Adams, Patty

From: Harvey, Mary
Sent: Thursday, December 14, 2006 2:09 PM
To: Adams, Patty
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

From: Thorley, David [mailto:DThorley@wm.com]
Sent: Thursday, December 14, 2006 1:35 PM
To: Harvey, Mary
Subject: RE: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

I received the email. thank you.

David Thorley, P.E.
Director of Air Programs - South
1001 Fannin, Suite 4000
Houston, TX 77002
office: 713-328-7404
fax: 713-328-7411
cell: 713-201-3752

Waste Management's renewable energy projects create enough energy to power over 1 million homes.

-----Original Message-----
From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Monday, December 11, 2006 12:33 PM
To: Scott.Salisbury@landfillenergy.com; ChrisP.SW1.CH4@coj.net; worley.gregg@epa.gov; Kirts, Christopher; robinson@coj.net; jeff.pope@us.bureauveritas.com; dderenzo@derenzo.com; Thorley, David; heather_abrams@dnr.state.ga.us; Dee_Morse@nps.gov
Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

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 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.

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Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Tuesday, December 12, 2006 8:50 AM
To: Adams, Patty; Arif, Syed
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Attachments: Trail Ridge Energy, LLC - Facility #0310358-004-AC-FINAL.zip

Trail Ridge Energy, LLC - Faci...

-----Original Message-----
From: Dee_Morse@nps.gov [mailto:Dee_Morse@nps.gov]
Sent: Monday, December 11, 2006 6:15 PM
To: Harvey, Mary
Subject: Re: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

The National Park Service received the message below and forwarded it onto the US Fish and Wildlife Service for their review.

Dee Morse
Environmental Protection Specialist
Air Resources Division
National Park Service
Phone: 303 969-2817
Fax: 303 969-2822
e-mail: dee_morse@nps.gov

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us> 12/11/2006 01:32 PM EST

To: <Scott.Salisbury@landfillenergy.com>, <ChrisP.SW1.CH4@coj.net>, <worley.gregg@epa.gov>, "Kirts, Christopher" <Christopher.Kirts@dep.state.fl.us>, <robinson@coj.net>, <jeff.pope@us.bureauveritas.com>, <dderenzo@derenzo.com>, <dthorley@wm.com>, <heather_abrams@dnr.state.ga.us>, <Dee_Morse@nps.gov>
cc:
Subject: Trail Ridge Energy, LLC # 0310358-004-AC-FINAL

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 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).

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http://www.adobe.com/products/acrobat/readstep.html.

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Thank you,
DEP, Bureau of Air Regulation
(See attached file: Trail Ridge Energy, LLC - Facility #0310358-004-AC-FINAL.zip)

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 2:15 PM
To: Adams, Patty; Arif, Syed
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

From: David Derenzo [mailto:dderenzo@derenzo.com]
Sent: Monday, December 11, 2006 1:47 PM
To: Harvey, Mary
Subject: RE: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Dear DEP, Bureau of Air Regulation

I acknowledge receipt of the final permit issued (Trail Ridge Energy, LLC#0310358-004-AC-FINAL).

David Derenzo

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Monday, December 11, 2006 1:33 PM
To: Scott.Salisbury@landfillenergy.com; ChrisP.SW1.CH4@coj.net; worley.gregg@epa.gov; Kirts, Christopher; robinson@coj.net; jeff.pope@us.bureauveritas.com; dderenzo@derenzo.com; dthorley@wm.com; heather_abrams@dnr.state.ga.us; Dee_Morse@nps.gov
Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Dear Sir/Madam:

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Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 2:15 PM
To: Arif, Syed; Adams, Patty
Subject: FW: DELIVERY FAILURE: Enhanced Mail System Status Code (RFC1893): 2.0.0

Follow Up Flag: Follow up
Flag Status: Flagged

Attachments: ATT48939.txt; Trail Ridge Energy, LLC #0310358-004-AC-FINAL


ATT48939.txt (327 B) | Trail Ridge Energy, LLC #03103...

-----Original Message-----
From: Postmaster@bureauveritas.com [mailto:Postmaster@bureauveritas.com]
Sent: Monday, December 11, 2006 1:33 PM
To: Harvey, Mary
Subject: DELIVERY FAILURE: Enhanced Mail System Status Code (RFC1893): 2.0.0

Your message

  Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

was not delivered to:

  postmaster@bureauveritas.com

because:

  Enhanced Mail System Status Code (RFC1893): 2.0.0

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 1:36 PM
To: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL
Attachments: Trail Ridge Energy, LLC - Facility #0310358-004-AC-FINAL.zip

Syed/Patty – this permit already sent. I just forgot to include on the cc's the names above.

Thanks,
Mary

From: Harvey, Mary
Sent: Monday, December 11, 2006 1:33 PM
To: 'Scott.Salisbury@landfillenergy.com'; 'ChrisP.SW1.CH4@coj.net'; 'worley.gregg@epa.gov'; Kirts, Christopher; 'robinson@coj.net'; 'jeff.pope@us.bureauveritas.com'; 'dderenzo@derenzo.com'; 'dthorley@wm.com'; 'heather_abrams@dnr.state.ga.us'; 'Dee_Morse@nps.gov'
Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Dear Sir/Madam:

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Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 2:16 PM
To: Adams, Patty; Arif, Syed
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

From: Thorley, David [mailto:DThorley@wm.com]
Sent: Monday, December 11, 2006 2:15 PM
To: Harvey, Mary
Subject: Read: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Your message

To: DThorley@wm.com
Subject:

was read on 12/11/2006 2:15 PM.

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 2:26 PM
To: Adams, Patty; Arif, Syed
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

I don't understand what happen - but I just received this message. What is going on?

Mary

-----Original Message-----
From: jeff.pope@us.bureauveritas.com [mailto:jeff.pope@us.bureauveritas.com]
Sent: Monday, December 11, 2006 2:24 PM
To: Harvey, Mary
Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Return Receipt

Your document:	Trail Ridge Energy, LLC #0310358-004-AC-FINAL
was received by:	Jeff Pope/USA/VERITAS
at:	12/11/2006 01:24:14 PM CST

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 2:48 PM
To: Adams, Patty; Arif, Syed
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

From: Kirts, Christopher
Sent: Monday, December 11, 2006 2:37 PM
To: Harvey, Mary
Subject: Read: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

Your message

To:	'Scott.Salisbury@landfillenergy.com'; 'ChrisP.SW1.CH4@coj.net'; 'worley.gregg@epa.gov'; Kirts, Christopher; 'robinson@coj.net'; 'jeff.pope@us.bureauveritas.com'; 'dderenzo@derenzo.com'; 'dthorley@wm.com'; 'heather_abrams@dnr.state.ga.us'; 'Dee_Morse@nps.gov'
Subject:	Trail Ridge Energy, LLC #0310358-004-AC-FINAL
Sent:	12/11/2006 1:33 PM

was read on 12/11/2006 2:37 PM.

Adams, Patty

From: Harvey, Mary
Sent: Monday, December 11, 2006 1:36 PM
To: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: FW: Trail Ridge Energy, LLC #0310358-004-AC-FINAL
Attachments: Trail Ridge Energy, LLC - Facility #0310358-004-AC-FINAL.zip

Syed/Patty – this permit already sent. I just forgot to include on the cc's the names above.

Thanks,
Mary

From: Harvey, Mary
Sent: Monday, December 11, 2006 1:33 PM
To: 'Scott.Salisbury@landfillenergy.com'; 'ChrisP.SW1.CH4@coj.net'; 'worley.gregg@epa.gov'; Kirts, Christopher; 'robinson@coj.net'; 'jeff.pope@us.bureauveritas.com'; 'dderenzo@derenzo.com'; 'dthorley@wm.com'; 'heather_abrams@dnr.state.ga.us'; 'Dee_Morse@nps.gov'
Subject: Trail Ridge Energy, LLC #0310358-004-AC-FINAL

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Thank you,

DEP, Bureau of Air Regulation

WASTE MANAGEMENT

WASTE MANAGEMENT
2859 Paces Ferry Road SE
Suite 1600
Atlanta, GA 30339
(770) 805-4130
(770) 805-9145 Fax

VIA FEDEX

November 30, 2006

Mr. Jeff Koerner
PE Permitting Administrator, North Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Trail Ridge Energy, LLC - Landfill Gas Engines
File No. 0310358-004-AC; and Trail Ridge Landfill Inc.'s
Comments to Draft PSD Permit

Dear Mr. Koerner:

Enclosed please find Trail Ridge Landfill Inc.'s comments on the Draft Permit. Please note both our comments and the redlined changes on the attached draft.

Should you have any questions, please call me at (770) 805-3350.

Sincerely,

John VanGessel
Group General Counsel

JVG/lc
Enclosures
cc: Syed Arif, P.E. (via e-mail)

Report	Item	Comments
General	1	All documentation should reflect the fact that although the location is on a small parcel of land at Trail Ridge Landfill, ownership is the City of Jacksonville, Sold Waste Division and not Trail Ridge Landfill, Inc. This includes the Permit, Technical Evaluation and Preliminary Determination, and all attachments and appendices.
General	2	All references to submission of compliance and performance testing, requests for permit changes, records and reports should come from, or be directed to, Trail Ridge Energy, LLC, as permittee, and/or the City of Jacksonville since the City of Jacksonville, Solid Waste Division is the owner and primary responsible official.
File ID Box Page 1 of 8	3	Project: Should be "Trail Ridge Energy, LLC Landfill Gas Engines" instead of "Trail Ridge Landfill, Inc." Trail Ridge Landfill is operated by Waste Management, but Waste Management has no right to operate nor ownership or responsibility for the gas engines.
Permit Page 1 of 8	4	Primary Responsible Official: "City of Jacksonville, Solid Waste Division" instead of "Trail Ridge Landfill, Inc." Notice had already been provided to the Department by the City to this effect.
Permit Page 1 of 8	5	Project and Location: 3rd line should read "Trail Ridge facility owned by the City of Jacksonville at ..." instead of "Trail Ridge Landfill, Inc."
Permit Page 2 of 8	6	Facility Description: 1st and 2nd line. Add "that is owned by the City of Jacksonville," between "...(MSW) landfill.." and " near Baldwin.."
Permit Page 2 of 8	7	Facility Description: 6th line "at the Trail Ridge Landfill facility". Insert at 5th line, "on a parcel of land segregated from" the Trail Ridge Landfill operations, as depicted in permittee's filings.
Permit Page 2 of 8	8	Regulatory Classification: Add this sentence to the end of the first paragraph "The landfill facility is also classified as a Title V source since the design capacity of the landfill is greater than 2.5 million cubic meters and megagrams.
Permit Pages 2 through 8	9	Footer on each page: Replace Trail Ridge Landfill, Inc. with City of Jacksonville, Solid Waste Division. At page 7 of 8, 13.a. insert, "including permittee's return of LFG to the Trail Ridge Landfill Flares."
Appendix BD	10	Whatever reference is made to "Trail Ridge Landfill, Inc." as permittee in connection with the gas engine plant, that should be replaced with Trail Ridge Energy, LLC or "City of Jacksonville, Solid Waste Division," as appropriate. For example, see 4th line from top of page BD-1 and the 2nd left hand line of the footer on each page.
Appendix GC	11	2nd left line of the footer on each page should read "City of Jacksonville, Solid Waste Division" instead of "Trail Ridge Landfill, LLC".

