



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

July 1, 2009

*Electronic Mail - Received Receipt Requested*  
[rgreene@ingenco.com](mailto:rgreene@ingenco.com)

Mr. Robert L. Greene  
Industrial Power Generating Company (INGENCO), LLC  
2250 Dabney Road  
Richmond, Virginia 23230

Re: DEP File No. 0250623-007-AC (PSD-FL-408)  
INGENCO Dade South – Installation of 24 reciprocating internal combustion engines  
Request for Additional Information

Dear Mr. Greene:

The Department has received the application on June 2, 2009, to allow INGENCO to construct and operate an electric generation facility at the Dade South Landfill Facility in Miami-Dade County.

Pursuant to Rules 62-296.340, 62-4.055, and 62-4.070 F.A.C., Permit Processing, the Department requests submittal of additional information prior to processing the application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Section 1.1 of the application: The application indicates that bio-diesel fuel might be used in the Detroit Diesel engines. Please provide more information on the bio-diesel fuel that will be utilized in the engines. What effect will the bio-diesel have on the nitrogen oxides (NOx) emissions from the engines? If the NOx emissions are higher compared to No. 2 fuel oil, have they been taken into account when determining total NOx emissions from the engines? [Rule 62-4.070, F.A.C. Reasonable Assurance]
2. Section 1.3 of the application: The application indicates that the engines when operating in the dual fuel mode will be burning No. 2 fuel oil (or biodiesel) and landfill gas (LFG). Please indicate when the engines are operating in dual fuel mode, how will the fractions of each fuel be monitored? The application also indicates that the optimum level of LFG fraction will be in the 92 to 94 percent range. How will this fraction of LFG be monitored? [Rule 62-4.070, F.A.C. Reasonable Assurance]
3. Section 1.3 of the application: The application indicates that the LFG will be treated compression, dewatering, and filtration through a 10-micron filter. The Department has required filtration through a 1-micron filter (primary and polishing) for similar projects in the past. The same requirement will be imposed by the Department for this project. [Rule 62-4.070, F.A.C. Reasonable Assurance]

4. Section 1.3 and 1.5 of the application: The application indicates that a process diagram of the LFG treatment is included in Figure 3. The process diagram of the LFG treatment was not included with the application. Please submit the process diagram of the LFG treatment system. The application states in Section 1.5 that INGENCO will purchase LFG from the landfill that has been treated by compression, filtration and moisture removal. Will the operation of the LFG treatment system INGENCO responsibility or the Dade South landfill? [Rule 62-4.070, F.A.C. Reasonable Assurance]
5. Section 1.4 of the application: The application indicates that the 24 Detroit engines were manufactured prior to 2007. Please submit documentation to the Department that shows the manufactured date of the engines. [Rule 62-4.070, F.A.C. Reasonable Assurance]
6. Section 2.1.1 and 2.1.2 of the application: Emission calculations were done for NO<sub>x</sub>, carbon monoxide (CO), volatile organic compound (VOC) and particulate matter (PM) based on stack sampling results from similar facilities. Please provide stack sampling test data that were used to determine emissions from this facility. [Rule 62-4.070, F.A.C. Reasonable Assurance]
7. Section 2.1.3 of the application: Emission calculations for sulfur dioxide (SO<sub>2</sub>) were done by assuming the hydrogen sulfide (H<sub>2</sub>S) concentration in the LFG to be 347 ppm. The Department in a teleconference on September 30, 2008 (followed up by an e-mail on February 5, 2009) requested the applicant to conduct H<sub>2</sub>S analysis of the LFG. Please provide results of the analysis, and if the H<sub>2</sub>S analysis has not been performed, please conduct the analysis and provide the results to the Department. [Rule 62-4.070, F.A.C. Reasonable Assurance]
8. Section 2.1.4 and Appendix 4 of the application: Emission calculations for hydrogen chloride (HCl) were based on a default concentration of chlorinated compounds in the LFG as shown in Appendix 4 of the application. Please explain if the concentration of chlorinated compounds were verified analytically for the Dade South LFG? [Rule 62-4.070, F.A.C. Reasonable Assurance]
9. Section 3.15.1 and Appendix 2 of the application: The application states that the generator limits are 340 kilowatts (kW) per generator, which limits the engine output to 469 brake horsepower (bhp) and therefore, the new electrical generating station will not be subject to 40 CFR Part 63, Subpart ZZZZ as the engine rating is less than 500 bhp. The generator specification sheet in Appendix 2 of the application lists the rated power of the engine as 550 bhp and 410 kW. Please explain the discrepancy. [Rule 62-4.070, F.A.C. Reasonable Assurance]
10. Section 5.2 of the application: The application states that the installation of siloxane removal system is possible and will allow operation of a catalytic control system such as selective catalytic reduction (SCR) to control NO<sub>x</sub> emissions. Please provide cost effectiveness data in dollars per ton of NO<sub>x</sub> removed with the installation of siloxane removal system and SCR. [Rule 62-4.070, F.A.C. Reasonable Assurance]
11. The National Park Service (NPS) reviewed the application and commented that the proposed facility will not cause significant impacts at the Everglades National Park. However, based on

