCE PLAN

ATTACHMENT MIC-FI-CV3a

REVISED COMPLIANCE REPORT AND PLAN FOR MIAMI-DADE COUNTY RESOURCES RECOVERY FACILITY

January 3, 2006

A Compliance Report and Plan (Plan) for the Miami-Dade County Resources Recovery Facility (Facility) was included in the Title V permit modification request submitted to the Florida Department of Environmental Protection (FDEP) in April 2005. The Plan was revised in June 2005. The Plan is now being revised and updated again with this submittal. As revised, the Plan contains the current information about the Facility's carbon monoxide (CO) emissions, the 2004 stack tests for dioxin/furans, and other compliance issues that have not yet been resolved with the FDEP. This Plan does not address any deviations at the Facility that previously were reported to the FDEP and resolved.

1. Carbon Monoxide Emissions (Emission Units 001, 002, 003, and 004)

Deviations from Applicable Requirements

On January 11, 2005, the FDEP issued a Warning Letter (WL05-0001AS13SED) concerning the Facility's CO emissions in 2002, 2003 and 2004. In the letter and during subsequent meetings, the FDEP alleged that Facility may not be in compliance with the requirements contained in 40 CFR 60.11(d) and the Facility's Title V air operation permit (Specific Condition B.43). In addition, the CO emissions from Unit 2 exceeded the applicable 24-hour emission limit [200 parts per million by volume dry (ppmdv) @ 7 percent O_2] on April 13, 2005. The incident was reported to the FDEP. The CO emissions subsequently were reduced to the permitted limit, as demonstrated by the Facility's continuous monitoring data. The Facility has now received a proposed Consent order from the FDEP, dated September, 2005, which addresses these compliance issues.

Compliance Plan

The County has spent more than $63,000,000 for air pollution control systems and other improvements that were designed to enable the Facility to comply with the emissions limitations contained in 40 CFR 60, Subpart Cb, including the CO limits, which are also contained in Specific Condition B.36 of the Title V permit. Nonetheless, the Facility's emissions sometimes exceed the 24-hour emission limit for CO in Subpart Cb. These

exceedances are caused by the Facility's unique design. It is not feasible for the Facility to eliminate all such exceedances.

For these reasons, the County and Montenay requested that EPA revise Subpart Cb and thereby increase the daily CO emissions limit for the Facility. EPA proposes to amend the permit limit for the facility to 250 ppmvd at 7% O2 based on a 24-hour block average, geometric mean (see Federal Register, December 19, 2005, pgs. 75348-75369). As such, the County and Montenay request via this Compliance Plan that the permit limit for the facility be amended to the said limit proposed by EPA during the Compliance Plan period, and for that limit to automatically become part of the Title V permit when the rule becomes final.

If EPA's proposal is withdrawn or amended, the Compliance Plan limits will be made null and void and the limits will revert to the current limits set forth by 40 CFR 60 Subpart Cb, and the County and Montenay will prepare a plan that describes the corrective actions that will be taken to reduce the Facility's CO emissions. The corrective actions plan will be submitted to the FDEP within 90 days after EPA's decision to deny relief becomes final. The County and Montenay shall begin to implement the corrective actions plan within 30 days after it is approved by the FDEP.

This Compliance Plan is based on the following milestones:

Milestone 1 – EPA publishes notice of its proposed action concerning the CO emission limit for the Facility, as part of EPA's 5-year review of Subpart Cb pursuant to Section 129(a)(5) of the Clean Air Act – completed on December 19, 2005;

Milestone 2 – EPA publishes notice of its final agency action concerning the CO emission limit for Facility;

Milestone 3(a) - If EPA grants the request to increase the CO limit for the Facility, the Facility will comply with the new limit when EPA's final decision is published in the Federal Register;

Milestone 3(b) - If EPA does not grant the request to increase the CO limit for the Facility, a corrective actions plan will be submitted to the FDEP within 90 days after EPA's decision becomes final; and

Milestone 4 - If EPA does not grant the request to increase the CO limit for the Facility, the Facility will begin to implement the corrective actions plan within 30 days after the plan is approved by the FDEP.

The County and Montenay also will address these compliance issues in a separate consent order with the FDEP.

2. **Dioxin-Furan Emissions (Emission Unit 001)**

Deviations from Applicable Requirements

Specific Condition B.34 of the Facility's Title V air operation permit (No. 0250348-005-AV) requires annual testing for dioxins and furans to demonstrate that the Facility's emissions are equal to or less than 30 nanograms per dry standard cubit feet per minute (ng/dscm). Stack tests were conducted in April 2005, but they did not demonstrate compliance with the emissions limit. This issue is addressed in the proposed Consent Order issued to the Facility in September 2005 by FDEP.