Technical Evaluation and Preliminary Determination	12	Cover Sheet: remove ",Inc." from "Trail Ridge Landfill, Inc."
Tech Eval Page 2 of 18	13	B. Facility: remove ",Inc." from "Trail Ridge Landfill, Inc."
Tech Eval Pages 2 through 18	~~14~~	2nd left hand line of footer on all pages: Replace Trail Ridge Landfill, Inc." with "City of Jacksonville, Solid Waste Division".
Tech Eval Pages 3 of 18	15	E. Facility Description, 3rd paragraph: Clarify roles/responsibilities in this paragraph. 3rd sentence "under contract with Trail Ridge Landfill" should read "under contract with the City of Jacksonville, the owner of the landfill." The balance of the sentence should read that, "the owner of the landfill, the City of Jacksonville, has control over …". We understand the City has requested/has been given "primary responsible official" status. First use of Trail Ridge Landfill should be modified according to Item 5 above. Suggest using Trail Ridge facility without the word landfill to reference the entire facility and avoid referencing the specific operator.
Tech Eval Pages 4 of 18	16	1st paragraph: add language from Item 8 above to this paragraph.

PERMITTEE:

Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

File No.	0310358-004-AC
Permit No.	PSD-FL-374
SIC No.	4953
Project:	Trail Ridge ~~Landfill, Inc. Modification~~ Energy, LLC – Landfill Gas Engines
Expires:	October 1, 2008

Secondary Responsible Official (Energy Section):

Mr. Scott Salisbury
Managing Member

Primary Responsible Official (~~Trail Ridge Landfill, Inc~~City of Jacksonville, Solid Waste Division.):

Mr. L. Chris Pearson
Acting Division Chief
City of Jacksonville, Solid Waste Division

PROJECT AND LOCATION:

This permit covers the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The project is located at the Trail Ridge ~~Landfill, Inc.~~ facility. Owned by the City of Jacksonville at 5110 US Highway 301 South, Baldwin, Duval County. UTM coordinates are Zone 17; 399.765 km E; 3344.919 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

ATTACHMENTS MADE A PART OF THIS PERMIT:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Joseph Kahn, Director
Division of Air Resource Management

SECTION I – FACILITY INFORMATION

SECTION I – FACILITY INFORMATION

FACILITY DESCRIPTION

Trail Ridge Landfill, Inc. operates a municipal solid waste (MSW) landfill that is owned by the City of Jacksonville near Baldwin, Duval County consisting of 176 acres which are allocated for Class I MSW. Methane-rich landfill gas produced from the decomposition of disposed waste materials is being collected by a gas recovery system. The collected gas is currently being diverted to the flaring system for control. Trail Ridge Energy, LLC plans to construct and operate an electricity generation plant on a parcel of land segregated from ~~at~~ the Trail Ridge Landfill ~~facility~~operations, as depicted in permittee's filings. In order to reduce the amount of landfill gas (LFG) wasted by flaring, all available LFG from the landfill will be supplied to Trail Ridge Energy for use as fuel to power the proposed internal combustion (IC) engine electricity generation plant. As a result of these changes, significant emission increases will occur for carbon monoxide (CO), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) and nitrogen oxides (NOx).

REGULATORY CLASSIFICATION

The Trail Ridge Landfill ~~Facility~~ is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 tons per year (TPY). The landfill facility is also classified as a Title V source since the design capacity of the landfill is greater than 2.5 million cubic meters and megagrams.

The provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 63, Subpart A, General Provisions, 40 CFR 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills and 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines applies to the six internal combustion engines.

The proposed landfill gas fueled IC engine electricity generation plant will be subject to Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(164)(a)2, F.A.C. due to its potential CO emissions being greater than 250 TPY. Best Available Control Technology (BACT) determinations are required for each pollutant emitted in excess of the Significant Emission Rates listed in Rule 62-210.200(242), F.A.C. For this project, the permit specifies BACT emissions standards for CO, NOx and PM_{10} emissions.

RELEVANT DOCUMENTS:

The documents listed below are specifically related to this permitting action and form the basis of the permit. They are on file with the Department:

- Application received 02-24-2006
- Department letters dated 03-15-2006, 04-27-2006, 07-05-2006 and 07-31-2006
- Applicant's letters received 04-12-2006, 05-10-2006, 07-25-2006 and 08-15-2006
- Technical Evaluation and Preliminary Determination dated 10-16-2006
- Best Available Control Technology determination (issued concurrently with permit)

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Northeast District Office, 7825 Baymeadows Way, Suite 200 B, Jacksonville, Florida 32256-7590. All applications for permits to construct or modify emissions unit(s) subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400 (phone number 850/488-0114).
2. General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Parts 60 and 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Expiration: The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Northeast District Office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C]
6. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213.420, F.A.C.]
7. Source Obligation: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between constructions of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.].
8. BACT Determination: 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. [40 CFR 52.21(j)(4)]

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

9. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports using DEP Form 62-210.900(4) shall be sent to the DEP's Northeast District office by March 1st of each year.

10. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

11. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

SECTION III – EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
004 - 009	Six Caterpillar Model G3520C landfill gas fueled internal combustion engines and electricity generators. Each engine has a power generation rating of 2,233 brake horsepower at 100 percent load. The generator has a power output rating of 1,600 kilowatt. The engines will be fueled exclusively with landfill gas generated by and received from the Trail Ridge landfill facility. The landfill gas will go through a gas treatment system prior to combustion in the engines.

A. FUEL SPECIFICATIONS AND WORK PRACTICES

1. This permit authorizes the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The power generation rating of each engine shall be 2,233 brake horsepower (bhp). **[Rule 62-212.400, F.A.C.]**

   {Permitting Note: The power generation rating of 2,233 bhp is based on a minimum fuel heating value requirement of 467 BTU/scf and landfill gas usage of 580 scfm per engine.}

2. This permit authorizes the installation of a LFG Treatment System including gas compression (via blowers), liquids removal (via knock-out and chilling), and particulate removal (via 1 micron primary and polishing filters). The gas treatment system shall not be equipped with atmospheric vents. **[Rule 62-212.400, F.A.C., 40 CFR 60.752 and Appendix J of the application]**

3. Emissions Units Nos. 004-009 are subject to 40 CFR 60 Subpart WWW and certain sections of 40 CFR 63 Subparts AAAA and ZZZZ adopted by the Department at Rule 62-204.800(8)(b) and 62-204.800(11)(b), F.A.C. **[Rules 62-204.800 and 62-210.300, F.A.C.]**

4. Unless otherwise indicated, the modification/construction and operation of the six Caterpillar internal combustion engines shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

5. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

6. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

7. Fuel fired in the engines is limited to LFG. The use of any other fuel will require an amendment to this permit. **[Rule 62-212.400, F.A.C.]**

8. The permittee shall operate each engine at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C.]**

9. The permittee shall operate each engine within 0.5% of the O_2 content in the exhaust gas at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the

most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C. and Appendix F of the application]**

10. The permittee shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of LFG in the event of an engine failure. **[Rule 62-4.070, F.A.C.]**
11. Excess LFG not used as fuel in an engine must be flared in accordance with the requirements of 40 CFR 60 Subpart WWW. **[Rule 62-4.070, F.A.C.]**
12. Each engine/generator set may operate up to 8,760 hours per year. **[Rule 62-210.200(232), F.A.C.]**
13. The subject emissions units shall be subject to the following:
    a. Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to, including permittee's return of LFG to the Trail Ridge Landfill flares and (2) 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. **[Rule 62-210.700, F.A.C.]**

    b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**

    c. In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. **[Rule 62-210.700, F.A.C.]**

B. EMISSION AND PERFORMANCE REQUIREMENTS

1. ***Nitrogen oxides (NOx)***: The emission rate of NOx from each engine/generator set exhaust shall not exceed 0.6 gram per brake horsepower hour (g/bhp-hr) and a maximum of 2.95 pounds per hour (lb/hr) and 12.94 tons per year (TPY). **[Rule 62-212.400(12), F.A.C.]**
2. ***Carbon Monoxide (CO)***: The emission rate of CO from each engine/generator set exhaust shall not exceed 2.75 g/bhp-hr and a maximum of 13.54 lb/hr and 59.30 TPY. **[Rule 62-212.400(12), F.A.C.]**
3. ***Particulate Matter less than 10 microns (PM_{10})***: The emission rate of PM_{10} from each engine/generator set exhaust shall not exceed 0.24 g/bhp-hr and a maximum of 1.18 lb/hr and 5.17 TPY. **[Rule 62-212.400(12), F.A.C.]**
4. ***Volatile Organic Compounds (VOC)***: The emission rate of total VOC from each engine/generator set exhaust shall not exceed 0.28 g/bhp-hr and a maximum of 1.37 lb/hr and 5.99 TPY. **[Rule 62-212.400(12), F.A.C.]**

   {Permitting Note: Project avoids PSD review for VOC based on emission limits.}
5. ***Hydrogen Chloride (HCl)***: The emission rate of HCl from each engine/generator set shall not exceed 10.9 lb/MMscf and 1.66 TPY. **[Rule 62-210.200(184), F.A.C.]**

   {Permitting Note: Facility remains a minor source of HAP emissions based on permit limits.}
6. ***Sulfur Dioxide (SO_2)***: The emission rate of SO_2 from each engine/generator set shall not exceed 27.5 lb/MMscf. **[Rule 62-212.400(12), F.A.C.]**

{Permitting Note: Project avoids PSD review based on permit limits.}

7. Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity. **[Rule 62-212.400, F.A.C.]**

C. TEST METHODS AND PROCEDURES

1. Sampling Facilities

   The permittee shall design the internal combustion engine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. **[Rule 62-297.310(6), F.A.C.]**

2. Performance Test Methods

   Initial (I), Annual (A) and permit renewal (R) compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 51 Appendix M, adopted by reference in Chapter 62-204.800, F.A.C. Initial, annual and renewal compliance tests shall be conducted on only one of the six engines. A different engine shall be tested each year such that all engines are tested during the six year cycle.

   (a) EPA Method 7 or 7E – Determination of NOx Emissions from Stationary Sources (I,A);

   (b) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources (I,A);

   (c) EPA Method 10 – Determination of CO Emissions from Stationary Sources (I,A);

   (d) EPA Method 18 – Measurement of Gaseous Organic Compounds Emissions (I,R);

   (e) EPA Method 26 – Determination of HCl Emissions from Stationary Sources (I,A);

   (f) EPA Method 201 – Determinations of PM_{10} Emissions (I,A)

   EPA Methods 1 through 4 shall be used as necessary to support other test methods. No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the Department. **[Rule 62-297.310(7), F.A.C.]**

3. The permittee shall comply with the following requirements to monitor the sulfur and chlorine content of the landfill gas:

   a. At least 180 days prior to commercial startup of the engines, the permittee shall sample and analyze the landfill gas for sulfur and chlorine content. The gas sample collected for the analyses shall be a composite sample and collected under normal operating conditions (i.e., with valves open for all operating cells). The gas sample collection and analyses for sulfur and chlorine content shall be done semi-annually. Based on the sampling results and Rule 62-297.310(7)(b), F.A.C., the Department may request additional gas sampling and analyses. Results shall be reported as SO_2 and HCl emission factors in terms of lb/MMscf of landfill gas.

   b. During each required compliance test conducted for HCl, the permittee shall sample and analyze the landfill gas for the chlorine content. Results for the compliance test shall be reported in terms of HCl

emissions in lb/hr and the sample analysis result shall be reported as HCl emission factor in terms of lb/MMscf of landfill gas.

c. Analysis of the chlorine content shall be used to track changes in the landfill gas. Based on the analysis, the Compliance Authority may require additional stack testing for HCl emissions to determine compliance with the emissions standard.

d. Compliance with the fuel sulfur specification shall be determined based on each analysis for the sulfur content of the landfill gas.