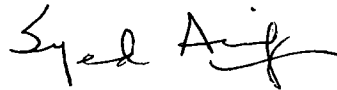
information in the application, significant plume impacts were predicted at Biscayne National Park (NP) from the proposed facility. Generally the NPS considers plumes from a proposed source as significant if the perceptible impacts exceed a delta E of 2.0. Because the reported impacts are above the NPS plume impact threshold at Biscayne NP, the NPS asked that Dade South Landfill to look at mitigating measures to reduce emissions and corresponding impacts.

Any additional comments from EPA will be forwarded to you after we receive them.

The Department will resume processing this application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

We will be happy to meet and discuss the details with you and your staff. If you have any questions, I can be contacted at 850/921-9528. You may discuss the modeling requirements with Mr. Cleve Holladay at 850/921-8689.

Sincerely,



Syed Arif, P.E.  
New Source Review Section

/sa

cc: German Hernandez, Miami-Dade Solid Waste Management: [germanh@miamidade.gov](mailto:germanh@miamidade.gov)  
Kathleen Forney, EPA Region 4: [forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov)  
Lee Hoefert, DEP-SED: [lee.hoefert@dep.state.fl.us](mailto:lee.hoefert@dep.state.fl.us)  
Mallika Muthiah, DERM: [muthim@miamidade.gov](mailto:muthim@miamidade.gov)  
James A. Susan, P.E., Fishbeck, Thompson, Carr & Huber, Inc.: [jasusan@ftch.com](mailto:jasusan@ftch.com)  
Dee Morse, NPS: [dee\\_morse@nps.gov](mailto:dee_morse@nps.gov)  
Vicki Gibson, DEP-BAR: ([victoria.gibson@dep.state.fl.us](mailto:victoria.gibson@dep.state.fl.us)) (for read file)

## Livingston, Sylvia

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**From:** Livingston, Sylvia  
**Sent:** Wednesday, July 01, 2009 9:29 AM  
**To:** 'germanh@miamidade.gov'  
**Cc:** 'forney.kathleen@epa.gov'; 'abrams.heather@epamail.epa.gov'; Hoefert, Lee; 'MuthiM@miamidade.gov'; 'jasusan@ftch.com'; 'dee\_morse@nps.gov'; Gibson, Victoria; Walker, Elizabeth (AIR); Arif, Syed  
**Subject:** RAI - INGENCO Dade South (0250623-007-AC/ PSD-FL-408)  
**Attachments:** RAI 0250623-007-AC.pdf

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software, *noting that you can view the documents*, and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html> .

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506  
[sylvia.livingston@dep.state.fl.us](mailto:sylvia.livingston@dep.state.fl.us)

## Livingston, Sylvia

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**From:** Abrams.Heather@epamail.epa.gov  
**Sent:** Wednesday, July 01, 2009 9:31 AM  
**To:** Livingston, Sylvia  
**Subject:** Re: RAI - INGENCO Dade South (0250623-007-AC/ PSD-FL-408)

Got it  
Heather Abrams  
Air Permits Section  
U.S. EPA - Region 4  
61 Forsyth St. SW  
Atlanta, Georgia 30303

Phone: 404-562-9185  
Fax: 404-562-9019