Compliance Plan

According to the proposed Consent Order, Unit #1 will be tested quarterly beginning with the first quarter after the Consent Order is signed. Testing will continue for at least three quarters. Once the unit demonstrates compliance with all three individual test runs below the emissions limit of the permit for three consecutive quarters, the test frequency will revert back to that in the Title V permit.

3. **Visible Emissions**

Deviations from Applicable Requirements

Specific Condition B.25 of the Facility's Title V air operation permit (No. 0250348-005-AV) limits visible emissions of the Units to 10 percent opacity based on a six-minute block average. Between August 23, 2004 and October 19, 2004, the emissions from Unit 2 exceeded the 10% limit for opacity on several occasions. Repairs were made to the air pollution control device on Unit 2 to reduce the opacity emissions and restore

compliance. This issue is addressed in the proposed Consent Order issued to the Facility in September 2005 by FDEP.

Compliance Plan

According to the proposed Consent Order, the Facility will prepare a Visible Emissions Reduction Plan that identifies the preventative measures the Facility will take to minimize opacity excursions. As a minimum, the Plan must identify operating parameters and action levels that will be monitored for purposes of reducing opacity excursions, and identify operating procedures to be implemented when an operating parameter approaches an identified action level. The Plan must be submitted to the FDEP within 30 days of the effective date of the Consent Order.

4. Other Deviations

Deviations from Applicable Requirements

There have been deviations at the Facility that will be addressed in a consent order with the FDEP, including the deviations discussed in Sections 1 and 2, above. The following deviations have been corrected already or they will be resolved in the near future in the Consent Order:

1. The Statement of Compliance for 2003 neglected to identify all of the prior items of non-compliance. This issue was described in an FDEP Warning Letter (WL04-003AS13SED) dated December 30, 2004. The Statement of Compliance for 2004 also did not identify all of the prior items of non-compliance.
2. The 2003 stack tests indicated that the emissions from Unit 1 exceeded the applicable limits for hydrogen chloride and dioxin/furan, as described in the FDEP's Warning Letter (WL04-0018AS13SED) dated October 19, 2004. Since these test results were adversely affected by a malfunction of the lime slurry system for Unit 1, the lime slurry system for Unit 1was repaired and Unit 1 was retested. The new tests demonstrated compliance with the applicable emission limits.
3. During an inspection of the Facility on November 21, 2003, the FDEP observed a hole above a viewport and a recently repaired breach in the waterwall of Unit 3. These issues were described in FDEP's Warning Letter (WL04-0007AS13SED) dated February, 24, 2004. In its letter, the FDEP alleged that the emissions from Unit 3 had circumvented the Facility's air pollution control devices. The hole subsequently was repaired and, as noted in the Warning Letter, the breach was repaired before the FDEP inspection.

6. During the 2004 stack tests for Unit 1, four test runs were conducted for dioxin. One test sample was broken during shipping and a malfunction adversely affected another sample. Consequently, the Facility did not complete three valid test runs within a consecutive 5-day period, as required by Specific Condition B.69, and did not complete its 2004 tests on time. Since the tests were not completed in a timely manner, stack tests for dioxin were conducted in 2005.
7. During the 2004 stack tests for Unit 4, the results from the first run for dioxin were adversely affected by a malfunction, but the FDEP was not given timely notice of the malfunction. Notice subsequently was provided, but it was not timely.

Compliance Plan

The Facility and the FDEP are addressing all of these issues in the proposed Consent Order. The Facility already has completed its corrective actions concerning these deviations.

ATTACHMENT 2

REVISED APPLICATION FORM PAGES

APPLICATION INFORMATION

Application Responsible Official Certification

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

1. Application Responsible Official Name:
   Tom Morello, Plant Manager

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☒ 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.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **Montenay Power Corporation**
   Street Address: **6990 N.W. 97th Avenue**
   City: **Miami** State: **Florida** Zip Code: **33178**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(305) 593-7000** ext. Fax: **(305) 593-7203**

5. Application Responsible Official Email Address: **tmorello@montenay-onyx.com**

6. Application Responsible Official Certification:

   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.