[Rules 62-210.200(184), 62-210.200(232) and 62-212.400(12), F.A.C.]

4. Within 60 days of achieving the permitted capacity, but no later than 180 days after initial startup, and annually, the subject emissions units as described in Specific Condition C.2 shall be tested for compliance with the applicable emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

D. RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

1. Total landfill gas flow to the engines shall be continuously measured and recorded. **[Rule 62-210.200 (232), F.A.C.]**
2. Gross electrical power generation (kw-hrs) shall be continuously measured and recorded for each engine individually and for the six engines combined. **[Rule 62-210.200(232), F.A.C.]**
3. Each engine/generator set shall be equipped with a non-resetable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. **[Rule 62-210.200(232), F.A.C.]**
4. The permittee shall maintain the following records on a monthly basis:

   a. The hours of operation of each engine/generator set, including any start-up, shutdown or malfunction in the operations of the engine/generator set.

   b. The total landfill gas flow to each engine.

   c. Gross electrical power generation in kw-hr for each engine and the six engines combined.

   [Rule 62-210.200(232), F.A.C.]

5. The permittee shall submit the results and the corresponding data of the site specific HCl emission factor and the SO_2 emission factor within 45 days of gas sampling to the Bureau of Air Regulation. The results shall also be submitted to the Northeast District and the Local Program. **[Rules 62-210.200(232) and 62-210.200(264), F.A.C.]**

Memorandum

Florida Department of Environmental Protection

12/11/06

TO: Joseph Kahn

THRU: Trina Vielhauer

Jeff Koerner

FROM Syed Arif 12/7

DATE: December 7, 2006

SUBJECT: Trail Ridge Energy, LLC
DEP File No. 0310358-004-AC; PSD-FL-374

Attached for your approval and signature is the final construction permit for Trail Ridge Energy, LLC to install six (6) lean burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility owned by the City of Jacksonville located in Baldwin, Duval County. A Best Available Control Technology (BACT) determination was required for nitrogen oxide (NOx), carbon monoxide (CO) and particulate matter less than or equal to 10 microns (PM_{10}) pursuant to Rule 62-212.400, F.A.C.

Trail Ridge Energy, LLC applied on February 24, 2006 (complete on August 15, 2006) to install the six engines for generating electricity by combusting landfill gas that is currently being flared at the Trail Ridge Landfill facility. Due to this modification potential emissions of CO will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for PSD review. The increases in emissions of NOx and PM_{10} will exceed the significant emission rates. The total annual increases due to the proposed project are approximately 356 TPY of CO, 78 TPY of NOx and 31 TPY of PM_{10}. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM_{10} emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines.

The Public Notice was published on November 1, 2006 in the Florida Times-Union. Comments were submitted by the applicant and Waste Management which were entertained in the final determination. No comments were received from the public, EPA Region IV or National Park Service.

We recommend your approval and signature.

JK/sa

Attachments

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit

Mr. Scott Salisbury, Managing Member
Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

DEP File No. 0310358-004-AC
PSD-FL-374

Enclosed is the FINAL Permit Number PSD-FL-374 for the installation of six (6) lean burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill owned by the City of Jacksonville in Baldwin, Duval County. This permit is issued pursuant to Chapter 403, Florida Statutes and in accordance with Rule 62-212.400., F.A.C. - Prevention of Significant Deterioration (PSD).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) and all copies were sent by electronically (with Received Receipt) before the close of business on 12/11/06 to the person(s) listed:

Scott Salisbury, Trail Ridge Energy, LLC (Scott. Salisbury@landfillenergy.com)
Chris Pearson, Acting Division Chief, ERM/SWD (ChrisP.SW1.CH4@coj.net)
Gregg Worley, EPA (worley.gregg@epa.gov)
John Bunyak, NPS (john_bunyak@nps.gov)
Chris Kirts, DEP-NED (Christopher.Kirts@dep.state.fl.us)
Richard Robinson, ERM/AQB (ROBINSON@coj.net)
Jeff Pope, P.E., Clayton Group Services, Inc. (jeff.pope@us.bureauveritas.com)
David Derenzo, Derenzo & Associates, Inc. (dderenzo@derenzo.com)
David Thorley, Waste Management (dthorley@wm.com)
Ms. Heather Abrams, Georgia Department of Natural Resources (heather_abrams@dnr.state.ga.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 12/11/06 (Date)

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

PERMITTEE:

Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

File No.	0310358-004-AC
Permit No.	PSD-FL-374
SIC No.	4953
Project:	Trail Ridge Energy, LLC – Landfill Gas Engines
Expires:	October 1, 2008

Secondary Responsible Official (Energy Section):

Mr. Scott Salisbury
Managing Member

Primary Responsible Official (City of Jacksonville, Solid Waste Division):

Mr. L. Chris Pearson
Acting Division Chief
City of Jacksonville, Solid Waste Division

PROJECT AND LOCATION:

This permit covers the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The project is located at the Trail Ridge Landfill owned by the City of Jacksonville at 5110 US Highway 301 South, Baldwin, Duval County. UTM coordinates are Zone 17; 399.765 km E; 3344.919 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

ATTACHMENTS MADE A PART OF THIS PERMIT:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Joseph Kahn, Director
Division of Air Resource Management

FINAL DETERMINATION

Trail Ridge Energy, LLC

Permit No. 0310358-004-AC, PSD-FL-374

Trail Ridge Landfill, City of Jacksonville

An Intent to Issue an air construction permit to Trail Ridge Energy, LLC for the installation of six landfill gas-fired engines at Trail Ridge Landfill, owned by the City of Jacksonville in Duval County, was distributed on October 26, 2006. The Notice of Intent was published in the Florida Times-Union on November 1, 2006. Copies of the draft construction permit were available for public inspection at the Department offices in Jacksonville and Tallahassee.

No comments were received from the public, EPA Region IV or the National Park Service. Comments were received from the applicant and Waste Management (operator of Trail Ridge Landfill).

The applicant's comment was related to the inclusion of additional EPA test methods for volatile organic compound emissions compliance demonstration. The Department will add the additional EPA test methods as requested by the applicant.

Waste Management's comments related primarily to reflecting the fact that although the Trail Ridge Energy, LLC location is on a small parcel of land at Trail Ridge Landfill, ownership is the City of Jacksonville, Solid Waste Division and not Trail Ridge Landfill, Inc. All references to Trail Ridge Landfill, Inc., in the Permit, Technical Evaluation and Preliminary Determination, Best Available Control Technology (BACT) determination and all attachments and appendices should be changed to read Trail Ridge Landfill, City of Jacksonville. Additionally, all correspondence should be directed to, Trail Ridge Energy, LLC as permittee, and/or the City of Jacksonville since the City of Jacksonville, Solid Waste Division is the owner and primary responsible official. The Department concurs with these changes and will change the appropriate documents accordingly. The applicant Trail Ridge Energy, LLC, is in agreement with this change.

The final action of the Department is to issue the permit and BACT with the changes noted above.

SECTION I – FACILITY INFORMATION

FACILITY DESCRIPTION

Trail Ridge Landfill, Inc. operates a municipal solid waste (MSW) landfill that is owned by the City of Jacksonville near Baldwin, Duval County consisting of 176 acres which are allocated for Class I MSW. Methane-rich landfill gas produced from the decomposition of disposed waste materials is being collected by a gas recovery system. The collected gas is currently being diverted to the flaring system for control. Trail Ridge Energy, LLC plans to construct and operate an electricity generation plant on a parcel of land segregated from the Trail Ridge Landfill, Inc. operations, as depicted in the permittee's filings. In order to reduce the amount of landfill gas (LFG) wasted by flaring, all available LFG from the landfill will be supplied to Trail Ridge Energy for use as fuel to power the proposed internal combustion (IC) engine electricity generation plant. As a result of these changes, significant emission increases will occur for carbon monoxide (CO), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) and nitrogen oxides (NOx).

REGULATORY CLASSIFICATION

The Trail Ridge Landfill is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 tons per year (TPY). The landfill facility is also classified as a Title V source since the design capacity of the landfill is greater than 2.5 million cubic meters and megagrams.

The provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 63, Subpart A, General Provisions, 40 CFR 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills and 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines applies to the six internal combustion engines.

The proposed landfill gas fueled IC engine electricity generation plant will be subject to Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(164)(a)2, F.A.C. due to its potential CO emissions being greater than 250 TPY. Best Available Control Technology (BACT) determinations are required for each pollutant emitted in excess of the Significant Emission Rates listed in Rule 62-210.200(242), F.A.C. For this project, the permit specifies BACT emissions standards for CO, NOx and PM_{10} emissions.

RELEVANT DOCUMENTS:

The documents listed below are specifically related to this permitting action and form the basis of the permit. They are on file with the Department:

- Application received 02-24-2006
- Department letters dated 03-15-2006, 04-27-2006, 07-05-2006 and 07-31-2006
- Applicant's letters received 04-12-2006, 05-10-2006, 07-25-2006 and 08-15-2006
- Technical Evaluation and Preliminary Determination dated 10-16-2006
- Best Available Control Technology determination (issued concurrently with permit)

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted by Trail Ridge Energy, LLC to the Department's Northeast District Office, 7825 Baymeadows Way, Suite 200 B, Jacksonville, Florida 32256-7590. All applications for permits to construct or modify emissions unit(s) subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400 (phone number 850/488-0114).
2. General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Parts 60 and 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Expiration: The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Northeast District Office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C]
6. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213.420, F.A.C.]
7. Source Obligation: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between constructions of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.].
8. BACT Determination: 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. [40 CFR 52.21(j)(4)]

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

9. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports using DEP Form 62-210.900(4) shall be sent to the DEP's Northeast District office by March 1st of each year.

10. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

11. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

SECTION III – EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
004 - 009	Six Caterpillar Model G3520C landfill gas fueled internal combustion engines and electricity generators. Each engine has a power generation rating of 2,233 brake horsepower at 100 percent load. The generator has a power output rating of 1,600 kilowatt. The engines will be fueled exclusively with landfill gas generated by and received from the Trail Ridge landfill facility. The landfill gas will go through a gas treatment system prior to combustion in the engines.

