

Derenzo and Associates, Inc.

Environmental Consultants

August 15, 2006

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AUG 21 2006

BUREAU OF AIR REGULATION

Mr. Syed Arif, P.E.
Bureau of Air Regulation
Division of Air Resource Management
Department of Environmental Protection
STATE OF FLORIDA
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400

Subject: Brevard Energy, L.L.C.
DEP File No. 090069-004-AC (PSD-FL-378)
Response to July 31, 2006 request for information

Dear Mr. Arif:

Derenzo and Associates, Inc. (Derenzo and Associates), on behalf of Brevard Energy, L.L.C (Brevard Energy), is submitting to the Florida Department of Environmental Protection, Division of Air Resource Management (FDEP-DARM) information that was requested by the regulatory agency on July 31, 2006.

Attachment A provides for reference the July 31, 2006 FDEP-DARM communication.

Item 1 – Coalescing Filter Specification

Landfill Energy Systems, the parent company of Brevard Energy, has been developing landfill gas to electricity projects for over 15 years and designed (and utilizes) a gas treatment system based on its extensive operating experience that works best (in its opinion) with the proposed IC engines.

Brevard Energy has specified in documents submitted to the FDEP-DARM that BACT for the control of PM10 emissions from the proposed CAT 3520 IC engine operations is treatment of the landfill gas fuel (compression, dewatering, and filtering the landfill gas down to at least 10 microns) and proper equipment maintenance that minimizes the amount of particulate emissions produced during the landfill gas combustion process.

Brevard Energy plans to utilize coalescing filters (primary and polishing) that are rated at 1 micron. Its July 25 communication to the FDEP-DARM indicated that the ... *gas treatment system will have a specification that is significantly less than 10 microns.* The 1 micron size specification has not been selected as a means for reducing solid particulates that may be present in the gas extracted from the landfill and used as engine fuel. This size specification

Derenzo and Associates, Inc.

Mr. Syed Arif, P.E.
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works best (based on Landfill Energy Systems experience) for the collection and removal of water vapor aerosols that are readily present in the moisture rich gas stream.

Landfill Energy Systems is not aware of any data (nor the results of its extensive landfill fueled IC engine operating experience or knowledge of the waste gas fuel recovery industry) that indicate a lower aerosol/solid particulate size rating on a coalescing filter results in lower particulate emissions from the combustion of the filtered landfill gas in IC engines. If the Bio Energy Texas LFG fueled electricity generation facility has specified that a 1 micron size coalescing filter is necessary to reduce CAT 3520 IC engine PM10 emissions (to achieve a 0.148 g/bhp-hr exhaust emission), this information is misleading. Information previous submitted to the FDEP-DARM indicates that the fuel is not the major source of the particulates present in the engine exhaust.

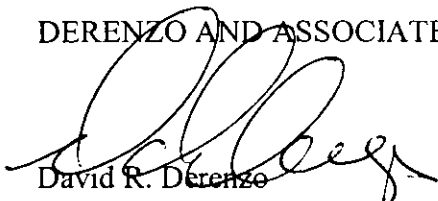
The information presented in this communication indicates that Brevard Energy plans to utilize coalescing filters (primary and polishing) that are rated at 1 micron (which is equivalent to that specified for Bio Energy Texas). However, it is the perspective of Brevard Energy and Landfill Energy Systems that the coalescing filter specification (aerosol/solid particulate removal size) has no bearing on the PM10 BACT determination.

Brevard Energy appreciates the consideration of the FDEP-DARM of the information that is presented in this document.

Please contact us if you have questions or require additional information.

Sincerely,

DERENZO AND ASSOCIATES, INC.



David R. Derenzo
Services Director

c: Bill Owen, Landfill Energy Systems
Scott Salisbury, Landfill Energy Systems

D. Nelson
J. Kozlowski, CID
J. Benjak, NPS
G. Worley, EPA

Derenzo and Associates, Inc.

ATTACHMENT A

July 31, 2006 FDEP-DARM Communication



Jeff Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

July 31, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Scott Salisbury
Brevard Energy, L.L.C.
29261 Wall Street
Wixom, Michigan 48393

Re: DEP File No. 0090069-004-AC (PSD-FL-378)
Brevard Energy – Installation of six (6) reciprocating internal combustion engines

Dear Mr. Salisbury:

The Department has received the response on July 26, 2006, for our initial request for additional information regarding construction and operation of an electric generation facility at the Brevard County Solid Waste Management Central Disposal Facility (Central Disposal Facility) in Brevard County. Based on our review of the response, we have determined that additional information is needed in order to continue processing this application package.

The Department does not concur with the applicant's response of the Department not having any regulatory basis for specifying a performance value that is less than 10 micron threshold approved in the USEPA determinations. This was in response to the Department's query of using a 1 micron filter in place of a 3 micron filter for the final knock-out chamber for pre-treatment of landfill gas prior to the combustion as fuel in the proposed IC engines. The Department's regulatory authority comes from the Prevention of Significant Deterioration rules as follows:

- Rule 62-212.400(4)(c) states that the owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under this section. Such information shall include a proposed best available control technology (BACT).
- Rule 62-210.200(38) defines BACT as an emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account:
 1. Energy, environmental and economic impacts and other costs;
 2. All scientific, engineering and technical material and other information available to the Department; and
 3. The emission limiting standards or BACT determinations of Florida and any other state; determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.

The rule further states that in no event shall application of BACT result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61 and 63.