   T Morello — Signature

   1/4/06 — Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext.**545** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

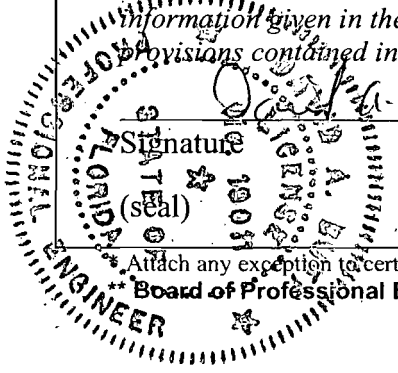
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, 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 ☒, 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.

(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 ☐, 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.



Signature (seal)

1/9/06
Date

* Attach any exception to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **87.46**lb/hour **38.31**tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **250 ppmvd @ 7% O2** Reference: **40 CFR 60, Subpart Cb (proposed)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Table MIC-EU1-F8. Hourly emissions represent a 24-hour block average, geometric mean.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Equivalent to proposed 40 CFR 60.34b, Table 2 emission limit of 250 ppmvd @ 7% O2. Annual emissions based on 365 days per year of operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **250 ppmvd @ 7% O2**	4. Equivalent Allowable Emissions: **87.46**lb/hour **383.1**tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed 40 CFR 60.34b. Equivalent hourly emissions represent a 24-hour block average, geometric mean.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

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Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **87.46**lb/hour **38.31**tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **250 ppmvd @ 7% O2** Reference: **40 CFR 60, Subpart Cb (proposed)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Table MIC-EU1-F8. Hourly emissions represent a 24-hour block average, geometric mean.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Equivalent to proposed 40 CFR 60.34b, Table 2 emission limit of 250 ppmvd @ 7% O2. Annual emissions based on 365 days per year of operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **250 ppmvd @ 7% O2**	4. Equivalent Allowable Emissions: **87.46**lb/hour **383.1**tons/year
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6. Allowable Emissions Comment (Description of Operating Method): **Proposed 40 CFR 60.34b. Equivalent hourly emissions represent a 24-hour block average, geometric mean.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

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Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

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F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **87.46**lb/hour **38.31**tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **250 ppmvd @ 7% O2** Reference: **40 CFR 60, Subpart Cb (proposed)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Table MIC-EU1-F8. Hourly emissions represent a 24-hour block average, geometric mean.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Equivalent to proposed 40 CFR 60.34b, Table 2 emission limit of 250 ppmvd @ 7% O2. Annual emissions based on 365 days per year of operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **250 ppmvd @ 7% O2**	4. Equivalent Allowable Emissions: **87.46**lb/hour **383.1**tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed 40 CFR 60.34b. Equivalent hourly emissions represent a 24-hour block average, geometric mean.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **87.46**lb/hour **38.31**tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **250 ppmvd @ 7% O2** Reference: **40 CFR 60, Subpart Cb (proposed)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Table MIC-EU1-F8. Hourly emissions represent a 24-hour block average, geometric mean.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Equivalent to proposed 40 CFR 60.34b, Table 2 emission limit of 250 ppmvd @ 7% O2. Annual emissions based on 365 days per year of operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **250 ppmvd @ 7% O2**	4. Equivalent Allowable Emissions: **87.46**lb/hour **383.1**tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed 40 CFR 60.34b. Equivalent hourly emissions represent a 24-hour block average, geometric mean.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

MIC-EU1-F8

Summary of Maximum Emission Rates of Regulated Pollutants for the boiler units, Miami-Dade County Resource Recovery (revised 1-03-2006)

Regulated Pollutant	Basis of Emission Factor	Emission Factor (at 7% O2)	References	Maximum Emission Rate per Unit: Maximum 1-hr [a] (lb/hr)	Maximum 24-hr [b] (lb/hr)	(TPY) [c]	Total Annual Emission Rate For All Four Units (TPY)
Particulate Matter (TSP/PM10	40 CFR 60, Subpart Cb	0.0118 gr/dscf	2	8.93	8.12	29.0	116.0
Sulfur Dioxide	40 CFR 60, Subpart Cb	75 % reduction [d]	1, 2			214.2	856.8
Hydrogen Chloride	40 CFR 60, Subpart Cb	29 ppmvd [e]	1, 2	14.34	13.04	57.1	228.5
Nitrogen Oxides	40 CFR 60, Subpart Cb	250 ppmvd	1, 2	158.01	143.69	614.9	2,459.6
Carbon Monoxide	40 CFR 60, Subpart Cb (proposed)	250 ppmvd	4	96.18	87.46	383.1 [h]	1,532.3
Volatile Organic Compounds	PSD-FL-006(D)	25 ppmvd (as CH_4)	1	5.50	5.00	19.1	76.4
Lead	PSD-FL-006(D)	440 ug/dscm	2	0.145	0.132	0.44	1.76
Mercury	F.A.C. Rule 62-296.416	0.070 mg/dscm [f]	1, 3	0.023	0.021	0.08	0.32
Beryllium	PSD-FL-006(D)	0.46 ug/m^3	1	0.00015	0.00014	0.0005	0.0020
Cadmium	PSD-FL-006(D)	15 ug/dscm	1	0.0050	0.0045	0.027	0.11
Arsenic	PSD-FL-006(D)	9.3 ug/dscm	1	0.0031	0.0028	0.011	0.044
Fluorides	PSD-FL-006(D)	840 ug/dscm	1	0.278	0.253	0.97	3.88
Sulfuric Acid Mist	PSD-FL-006(D)	2.1 ppmvd	1	2.83	2.57	9.80	39.2
Dioxin/Furan [g]	40 CFR 60, Subpart Cb	30 ng/dscm	1, 2	9.92E-06	9.02E-06	0.000038	0.00015