A. FUEL SPECIFICATIONS AND WORK PRACTICES

1. This permit authorizes the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The power generation rating of each engine shall be 2,233 brake horsepower (bhp). **[Rule 62-212.400, F.A.C.]**

   {Permitting Note: The power generation rating of 2,233 bhp is based on a minimum fuel heating value requirement of 467 BTU/scf and landfill gas usage of 580 scfm per engine.}

2. This permit authorizes the installation of a LFG Treatment System including gas compression (via blowers), liquids removal (via knock-out and chilling), and particulate removal (via 1 micron primary and polishing filters). The gas treatment system shall not be equipped with atmospheric vents. **[Rule 62-212.400, F.A.C., 40 CFR 60.752 and Appendix J of the application]**

3. Emissions Units Nos. 004-009 are subject to 40 CFR 60 Subpart WWW and certain sections of 40 CFR 63 Subparts AAAA and ZZZZ adopted by the Department at Rule 62-204.800(8)(b) and 62-204.800(11)(b), F.A.C. **[Rules 62-204.800 and 62-210.300, F.A.C.]**

4. Unless otherwise indicated, the modification/construction and operation of the six Caterpillar internal combustion engines shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

5. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

6. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

7. Fuel fired in the engines is limited to LFG. The use of any other fuel will require an amendment to this permit. **[Rule 62-212.400, F.A.C.]**

8. The permittee shall operate each engine at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C.]**

9. The permittee shall operate each engine within 0.5% of the O_2 content in the exhaust gas at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the

most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C. and Appendix F of the application]**

10. The permittee shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of LFG in the event of an engine failure. **[Rule 62-4.070, F.A.C.]**
11. Excess LFG not used as fuel in an engine must be flared in accordance with the requirements of 40 CFR 60 Subpart WWW. **[Rule 62-4.070, F.A.C.]**
12. Each engine/generator set may operate up to 8,760 hours per year. **[Rule 62-210.200(232), F.A.C.]**
13. The subject emissions units shall be subject to the following:
    a. Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to, including permittee's return of LFG to the Trail Ridge Landfill flares and (2) 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. **[Rule 62-210.700, F.A.C.]**

    b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**

    c. In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. **[Rule 62-210.700, F.A.C.]**

B. EMISSION AND PERFORMANCE REQUIREMENTS

1. ***Nitrogen oxides (NOx)***: The emission rate of NOx from each engine/generator set exhaust shall not exceed 0.6 gram per brake horsepower hour (g/bhp-hr) and a maximum of 2.95 pounds per hour (lb/hr) and 12.94 tons per year (TPY). **[Rule 62-212.400(12), F.A.C.]**
2. ***Carbon Monoxide (CO)***: The emission rate of CO from each engine/generator set exhaust shall not exceed 2.75 g/bhp-hr and a maximum of 13.54 lb/hr and 59.30 TPY. **[Rule 62-212.400(12), F.A.C.]**
3. ***Particulate Matter less than 10 microns (PM_{10})***: The emission rate of PM_{10} from each engine/generator set exhaust shall not exceed 0.24 g/bhp-hr and a maximum of 1.18 lb/hr and 5.17 TPY. **[Rule 62-212.400(12), F.A.C.]**
4. ***Volatile Organic Compounds (VOC)***: The emission rate of total VOC from each engine/generator set exhaust shall not exceed 0.28 g/bhp-hr and a maximum of 1.37 lb/hr and 5.99 TPY. **[Rule 62-212.400(12), F.A.C.]**

   {Permitting Note: Project avoids PSD review for VOC based on emission limits.}
5. ***Hydrogen Chloride (HCl)***: The emission rate of HCl from each engine/generator set shall not exceed 10.9 lb/MMscf and 1.66 TPY. **[Rule 62-210.200(184), F.A.C.]**

   {Permitting Note: Facility remains a minor source of HAP emissions based on permit limits.}
6. ***Sulfur Dioxide (SO_2)***: The emission rate of SO_2 from each engine/generator set shall not exceed 27.5 lb/MMscf. **[Rule 62-212.400(12), F.A.C.]**

{Permitting Note: Project avoids PSD review based on permit limits.}

7. Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity. **[Rule 62-212.400, F.A.C.]**

C. TEST METHODS AND PROCEDURES

1. Sampling Facilities

   The permittee shall design the internal combustion engine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. **[Rule 62-297.310(6), F.A.C.]**

2. Performance Test Methods

   Initial (I), Annual (A) and permit renewal (R) compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 51 Appendix M, adopted by reference in Chapter 62-204.800, F.A.C. Initial, annual and renewal compliance tests shall be conducted on only one of the six engines. A different engine shall be tested each year such that all engines are tested during the six year cycle.

   (a) EPA Method 7 or 7E – Determination of NOx Emissions from Stationary Sources (I,A);

   (b) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources (I,A);

   (c) EPA Method 10 – Determination of CO Emissions from Stationary Sources (I,A);

   (d) EPA Method 18, 25, 25A or 25C – Measurement of Gaseous Organic Compounds Emissions (I,R);

   (e) EPA Method 26 – Determination of HCl Emissions from Stationary Sources (I,A);

   (f) EPA Method 201 – Determinations of PM_{10} Emissions (I,A)

   EPA Methods 1 through 4 shall be used as necessary to support other test methods. No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the Department. **[Rule 62-297.310(7), F.A.C.]**

3. The permittee shall comply with the following requirements to monitor the sulfur and chlorine content of the landfill gas:

   a. At least 180 days prior to commercial startup of the engines, the permittee shall sample and analyze the landfill gas for sulfur and chlorine content. The gas sample collected for the analyses shall be a composite sample and collected under normal operating conditions (i.e., with valves open for all operating cells). The gas sample collection and analyses for sulfur and chlorine content shall be done semi-annually. Based on the sampling results and Rule 62-297.310(7)(b), F.A.C., the Department may request additional gas sampling and analyses. Results shall be reported as SO_2 and HCl emission factors in terms of lb/MMscf of landfill gas.

   b. During each required compliance test conducted for HCl, the permittee shall sample and analyze the landfill gas for the chlorine content. Results for the compliance test shall be reported in terms of HCl

emissions in lb/hr and the sample analysis result shall be reported as HCl emission factor in terms of lb/MMscf of landfill gas.

c. Analysis of the chlorine content shall be used to track changes in the landfill gas. Based on the analysis, the Compliance Authority may require additional stack testing for HCl emissions to determine compliance with the emissions standard.

d. Compliance with the fuel sulfur specification shall be determined based on each analysis for the sulfur content of the landfill gas.

[Rules 62-210.200(184), 62-210.200(232) and 62-212.400(12), F.A.C.]

4. Within 60 days of achieving the permitted capacity, but no later than 180 days after initial startup, and annually, the subject emissions units as described in Specific Condition C.2 shall be tested for compliance with the applicable emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

D. RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

1. Total landfill gas flow to the engines shall be continuously measured and recorded. **[Rule 62-210.200 (232), F.A.C.]**
2. Gross electrical power generation (kw-hrs) shall be continuously measured and recorded for each engine individually and for the six engines combined. **[Rule 62-210.200(232), F.A.C.]**
3. Each engine/generator set shall be equipped with a non-resetable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. **[Rule 62-210.200(232), F.A.C.]**
4. The permittee shall maintain the following records on a monthly basis:

   a. The hours of operation of each engine/generator set, including any start-up, shutdown or malfunction in the operations of the engine/generator set.

   b. The total landfill gas flow to each engine.

   c. Gross electrical power generation in kw-hr for each engine and the six engines combined.

   [Rule 62-210.200(232), F.A.C.]

5. The permittee shall submit the results and the corresponding data of the site specific HCl emission factor and the SO_2 emission factor within 45 days of gas sampling to the Bureau of Air Regulation. The results shall also be submitted to the Northeast District and the Local Program. **[Rules 62-210.200(232) and 62-210.200(264), F.A.C.]**

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Trail Ridge Energy, LLC
Trail Ridge Landfill, City of Jacksonville
PSD-FL-374/0310358-004-AC
Baldwin, Duval County

Trail Ridge Energy, LLC has applied to modify Trail Ridge Landfill, owned by the city of Jacksonville, by installing six (6) lean-burn internal combustion (IC) Caterpillar (CAT) Model G3520C gas IC engines and electricity generators. The electricity generation plant will also consist of landfill gas (LFG) treatment equipment (gas dewatering, filtration and compression equipment and processes) and ancillary equipment that supports the electricity generation operations (e.g., engine oil storage tanks and LFG temperature and moisture conditioning equipment).

The six lean-burn IC engines will be connected to individual electricity generators. Each gas IC engine will be connected to a 1,600 kilowatt electricity generator. The plant will have the potential to generate 9.6 megawatts of electricity under base load operating conditions and will be interconnected to the Jacksonville Electric Authority distribution network through a nearby power line.

The LFG fueled IC engines will be housed in a single building constructed near the existing LFG collection system header and control system flare. A gas transmission line will be connected to the header of the existing LFG collection system and a dedicated gas blower/compressor will be used to draw methane-rich gas (fuel) from the existing LFG collection system to the proposed electricity generation plant.

The Trail Ridge Landfill is a major source of air pollution or a Title V source based on Rule 62-210.200(184), Florida Administrative Code (F.A.C.). Additionally, based on this modification, potential emissions of carbon monoxide (CO) will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(185)(a)2., F.A.C. The increases in emissions of nitrogen oxide (NOx) and particulate matter less than or equal to 10 microns (PM_{10}) will exceed the significant emission rates listed in Rule 62-210.200(264), F.A.C. A Best Available Control Technology (BACT) determination is part of the review required for CO, NOx and PM_{10} by Rule 62-210.200(39), F.A.C.

Descriptions of the process, project, BACT determination, air quality effects, and rule applicability are given in the Technical Evaluation and Preliminary Determination, accompanying the Department's Intent to Issue.

The Department proposes the following as BACT for each engine:

POLLUTANT	EMISSION LIMIT	CONTROL TECHNOLOGY
CO	2.75 g/bhp-hr and 13.54 lb/hr and 59.30 TPY	Combustor design and good combustion practices
NOx	0.6 g/bhp-hr and 2.95 lb/hr and 12.94 TPY	Combustor design and good combustion practices
PM_{10}	0.24 g/bhp-hr and 1.18 lb/hr and 5.17 TPY	Pretreatment of landfill gas and proper engine maintenance

Compliance with the emission limits shall be in accordance with the following EPA Reference Methods as contained in 40 CFR 60, Appendix A or as otherwise approved by the Department:

EMISSION UNIT	POLLUTANT	EPA REFERENCE METHOD
Six (6) Caterpillar Model G 3520C Landfill gas fueled Internal Combustion Engines	PM_{10}	201
	NOx	7 or 7E
	CO	10
	VE	9

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5) , F.S. the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;
b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and
b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by sections 403.73 and 403.111, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Rules 62-4.120, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(X) Determination of Best Available Control Technology (BACT)
(X) Determination of Prevention of Significant Deterioration (PSD)
(X) Compliance with New Source Performance Standards (NSPS). Subpart WWW requirements and
(X) Compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP). Subpart AAAA and ZZZZ requirements

G.14 The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:
   - the date, exact place, and time of sampling or measurements;
   - the person responsible for performing the sampling or measurements;
   - the dates analyses were performed;
   - the person responsible for performing the analyses;
   - the analytical techniques or methods used; and
   - the results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

RECEIVED

NOV 07 2006

BUREAU OF AIR REGULATION

THE FLORIDA TIMES-UNION
Jacksonville, FL
Affidavit of Publication

Florida Times-Union

DERENZO & ASSOCIATES INC.
39395 SCHOOLCRAFT RD.
LIVONIA, MI 48150

REFERENCE: F55210445
10898465A

State of Florida
County of Duval

Before the undersigned authority personally appeared Sharon Walker who on oath says she is a Legal Advertising Representative of The Florida Times-Union, a daily newspaper published in Jacksonville in Duval County, Florida; that the attached copy of advertisement is a legal ad published in The Florida Times-Union. Affiant further says that The Florida Times-Union is a newspaper published in Jacksonville, in Duval County, Florida, and that the newspaper has heretofore been continuously published in Duval County, Florida each day, has been entered as second class mail matter at the post office in Jacksonville, in Duval County, Florida for a period of one year proceeding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission, or refund for the purpose of securing this advertisement for publication in said newspaper.