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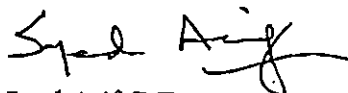
Mr. Scott Salisbury
Page 2 of 2
July 31, 2006

The Department through the application of BACT can set standards more stringent than required by EPA. Based on the above rule authority, please provide the Department with cost effectiveness data of using 10 micron filter in the final knock-out chamber as a baseline for PM₁₀ emissions. Provide the cost effectiveness (\$/ton of PM₁₀ removed) of installing 3 micron filters and calculate the cost effectiveness of using 1 micron filter and associated PM₁₀ emissions. This requested information must be certified by a professional engineer registered in the State of Florida. This issue of setting PM₁₀ BACT emission limit by the Department is applicable to all three projects, namely, Trail Ridge Energy, Seminole Energy and Brevard Energy.

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.

Sincerely,



Syed Arif, P.E.
Bureau of Air Regulation

/sa

cc: Len Kozlov, DEP-CD
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

July 31, 2006

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29261 Wall Street
Wixom, Michigan 48393

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- Rule 62-210.200(38) defines BACT as an emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account:
 1. Energy, environmental and economic impacts and other costs;
 2. All scientific, engineering and technical material and other information available to the Department; and
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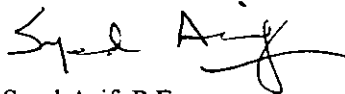
Mr. Scott Salisbury
Page 2 of 2
July 31, 2006

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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.

Sincerely,



Syed Arif, P.E.
Bureau of Air Regulation

/sa

cc: Len Kozlov, DEP-CD
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS

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Mr. Scott Salisbury
Trail Ridge Energy, L.L.C.
29261 Wall Street
Wixom, Michigan 48393

2. Article Number
(Transfer from service label)

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PS Form 3811, February 2004

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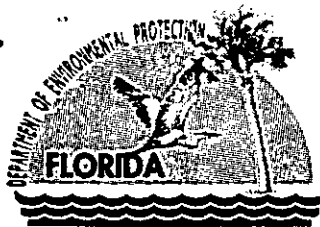
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Mr. Scott Salisbury
Trail Ridge Energy, L.L.C.
29261 Wall Street
Wixom, Michigan 48393

for Instructions



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

July 3, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Scott Salisbury
Brevard Energy, L.L.C.
29261 Wall Street
Wixom, Michigan 48393

Re: DEP File No. 0090069-004-AC (PSD-FL-378)

Brevard Energy – Installation of six (6) reciprocating internal combustion engines

Dear Mr. Salisbury:

The Department has received the application on June 5, 2006, to allow Brevard Energy to construct and operate an electric generation facility at the Brevard County Solid Waste Management Central Disposal Facility (Central Disposal Facility) in Brevard County. Based on our initial review of the proposed project, we have determined that additional information is needed in order to continue processing this application package. Please submit the information requested below to the Department's Bureau of Air Regulation:

1. The application in Section 2.1.1 states that the lower heating value (LHV) of the landfill gas (LFG) is approximately 397.4 British thermal units per standard cubic foot of gas (Btu/scf). This value is expected to be 450 Btu/scf by the time the engines are operational. Please explain how the LHV value will increase to 450 Btu/scf in a year's time. What other modifications will be taking place at the landfill to accomplish this?
2. The application in Section 2.1.2 states that the minimum heating value of 420 Btu/scf is currently being achieved as represented in Table 1. Table 1 does not indicate that. Please explain the discrepancy.
3. The application in Section 2.1.3 states that the LFG treatment consists of a condensate knock-out tank with a 10 micron filter, followed by a blower and a chiller and then a final knock-out tank equipped with a 3 micron filter. The Texas Bio Energy Permit (PSD-TX-1034) indicates that their set-up uses a 1 micron filter for the final knock-out chamber. Please explain the reasons for not using the same set-up as the one done at Texas.
4. The application in Section 2.3 is not clear whether this project will be a phased construction project. If it will be a phased construction project, please provide a schedule for the phased construction. Rule 62-212.400(10)(d) requires that the owner or operator of a phased construction project shall adhere to the procedures provided in 40 CFR 52.21(j)(4). Those procedures requires that for phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.
5. The application in Section 5.2 states that Brevard Energy is part of the Central Disposal Facility and its approved Air Construction Permit is to be incorporated into the Central Disposal Facility Title V Operating Permit. Mr. Euripides Rodriguez (321-633-2042) of the Brevard County Solid Waste

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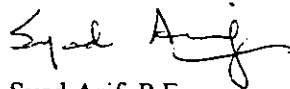
Management Department is listed as the Primary Responsible Official for the Central Disposal Facility. Please provide a letter signed by him agreeing to be the Primary Responsible Official for the Brevard Energy and the Central Disposal Facility.

6. The application states that the electricity generation equipment and processes will be owned and operated by Brevard Energy, LLC. Will Brevard Energy, LLC be paying for the six internal combustion engines or will it be paid by the Brevard County?
7. The Department has still not received the required air quality analysis and will have an additional 30 days after receiving the modeling information to send any further comments based on the modeling review. Any additional comments from EPA and the U.S. Fish and Wildlife Service 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.
Bureau of Air Regulation

/sa

cc: Len Kozlov, DEP-CD
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS

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<p>1. Article Addressed to:</p> <p>Mr. Scott Salisbury Trail Ridge Energy, L.L.C. 29261 Wall Street Wixom, Michigan 48393</p>		<p>B. Received by (Printed Name) <i>Diane Lehr</i></p>	<p>C. Date of Delivery <i>7-6-06</i></p>
<p>2. Article Number (Transfer from service label) <i>7000 1670 0013 3110 0277</i></p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
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Mr. Scott Salisbury
 Trail Ridge Energy, L.L.C.
 29261 Wall Street
 Wixom, Michigan 48393

PS Form 3800, May 2000 See Reverse for Instructions