Notes: gr/dscf = grains per dry standard cubic foot.
lb/hr = pounds per hour.
mg/dscm = milligrams per dry standard cubic meter.
ug/m^3 = micrograms per actual cubic meter.
ng/dscm = nanograms per dry standard cubic meter
PM10 = particulate matter with an aerodynamic diameter less than 10 microns.
ppmvd = parts per million by volume dry.
TPY = tons per year.
TSP = total suspended particulate.

References:

1. Emission limit per permit PSD-FL-006(D).
2. Emission limit per 40 CFR 60, Subpart Cb.
3. Emission limit per 62-296.416, F.A.C.
4. Emission limit proposed in Federal Register, December 19, 2005, for changes to 40 CFR 60, Subpart Cb, for semi-suspension RDF-fired combustor/wet RDF fuel

Footnotes:

[a] Based on a steam rate of 198,000 lb/hr, with a corresponding flue gas flow rate of 88,250 dscfm at 7% oxygen (2,499 dscm/min).

[b] Based on a steam rate of 180,000 lb/hr, with a corresponding flue gas flow rate of 80,250 dscfm at 7% oxygen (2,273 dscm/min).

[c] Annual emission for all pollutants are limited by specific permit condition in PSD-FL-006(D), except CO is proposed limit.

[d] Permit no. PSD-FL-006(D) and CFR 40 60.33b(b)(3)(i) allows an SO_2 concentration in the flue gas discharged to the atmosphere of 29 ppmvd @ 7% O_2 or a 75% reduetion in weight or volume (whichever is less stringent). The 75% reduction is less stringent.

[e] Permit no. PSD-FL-006(D) and CFR 40 60.33b(b)(3)(ii) allows an HCl concentration in the flue gas discharged to the atmosphere of 29 ppmvd @ 7% O_2 or a 95% reduetion in weight or volume (whichever is less stringent). The 29 ppmvd is less stringent.

[f] Permit no. PSD-FL-006(D) allows a mercury concentration in the flue gas discharged to the atmosphere of 0.070 mg/dscm @ 7% O_2 or an 85% reduction by weight. CFR 40 60.33b(a)(3) allows an Hg concentration in the flue gas discharged to the atmosphere of 30.080 mg/dscm @ 7% O_2 or a 85% reduction in weight or volume (whichever is less stringent).

[g] As total tetra- through octa-dioxins/furans.

[h] Based on 24-hour limit and 365 days/yr operation.

Calculations:

To calculate emissions with an emission factor (EF) in terms of gr/dscf: lb/hr = EF(gr/dscf) x flow rate(dscfin) x 60 (min/hr)/7000

To calculate emissions with an emission factor (EF) in terms of mg/dscm: lb/hr = (EF(mg/dscm) x flow rate (dscm/min) x 2.832E-2(m3/ft3) x 2.205E-3 (lb/g) x 60(min/hr))/1E3

To calculate emissions with an emission factor (EF) in terms of ug/dscm: lb/hr = (EF(ug/dscm) x flow rate (dscm/min) x 2.832E-2(m3/ft3) x 2.205E-3 (lb/g) x 60(min/hr))/1E6

To calculate emissions with an emission factor (EF) in terms of ppmvd: lb/hr = (EF(ppmvd) x MW x flow rate(dscf/min) x 2,116.8 lb_f/ft^2 x 60(min/hr))/(1,545 ft-lb_f/lb_m-°R x 5