PUBLISHED ON: 11/01

FILED ON: 11/01

Name: Sharon Walker Title: Legal Advertising Representative
In testimony whereof, I have hereunto set my hand and affixed my official Seal, the day and year aforesaid.

NOTARY: _____

TWILLA SHIPP
MY COMMISSION # DD536853
EXPIRES: May 13, 2010
1-800-3-NOTARY Fl. Notary Discount Assoc. Co.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER
PUBLIC NOTICE OF INTENT TO ISSUE PSD AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Landfill, Inc.
Trail Ridge Energy, LLC
Duval County

The Department of Environmental Protection (Department) gives notice of its intent to issue aPrevention of Significant Deterioration (PSD) air construction permit to Trail Ridge Energy, LLC forinstallation of six (6) lean-burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility located in Baldwin. The facility is located at 5110 US Highway 301South, Baldwin, Duval County, Florida. A Best Available Control Technology (BACT) determinationwas required for nitrogen oxide (NOx), carbon monoxide (CO) and particulate matter less than or equal to 10 microns (PM10) pursuant to Rule 62-212.400, F.A.C.-The applicant's name and address are Trail Ridge Energy, LLC, 29261 Wall Street, Wixom, Michigan 48393. Trail Ridge Energy, LLC applied on February 24, 2006 (complete on August 15, 2006) to install the six engines for generating electricity by combusting landfill gas that is currently being flared at the Trail Ridge Landfill facility. The six lean-burn IC engines will be connected to individual electricity generators. Each gas IC engine will be connected to a 1,600 kilowatt electricity generator. The plant will have the potential to generate 9.6 megawatts of electricity under base load operating conditions and will be interconnected to the Jacksonville Electric Authority distribution network through a nearby power line. Due to this modification potential emission of CO will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for PSD review. The increases in emissions of NOx and PM10 will exceed the significant emission rates. The total annual increases due to the proposed project are approximately 356 TPY of CO, 78 TPY of NOx and 31 TPY of PM10. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM10 emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines. An air quality impact analysis was conducted. Emissions from the facility are not predicted to have a significant impact in either the PSD Class II area in the vicinity of the facility or in the PSD Class I Okefenokee National Wilderness Area.The permitting authority has determined that a PSD Air Construction Permit is required. TheDepartment will issue the Final PSD Air Construction Permit in accordance with the conditions of theDraft PSD Air Construction Permit unless a response received in accordance with the followingprocedures results in a different decision or significant change of terms or conditions. The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PSD AIR CONSTRUCTION PERMIT." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Departmentshall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filinga petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding. A person whose substantial interests are affected by the proposed permitting decision may petition foran administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Thepetition must contain the information set forth below and must be filed (received) in the Office of GeneralCounsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled towritten notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date ofpublication. A petitioner shall mail a copy of the petition to the applicant at the address indicated abovat the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion incompliance with Rule 28-106.205 of the Florida Administrative Code. A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and whenpetitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Department's action is based shallstate that no such facts are in dispute and otherwise shall contain the same information as set forth above,as required by Rule 28-106.301, F.A.C.Because the administrative hearing process is designed to formulate final agency action, the filing ofa petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Departmenton the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.A complete project file is available for public inspection during normal business hours, 8:00 a.m. to5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 850/488-0114
Fax: 850/922-6979

Environmental Resource Management
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-4900
Fax: 904/630-3638

Dept. of Environmental Protection Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300
Fax: 904/448-4362

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator North Permitting Section at 850/488-0114 for additional information.

Derenzo and Associates, Inc.
Environmental Consultants

November 9, 2006

Mr. Jeff Koerner
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: Trail Ridge Energy, L.L.C.
DEP File No. 0310358-004-AC (PSD-FL-374)
Public Notice Draft Permit Comments

Dear Mr. Koerner:

Derenzo and Associates, Inc. (Derenzo and Associates), on behalf of Trail Ridge Energy, L.L.C (trail Ridge Energy), is submitting to the Florida Department of Environmental Protection, Division of Air Resource Management (FDEP-DARM) comments on the draft Air Construction Permit recently issued by the regulatory agency for a new landfill gas (LFG) fueled internal combustion (IC) engine electricity generation facility at the Trail Ridge Landfill in Duval County Florida.

SECTION III – EMISSION UNIT(S) SPECIFIC CONDITIONS

A. FUEL SPECIFICATIONS AND WORK PRACTICES

Condition 1 specifies that the power generation rating of 2,233 bhp is based on a minimum fuel heating value requirement of 467 BTU/scf and landfill gas usage of 580 scfm per engine. The reference should include a reference to higher heating value (HHV).

C. TEST METHODS AND PROCEDURES

Condition 2(d) specifies that *EPA Method 18 – Measurements of Gaseous Organic Compounds Emissions* shall be used to demonstrate compliance with the engine VOC emission limit and that *No other test methods may be used for compliance testing unless prior DEP approval is received, in writing from the department.* EPA Method 25 and 25C should be included as approved procedures for the VOC emission compliance demonstration (i.e., Method 25C; Method 25 and/or Method18).

Derenzo and Associates and Trail Ridge Energy appreciate FDEP-DARM consideration of the comments and requested permit modifications that are presented in this document

Please contact us if you have questions or require clarifications

Sincerely,

DERENZO AND ASSOCIATES, INC.

David R. Derenzo
Services Director

c: Bill Owen, Trail Ridge Energy
Mike Laframboise, Trail Ridge Energy
Syed Arif, FDEP-DARM

Adams, Patty

From: David Derenzo [dderenzo@derenzo.com]
Sent: Monday, October 30, 2006 10:30 AM
To: Adams, Patty
Subject: RE: Facility 0310358-004-AC-D - Trail Ridge Energy

DEP, Bureau of Air Regulation

The email message is being sent to verify I have received the documents.

Thank you

David Derenzo

From: Adams, Patty [mailto:Patty.Adams@dep.state.fl.us]
Sent: Thursday, October 26, 2006 5:19 PM
To: robinson@coj.net; jeff.pope@us.bureauveritas.com; dderenzo@derenzo.com
Subject: FW: Facility 0310358-004-AC-D - Trail Ridge Energy

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 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,

DEP, Bureau of Air Regulation

Adams, Patty

From: Scott Salisbury [Scott.salisbury@landfillenergy.com]
Sent: Friday, October 27, 2006 2:05 PM
To: Adams, Patty
Cc: bill.owen1@verizon.net; Sheila Miller; Michael Laframboise
Subject: RE: Spam: FW: Facility 0310358-004-AC-D - Trail Ridge Energy

Verifying receipt of the documents.

From: Adams, Patty [mailto:Patty.Adams@dep.state.fl.us]
Sent: Thursday, October 26, 2006 5:13 PM
To: Scott Salisbury
Cc: Gibson, Victoria; Harvey, Mary; Arif, Syed
Subject: Spam: FW: Facility 0310358-004-AC-D - Trail Ridge Energy

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 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,

DEP, Bureau of Air Regulation

Adams, Patty

From: John_Bunyak@nps.gov
Sent: Thursday, October 26, 2006 5:43 PM
To: Adams, Patty
Subject: Re: FW: Facility 0310358-004-AC-D - Trail Ridge Energy

got it.

Adams, Patty

From: jeff.pope@us.bureauveritas.com
Sent: Friday, October 27, 2006 9:20 AM
To: Adams, Patty
Subject: Re: FW: Facility 0310358-004-AC-D - Trail Ridge Energy
Attachments: 0310358.004.AC.D_pdf.zip

I received your e-mail.

Thanks

Jeffery L. Pope, P.E.
Vice President
Director of Remediation Engineering
Clayton Group Services
A Bureau Veritas Company
3140 Finley Road
Downers Grove, IL 60515
Direct: 630-795-3211
Fax: 630-795-1102
Cell: 630-803-0274
jeff.pope@us.bureauveritas.com
www.us.bureauveritas.com

"Adams, Patty" <Patty.Adams@dep.state.fl.us>

10/26/2006 04:18 PM

To <robinson@coj.net>, Jeff Pope/USA/VERITAS@VERITAS, <dderenzo@derenzo.com>

cc

Subject FW: Facility 0310358-004-AC-D - Trail Ridge Energy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

4APT-ATMB

OCT 19 2006

Joseph Kahn, Acting Director
Division of Air Resource Management
FL Department of Environmental Protection
Mail Station 5500
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Kahn:

The purpose for this letter is to provide you with a determination regarding emission limit applicability and monitoring requirements for landfill gas that will be combusted in internal combustion engines to produce electricity at the following landfills located in Florida:

Trail Ridge Landfill (Baldwin, Florida)

Brevard County Landfill (Cocoa, Florida)

Seminole County Landfill (Geneva, Florida)

These landfills are subject to 40 CFR Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), and a consultant (Derenzo and Associates, Inc.) representing the owners of all three sites submitted applicability determination requests to the U.S. Environmental Protection Agency (EPA) Region 4 and to your agency. The primary question posed in these requests is whether the landfill gas processing operations at these sites constitute "treatment" as this term is defined under Subpart WWW. Based upon our review of the information provided with the applicability determination request, we concluded that the gas processing conducted at the three landfills in question does constitute treatment under Subpart WWW. Therefore, the gas leaving the treatment systems at these landfills is no longer subject to the control and monitoring requirements in Subpart WWW. Details regarding the gas processing systems at these sites and the basis for our determination are provided in the remainder of this letter.

Derenzo and Associates requested a determination regarding whether the gas processing at the three landfills in Florida constitutes treatment because gas that has been treated is no longer subject to the control requirements in Subpart WWW. Under provisions in 40 CFR §60.752(b)(2)(iii), gas collected from landfills subject to Subpart WWW must be routed to either a flare, a control system that reduces nonmethane organic compound (NMOC) emissions by 98 weight-percent, an enclosed combustor, or a

treatment system that processes the gas for subsequent sale or use. If an enclosed combustor is used, NMOC emissions must be reduced by either 98 weight-percent or to a concentration of less than 20 parts per million as hexane, corrected to three percent oxygen. Although landfill gas is no longer subject to the control requirements in Subpart WWW after it has been processed for subsequent sale or use, emissions from any atmospheric vents in the treatment system must be sent to a control system (flare, enclosed combustor, etc.) that complies with the removal efficiency standards in the rule.

According to the process description that Derenzo and Associates provided with its applicability determination requests, gas collected at the three landfills in question is filtered to remove particles larger than one micron, dewatered, and compressed. According to several previous U.S. Environmental Protection Agency (EPA) determinations, a landfill gas processing operation that includes filtration to ten microns or less, dewatering, and compression constitutes treatment in accordance with provisions in 40 CFR §60.752(b)(2)(iii)(C). Since the gas processing operations at the three landfills in question include all of the steps cited in EPA's previous determinations, they constitute treatment systems for Subpart WWW purposes, and the treated gas leaving these systems will no longer be subject to control or monitoring requirements under the rule.

If you have any questions about the determination provided in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404) 562-9102.

Sincerely,

Beverly H. Banister
Director
Air, Pesticides and Toxics
Management Division

cc: Syed Arif
Division of Air Resource Management
FL Department of Environmental Protection
Mail Station 5500
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Memorandum

Florida Department of
Environmental Protection

10/26/06

TO: Trina Vielhauer

THRU: Jeff Koerner

FROM Syed Arif

DATE: October 17, 2006

SUBJECT: Trail Ridge Energy, LLC – Trail Ridge Landfill Facility
DEP File No. 0310358-004-AC, PSD-FL-374

Attached is the Public Notice package for Trail Ridge Energy, LLC to install six (6) lean burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility located in Baldwin. A Best Available Control Technology (BACT) determination was required for nitrogen oxide (NOx), carbon monoxide (CO) and particulate matter less than or equal to 10 microns (PM_{10}) pursuant to Rule 62-212.400, F.A.C.

Trail Ridge Energy, LLC applied on February 24, 2006 (complete on August 15, 2006) to install the six engines for generating electricity by combusting landfill gas that is currently being flared at the Trail Ridge Landfill facility. Due to this modification potential emission of CO will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for PSD review. The increases in emissions of NOx and PM_{10} will exceed the significant emission rates. The total annual increases due to the proposed project are approximately 356 TPY of CO, 78 TPY of NOx and 31 TPY of PM_{10}. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM_{10} emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines.

We recommend your approval and signature.

JFK/sa

Attachments

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

P.E. Certification Statement

Permittee:
Trail Ridge Energy, LLC
Trail Ridge Landfill, Inc.

DEP File No. 0310358-004-AC
Permit No. PSD-FL-374

Project type: Trail Ridge Energy, LLC will install six (6) lean burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility located in Baldwin. The facility is located at 5110 US Highway 301 South, Baldwin, Duval County, Florida. A Best Available Control Technology (BACT) determination was required for nitrogen oxide (NOx), carbon monoxide (CO) and particulate matter less than or equal to 10 microns (PM_{10}) pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are Trail Ridge Energy, LLC, 29261 Wall Street, Wixom, Michigan 48393.

Trail Ridge Energy, LLC applied on February 24, 2006 (complete on August 15, 2006) to install the six engines for generating electricity by combusting landfill gas that is currently being flared at the Trail Ridge Landfill facility. Due to this modification potential emission of CO will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for PSD review. The increases in emissions of NOx and PM_{10} will exceed the significant emission rates. The total annual increases due to the proposed project are approximately 356 TPY of CO, 78 TPY of NOx and 31 TPY of PM_{10}. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM_{10} emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines.

I HEREBY CERTIFY *that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, meteorological and geological features).*

Syed Arif 10/17/06

Syed Arif, P.E. Date
Registration Number: 51861

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 488-0114
Fax (850) 922-6979

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

October 24, 2006

ELECTRONIC MAIL - RECEIVED RECEIPT REQUESTED

Mr. Scott Salisbury, Managing Member
Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

Re: DRAFT Permit No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Landfill, Inc.

Dear Mr. Salisbury:

Enclosed is one copy of the Draft Air Construction Permit for modification of the Trail Ridge Landfill Facility, located at 5110 US Highway 301 South, Baldwin, Duval County, Florida. The Technical Evaluation and Preliminary Determination, Best Available Control Technology, the Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" are also included.

The "PUBLIC NOTICE" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Jeff Koerner, P.E., Permitting Administrator, North Section, at the above letterhead address. If you have any other questions, please contact Syed Arif at 850/921-9528.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/sa

Enclosures

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE PSD PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, Draft BACT Determination, and the DRAFT permit) and all copies were sent electronically (with Received Receipt) before the close of business on 10/26/06 to the person(s) listed:

Scott Salisbury, Trail Ridge Energy, LLC* (Scott.Salisbury@landfillenergy.com)
Chris Pearson, Acting Division Chief, ERM/SWD (ChrisP.SW1.CH4@coj.net)
Gregg Worley, EPA (worley.gregg@epa.gov)
John Bunyak, NPS (john_bunyak@nps.gov)
Chris Kirts, DEP-NED (Christopher.Kirts@dep.state.fl.us)
Richard Robinson, ERM/AQB (ROBINSON@coj.net)
Jeff Pope, P.E., Clayton Group Services, Inc. (jeff.pope@us.bureauveritas.com)
David Derenzo, Derenzo & Associates, Inc. (dderenzo@derenzo.com)
Ms. Heather Abrams, Georgia Department of Natural Resources (heather_abrams@dnr.state.ga.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 10/26/06 (Date)

In the Matter of an
Application for Permit by:

Mr. Scott Salisbury, Managing Member
Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

DEP File No. 0310358-004-AC
Draft Permit No. PSD-FL-374
Trail Ridge Landfill, Inc.
Duval County

INTENT TO ISSUE PSD AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue a Prevention of Significant Deterioration (PSD) air construction permit (copy of DRAFT Permit attached) for the proposed project, detailed in the application specified above and in the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Trail Ridge Energy, LLC submitted an application on February 24, 2006 (complete on August 15, 2006) to the Department for a PSD permit to install six (6) lean burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility located in Baldwin. The facility is located at 5110 US Highway 301 South, Baldwin, Duval County, Florida.

Trail Ridge Energy will install the engines to generate electricity from the landfill gas that is currently being flared at the Trail Ridge Landfill facility. The Trail Ridge Landfill facility is a Title V source. Additionally, based on this modification potential emission of carbon monoxide (CO) will be greater than 250 tons per year making the facility a Major Stationary Source for PSD review. The increases in emissions of nitrogen oxide (NOx) and particulate matter less than or equal to 10 microns (PM_{10}) will exceed the significant emission rates. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM_{10} emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. As described in the attached Technical Evaluation and Preliminary Determination, the Department has determined that a review for Prevention of Significant Deterioration (PSD), a determination of Best Available Control Technology (BACT) and a PSD permit are required for the proposed work.

The Department intends to issue this Air Construction Permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the Final PSD Permit in accordance with the conditions of the attached Draft PSD permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the Draft PSD Permit, the permitting authority shall issue a Revised Draft PSD Permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

PUBLIC NOTICE OF INTENT TO ISSUE PSD AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Landfill, Inc.
Trail Ridge Energy, LLC
Duval County

The Department of Environmental Protection (Department) gives notice of its intent to issue a Prevention of Significant Deterioration (PSD) air construction permit to Trail Ridge Energy, LLC for installation of six (6) lean-burn Caterpillar Model G3520C landfill gas fueled internal combustion engines at Trail Ridge Landfill facility located in Baldwin. The facility is located at 5110 US Highway 301 South, Baldwin, Duval County, Florida. A Best Available Control Technology (BACT) determination was required for nitrogen oxide (NOx), carbon monoxide (CO) and particulate matter less than or equal to 10 microns (PM_{10}) pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are Trail Ridge Energy, LLC, 29261 Wall Street, Wixom, Michigan 48393.

Trail Ridge Energy, LLC applied on February 24, 2006 (complete on August 15, 2006) to install the six engines for generating electricity by combusting landfill gas that is currently being flared at the Trail Ridge Landfill facility. The six lean-burn IC engines will be connected to individual electricity generators. Each gas IC engine will be connected to a 1,600 kilowatt electricity generator. The plant will have the potential to generate 9.6 megawatts of electricity under base load operating conditions and will be interconnected to the Jacksonville Electric Authority distribution network through a nearby power line.

Due to this modification potential emission of CO will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for PSD review. The increases in emissions of NOx and PM_{10} will exceed the significant emission rates. The total annual increases due to the proposed project are approximately 356 TPY of CO, 78 TPY of NOx and 31 TPY of PM_{10}. CO and NOx emissions will be controlled through combustor design (lean burn engine) and good combustion practices (air to fuel ratio control). PM_{10} emissions will be minimized through the pretreatment of the landfill gas prior to combustion and proper equipment maintenance of the engines.

An air quality impact analysis was conducted. Emissions from the facility are not predicted to have a significant impact in either the PSD Class II area in the vicinity of the facility or in the PSD Class I Okefenokee National Wilderness Area.

The permitting authority has determined that a PSD Air Construction Permit is required. The Department will issue the Final PSD Air Construction Permit in accordance with the conditions of the Draft PSD Air Construction Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PSD AIR CONSTRUCTION PERMIT." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

Dept. of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 850/488-0114
Fax: 850/922-6979

Dept. of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/807-3300
Fax: 904/448-4362

Environmental Resource
Management
117 West Duval Street, Suite 225
Jacksonville, Florida 32202
Telephone: 904/630-4900
Fax: 904/630-3638

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator North Permitting Section at 850/488-0114 for additional information.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

TRAIL RIDGE ENERGY, LLC

TRAIL RIDGE LANDFILL, Inc.
Duval County, Florida

Facility Modification

DEP File No. 0310358-004-AC
PSD-FL-374

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

October 16, 2006

I. APPLICATION INFORMATION

A. Applicant

Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

Secondary Responsible Official: Mr. Scott Salisbury, Managing Member

B. Facility

Trail Ridge Landfill, Inc.
5110 US Highway 301 South
Baldwin, Florida 32234

Primary Responsible Official: Mr. L. Chris Pearson, Acting Division Chief, Environmental Resource Management Department – Solid Waste Division, City of Jacksonville

C. Reviewing and Process Schedule

02-24-2006:	Date of receipt of Application
03-15-2006:	DEP's Completeness Request
04-12-2006:	Applicant's response to DEP's Completeness Request
04-27-2006:	DEP's 2nd Completeness Request
05-10-2006:	Applicant's response to DEP's 2nd Completeness Request
06-05-2006:	Date of receipt of modeling information
07-05-2006:	DEP's 3rd Completeness Request concerning modeling
07-25-2006:	Applicant's response to DEP's 3rd Completeness Request
07-31-2006:	DEP's 4th Completeness Request regarding PM_{10} emission limit for Brevard Energy project
08-15-2006:	Applicant's response to DEP's 4th Completeness Request. Application Complete

D. Facility Location

This facility is located at 5110 US Highway 301 South, Baldwin, Duval County, Florida. Latitude and Longitude are 30/14/00 and 82/02/30 respectively. UTM coordinates of the site are: Zone 17, 399.765 km E and 3344.919 km N. This location is approximately 45 km from the nearest Class I area, the Okefenokee Wilderness Area.

Facility Identification Code (SIC):

Major Group No. 49, Industry Group No. 4953.

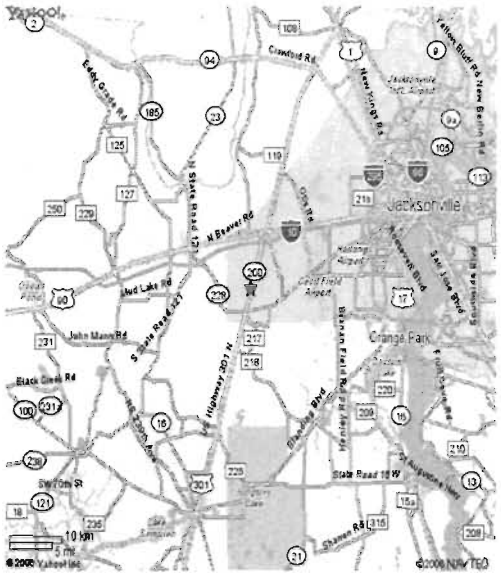


Figure 1- Location of Facility

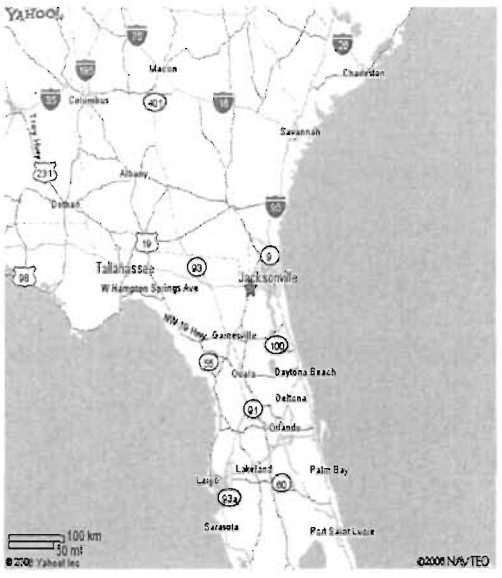


Figure 2- Regional Location

E. Facility Description

Trail Ridge Landfill is a Municipal Solid Waste (MSW) Landfill consisting of 176 acres which are allocated for Class I MSW. The Non-Methane Organic Compound (NMOC) control device (gas collection and control system) is installed in accordance with the requirements of 40 CFR 60, Subpart WWW. Methane-rich landfill gas (LFG) produced from the decomposition of disposed waste materials at both active and capped cells is being collected by a gas recovery system. A blower station connected to the gas recovery system moves the collected LFG to a central location. LFG is directed to an enclosed flare where methane, NMOC and HAPs contained in the gas are destroyed at high temperatures. Approximately 3,100 scfm of LFG is currently being directed to the flaring system for control.

In order to reduce the amount of LFG wasted by flaring, all available LFG from the landfill will be supplied to Trail Ridge Energy for use as fuel to power the proposed internal combustion (IC) engine electricity generation plant. While the Trail Ridge Energy electricity generation plant will be located on leased land at the Trail Ridge Landfill facility, the electricity generation equipment and processes will be owned and operated by Trail Ridge Energy and not directly under the control of the Trail Ridge Landfill.

Nevertheless, the Department presumes one facility located within another facility establishes a "control" relationship. Since Trail Ridge Energy will be fueled exclusively with methane-rich gas generated by the landfill and under contract with Trail Ridge Landfill, the Department concludes that the landfill has control over the electricity generation operations of the proposed plant. Therefore, Trail Ridge Energy is part of the Trail Ridge Landfill facility, and its approved Air Construction Permit will be incorporated into the Trail Ridge Landfill Title V Operating Permit. The Title V Operating Permit will have two different sections (one for the landfill operations and one for the electricity generation operations) with a secondary responsible official for each section. A primary responsible official will be designated for the entire facility that will be responsible for all appropriate reporting and compliance certifications of both sections of the facility. The primary responsible official will be the Solid Waste Division Chief of the Environmental Resource Management Department for the City of Jacksonville.

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 tons per year (TPY). The provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 63, Subpart A, General Provisions, and 40 CFR 63, Subpart AAAA, [National Emission Standards for Hazardous Air Pollutants] Municipal Solid Waste Landfills, applies to the designated facility.

The proposed LFG fueled IC engine electricity generation plant will be subject to Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(185)(a)3, F.A.C. due to its potential CO emissions being greater than 250 TPY. Best Available Control Technology (BACT) determinations are required for each pollutant emitted in excess of the Significant Emission Rates listed in Rule 62-210.200(264), F.A.C. These values are 40 TPY for NOx, 100 TPY for CO and 15 TPY for PM_{10}.

II. PROJECT DESCRIPTION

The proposed project will consist of Caterpillar (CAT) Model G3520C gas IC engines and electricity generators. The electricity generation plant will consist of:

1. LFG treatment equipment (gas dewatering, filtration and compression equipment and processes).

2. Six (6) lean-burn IC engines that will be connected to individual electricity generators. Each gas IC engine will be connected to a 1,600 kilowatt electricity generator. The plant will have the potential to generate 9.6 megawatts of electricity under base load operating conditions and will be interconnected to the Jacksonville Electric Authority distribution network through a nearby power line.

3. Ancillary equipment that supports the electricity generation operations (e.g., engine oil storage tanks and LFG temperature and moisture conditioning equipment).

The LFG fueled IC engines will be housed in a single building constructed near the existing LFG collection system header and control system flare. A gas transmission line will be connected to the header of the existing LFG collection system and a dedicated gas blower/compressor will be used to draw methane-rich gas (fuel) from the existing LFG collection system to the proposed electricity generation plant.

A. Treatment of Landfill Gas

The equipment and processes used to treat (dewater, filter and compress) the LFG received from the Landfill (prior to its combustion as fuel in the proposed IC engines) will consist of:

1. Initial two-stage inlet gas dewatering/filter vessels (the bottom chambers are used for moisture knock-out, top chambers are equipped with coalescing filter media to remove gas particles having diameters of 1-micron and larger).
2. A gas compressor/blower.
3. Air-to-gas coolers (chillers), which will be used to reduce the elevated temperatures of LFG received from compressor to approximately 10°F above ambient temperatures.
4. Final two-stage gas dewatering/filter vessels (the bottom chambers are used for moisture knock-out, top chambers are equipped with coalescing filter media to remove gas particles having diameters of 1-micron or larger).

Components of the specified gas treatment system will not be equipped with atmospheric vents. Therefore, all of the LFG received by the system will be directed to the IC engines for use as a fuel.

B. Engine/Generator Specifications

Six identical lean-burn IC engines, CAT Model G3520C gas IC engines will be used to power electricity generators. This engine:

1. Is designed to fire low-pressure, lean fuel mixtures and produce low combustion by-product emissions. The engine is equipped with an air-to-fuel ratio controller that monitors engine performance parameters and automatically adjusts the air-to-fuel ratio and ignition timing to maintain efficient fuel combustion, which minimizes air pollutant emissions.
2. Will be fueled exclusively with LFG generated by and received from the Trail Ridge Landfill (natural gas will not be used to fuel the IC engine operations under any conditions).
3. Has a power generation rating of 2,233 brake horsepower (bhp).
4. Will be connected to a 1,600 kW electricity generator.

The proposed facility will have a total electricity generation capacity of 9,600 kW (9.6 MW). Emissions produced by the combustion of LFG fuel in the six gas IC engines will be released into the ambient air through individual stacks connected to the engine exhaust manifolds. A noise muffler will be installed on each engine exhaust stack. The fuel combustion system exhausts and noise mufflers will be located on the roof of the single building that houses the engines.

C. LFG Fuel Requirement/Availability

The operation of the six gas IC engines under base load conditions (100% capacity) and with fuel that has a minimum lower heating value (LHV) of 420 Btu/scf (higher heating value (HHV) of 467 Btu/scf) will result in maximum LFG fuel utilization rates of approximately 3,480 scfm and 5.01 million standard cubic feet per day (MMscf/day).

Approximately 3,100 scfm of LFG is currently being controlled by the flaring system, which has a LHV of approximately 443.5 Btu/scf that is expected to be at least 450 Btu/scf at the time full fuel demand is required by the proposed engines. This gas extraction rate is adequate to fuel and power the six IC engine generators proposed for installation at Trail Ridge Energy.

The existing LFG flaring system will be periodically operated during periods of equipment downtime and maintenance, and continually operated when future LFG collection and extraction rates (from new waste placement) exceed the fuel supply requirement of the installed and operated engines.

D. Ancillary Equipment

Each of the proposed IC engines will be equipped with a stand-alone fan-cooled radiator. Engine coolant for the radiators will be stored on-site in drum quantities.

Engine lube oil (new and used) will be stored in separate above ground holding tanks positioned on the premises of the proposed LFG fueled IC engine electricity generation plant. The new lube oil storage tank will have a capacity of approximately 2,000-gallons. The waste oil storage tank will have a capacity of approximately 1,000-gallons.

III. AIR POLLUTANT EMISSIONS

A. Criteria Air Pollutants

The CAT G3520C gas IC engines will have the following maximum NOx, CO, VOC and PM_{10} emission rates:

- 2.75 grams of CO per brake-horsepower hour (g/bhp-hr);
  13.54 lbs/hr and 59.30 TPY (one engine)
  355.8 TPY (six engines)
- 0.60 g/bhp-hr NOx;
  4.95 lb/hr and 12.94 TPY (one engine)
  77.6 TPY (six engines)
- 0.28 g/bhp-hr of total VOC;
  1.37 lb/hr and 5.99 TPY (one engine)
  36.0 TPY (six engines)
- 0.24 g/bhp-hr for PM_{10}.
  1.18 lb/hr and 5.17 TPY (one engine)
  31.0 TPY (six engines)

The 2.75 g/bhp-hr CO value is based on the results of Best Available Control Technology (BACT) analyses.

The 0.60 g/bhp-hr NOx value is based on the results of BACT analyses.

The 0.28 g/bhp-hr VOC value is based on a voluntary limitation that is 90% of the 40 TPY significant emission thresholds listed in Rule 62-210.200(264), F.A.C.

The 0.24 g/bhp-hr PM_{10} value is based on the results of BACT analyses.

Sulfur oxide (SOx) emissions have the potential to be produced during the combustion of LFG since it contains sulfur-bearing compounds that are oxidized at normal engine operating temperatures. Site-specific sulfur content analyses have not been performed on the LFG generated by the Landfill. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Section 2.4 data was used to estimate the total potential sulfur content of the LFG to be used as IC engine fuel. The AP-42 data specify a hydrogen sulfide (H_2S) default LFG concentration of 35.5 parts per million by volume (ppmv). However, the applicant based on their experience determined that H_2S is typically observed at concentrations greater than 35.5 ppmv but less than 150 ppmv. Therefore, the AP-42 H_2S default LFG concentration of 35.5 ppmv was replaced with 150 ppmv value. The results of this analysis indicate that the total sulfur content of the LFG to be used as IC engine fuel is estimated to be less than 164.2 ppmv as H_2S. The additional sulfur content was due to other compounds like carbon disulfide, methyl mercaptan etc. that gets converted to SO_2. The operation of the six IC engines at this specified sulfur content will result in maximum potential emissions of 25.32 TPY of SO_2. This is less than significant emission rate for SO_2 of 40 TPY and doesn't trigger PSD/BACT review.

B. Hazardous Air Pollutants

Hazardous Air Pollutants (HAP) as specified in Rule 62-210.200(133), F.A.C are produced during the combustion of LFG to be used as fuel by the IC engines since:

1. HAP compounds are present in the gas generated by the Trail Ridge Landfill and the fuel combustion process is not 100% complete (i.e., a small portion of the HAPs pass through the fuel combustion system).
2. Chlorinated compounds that are present in LFG have the potential to form hydrogen chloride (HCl, a regulated HAP) when they are combusted.

Site-specific HAP content analyses have not been performed on the LFG generated by the Landfill. Therefore, data developed by EPA in AP-42, Section 2.4 were used to estimate the total potential HAP content of the LFG to be used as IC engine fuel.

Table 2.4-3 of AP-42 provides control efficiencies for LFG constituents and specifies IC engines typically reduce (control) halogenated species by 93 percent and non-halogenated species by 86.1 percent. These LFG constituent control efficiencies were considered in the HAP potential emission determinations.

The contribution of HCL to the HAP potential emissions of the IC engines was estimated based on a conversion of the individual chlorinated compound measurements presented in the AP-42 default list of LFG constituents to HCl as a result of the high temperature combustion environment and exhaust processes. The results of this analysis indicate that the HCl exhaust rate of the proposed IC engines is equivalent to an annual potential emission of 10.9 TPY under base load conditions. The major source threshold for any single HAP is 10 TPY. The applicant will restrict the allowable HCl emissions from the proposed engine operations to less than 10 TPY through appropriate permit limits.

The operation of six gas IC engines under base load conditions will result in maximum potential total HAP emissions that are less than 12.6 TPY and is well under the 25 TPY thresholds.

The reciprocating IC engine National Emission Standards for Hazardous Air Pollutants (RICE NESHAP, 40 CFR Part 63 Subpart ZZZZ) applies to major sources of HAPs that operate RICE rated for 500 bhp or greater. Major is defined as a facility that has the potential to emit in excess of 25 TPY of any combination of HAP compounds or 10 TPY of any single HAP.

The proposed electricity generation facility individual RICE will have power ratings that exceed 500 bhp. However, the maximum HAP emissions will be limited to less than the major facility thresholds. Therefore, the proposed facility is not subject to the emission limitations and operating limitations but will be subject to the initial notification, reporting and recordkeeping requirement of the subpart.

IV. RULE APPLICABILITY

A. Prevention of Significant Deterioration

The proposed project was reviewed under Rule 62-210.200(185)(a)3, F.A.C., New Source Review (NSR) for Prevention of Significant Deterioration (PSD), because it will be a major modification to a minor stationary source resulting in a significant increase in NOx, PM/PM_{10}, and CO emissions. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The emission units affected by this PSD permit shall comply with all applicable provisions of the Florida Administrative Code; specifically, the following Chapters and Rules:

Chapter 62-4	Permits
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments

Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted By Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Chapter 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-296.403	Phosphate Processing
Rule 62-297.310	General Compliance Test Requirements
Rule 62-297.401	Compliance Test Methods

B. Federal and State Emission Standards

The proposed project is subject to the applicable provisions of Chapter 403, Florida Statutes, Chapters 62-212, Chapters 62-210 and 62-4, Florida Administrative Code (F.A.C.), and 40 CFR 60. The facility is located in an area designated attainment or maintenance for all criteria pollutants in accordance with Rule 62-204.340, F.A.C.

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as PM/PM_{10}, SO_2, NOx, CO or VOC exceed 100 TPY. The provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 63, Subpart A, General Provisions, 40 CFR 63, Subpart AAAA, NESHAP for Municipal Solid Waste Landfills and 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines applies to the six internal combustion engines.

V. BEST AVAILABLE CONTROL TECHNOLGY DETERMINATION

A. BACT Determination Procedure:

In accordance with Chapter 62-210.200(38), F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.
- All scientific, engineering, and technical material and other information available to the Department.

- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility for which a BACT determination is required can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as indicated below:

- ***Particulate Matter less than or equal to 10 microns*** (PM_{10}/***Visible Emissions*** (VE)). Controlled generally by wet scrubbing or filtration.
- ***Combustion Products*** (CO and NOx). CO and NOx controlled generally by good combustion of clean fuels.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the pollutant control equipment and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM_{10}, CO, NOx, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

In the case of the proposed project at Trail Ridge Landfill, annual emissions of CO, NOx and PM_{10} are above significant emission rates triggering review for these pollutants. Therefore, since the proposed project involves physical modification of the facility, the BACT analysis will address emissions of CO, NOx and PM_{10}.

B. BACT Analysis

Add-on Emission Controls (General)

EPA in the preamble to the Standards of Performance for Stationary Spark Ignition IC Engines and National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines dated June 12, 2006 states that chemicals in landfill and digester gas fuels called siloxanes (organic compounds composed of silicon, oxygen and methyl groups) poison the catalyst in add-on control technologies such as Selective Catalytic Reduction (SCR), Non-Selective Catalytic Reduction (NSCR), and oxidation catalysts, rendering them ineffective in very short periods of time.

NSCR uses a three-way catalyst to remove NOx and CO from IC engine exhausts.

SCR uses the injection of a solution (urea or ammonia) into the engine exhaust to react with its NOx content. The combustion exhaust gases produced by the engines are subsequently passed through a catalyst in order to achieve NOx reductions.

Oxidation catalysts use energy in the presence of an appropriately selected metal catalyst to transform CO into carbon dioxide (i.e., the combustion exhaust gases produced by the engine are passed through a catalyst in order to complete the oxidation of CO to carbon dioxide).

The California Air Resource Board (CARB) has developed and published Guidance for the Permitting of Electrical Generation Technologies in July 2002, to assist companies and organizations in the permitting of electrical generating equipment. This CARB guidance document:

- Recognizes the benefits of generating electricity from waste gases (landfill and digester gas) and provides BACT determinations from reciprocating IC engines fueled with these materials.
- Indicates that waste gases "contain impurities that, if combusted will likely poison catalyst-based post combustion control systems."
- Determines that additional fuel treatment and post combustion controls have limited success and/or have not been proven to be cost effective in reducing air pollutant emissions from waste combustion applications.

Other state regulatory agencies (TX, RI, and NJ) have made similar determinations with the issuance of permits that specify BACT for LFG fueled IC engines that do not include the use of add-on emission controls.

Emission standards requiring aftertreatment controls from such engines have typically not been required due to poisoning of the catalyst leading to poor reduction efficiencies and eventually destroying the add-on control device. For this reason, EPA did not consider add-on control for landfill and digester gas applications. The technology that is the basis for the proposed standards for landfill and digester gas engines is the level achieved by new lean burn engines. EPA has been told that lean burn engines are the preferred choice for landfill and digester gas applications because these engines have the lowest NOx emissions without add-on control. Information EPA gathered during the proposal also shows that the majority of landfill applications use lean burn engines.

Documented BACT/LAER Determinations

The USEPA Office of Air Quality Planning and Standards RACT/BACT/LEAR Clearinghouse (RBLC) emission and control technology data indicate that no add-on emission controls have been established as BACT or LAER for LFG fueled IC engines.

The State of Texas issued PSD permit (PSD-TX-1034) to Bio Energy Texas, LLC on July 23, 2004 for the installation of eight (8) LFG fueled IC engines. No add-on emission controls were required for this project. The same Caterpillar engines as those proposed for Trail Ridge Energy were installed at Bio Energy Texas.

The State of New Jersey has completed its review of an ozone (NOx) non-attainment area new source review and PSD permit (CO) which will be issued to Ocean Energy Corporation, Inc. (a Landfill Energy Systems Company) in 2006 for the installation of six (6) LFG fueled IC engines as the ones proposed for Trail Ridge Landfill. No add-on emission controls were required for this project.

CAT G3520C gas IC engines (the same engines as those proposed for use by Trail Ridge Energy):

1. Have been installed and are operating at Ridgewood Power Management (final permit issued in approximately early 2005);
2. Have been installed and are operating at New England Waste Services (final permit issued in approximately late 2004);
3. Have been installed and are operating at Bio Energy Texas (final air permit issued in July 2004); and
4. Are planned for installation at Ocean Energy Corp. with final permit issuance in 2006.

All the above projects did not require any add-on emission controls. The maximum allowable emissions that were permitted for these sources are as follows:

FACILITY (STATE)	ENGINE SIZE (kW)	(hp)	CO (g/bhp-hr)	NOx (g/bhp-hr)	PM_{10} (g/bhp-hr)
Ridgewood Power Management (RI)		2229	2.75	0.50	0.1
New England Waste Services (VT)	1600	2221	2.75	0.50	–
Bio Energy Texas, LLC (TX)		2172	2.8	0.60	0.148
Ocean Energy Corp. (NJ)	1600	2233	2.75	0.60	0.24

BACT Emission Limits Proposed By Applicant

POLLUTANT	EMISSION LIMIT	CONTROL TECHNOLOGY
CO	2.75 g/bhp-hr and 13.54 lb/hr	Lean burn engine with air to fuel ratio control
NOx	0.60 g/bhp-hr and 2.95 lb/hr	Lean burn engine with air to fuel ratio control
PM_{10}	0.24 g/bhp-hr and 1.18 lb/hr	Treatment of LFG fuel

C. Pollutant Analysis

Carbon Monoxide (CO)

It is the Department's position that there is no practicably feasible and cost effective post combustion treatment technology for reducing CO emissions from LFG fueled IC engines. LFG fuel contains impurities (such as siloxanes and other chemicals) that, when combusted, have been shown to poison catalyst based post combustion treatment technologies such as an oxidation catalyst and NSCR.

Technical data issued by Caterpillar, Inc. for the CAT 3520C IC engine specifies that CO emissions for the first 100 hours of operations will be equal to or less than 2.5 g/bhp-hr and maximum CO emissions will not exceed 4.2 g/bhp-hr. Operational experience obtained by users of the equipment indicates that CO emissions for LFG fueled IC engines tend to increase with time. Increasing CO emissions occur as a result of the combustion of siloxanes that exist in the LFG used to fuel the engines. The combustion of LFG siloxanes produces particulate silica that acts as an abrasive material and increases normal wear on the moving components of the engine. With increasing engine operating hours, increasing amount of silica deposits are typically found on the fixed and moving parts in the engine combustion cylinder and in the lubricating oil reservoir. The specified increased engine wear affects the combustion process resulting in a gradual increase in CO emissions over the number of operating hours.

Data in the USEPA RBLC were reviewed to identify control technology determinations for the operation of IC engines on LFG fuel. The results indicate that BACT for CO emissions from IC engines with power ratings greater 2,000 and less than 4,000 bhp range from 2.75 to 3.0 g/bhp-hr (CAT G3520C gas IC engine has a power

rating of 2,233 bhp). The corresponding NOx LAER values range from approximately 0.5 to 0.6 g/bhp-hr. The database presents CO BACT values as low as 2.3 g/bhp-hr. However, these CO BACT determinations generally correspond to NOx emission rates that exceed 1.0 g/bhp-hr. The specified NOx LAER and CO BACT determinations are applicable to the operation of lean burn engines with air to fuel ratio control or simply specified as 'clean burn engine'. The following table summarizes the Departments findings:

TABLE 1

FACILITY	ENGINE SIZE	DATE	TYPE	CO g/bhp-hr	NOx g/bhp-hr
Ocean Energy Corp. (NJ)	2233 HP	2006	BACT/LAER	2.75	0.6
New England Waste Svcs. (VT)	2221 HP	12/21/2005	BACT/LAER	2.75	0.5
Ridgewood Power Mgmt. (RI)	2229 HP	06/24/2005	BACT/LAER	2.75	0.5
Bio Energy Texas, LLC (TX)	2172 HP	07/23/2004	BACT/LAER	2.8	0.6
Northwest Regional Landfill (AZ)	1410 HP	10/27/2003	BACT	2.5	0.6
Bio-Energy, LLC (OH) (Loraine County Landfill)	1877 HP	04/22/2003	BACT	2.4	1.4
Bio-Energy, LLC (OH) (Carbon Limestone LFG)	1877 HP	04/10/2003	BACT	2.3	1.2
MM San Bernardino Energy (CA)	1850 HP	05/16/2002	BACT	2.5	0.6
Northern Tier Landfill (PA)	815 kW	01/29/2002	BACT	3.0	2.0
Reliant Associates (TX)	2343 HP	01/24/2002	BACT	3.0	0.6
Sumpter Energy Associates (MI)	1138 HP	12/20/2001	BACT	2.9	2.0
Bio-Energy (Azusa) LLC (CA)	1850 HP	02/22/2000	LAER	2.0	0.6
Kiefer Landfill (CA)	4230 HP	01/18/2000	LAER	2.7	0.55
MM Hackensack Energy (NJ)	1340 HP	04/09/1998	LAER	2.0	1.0

Based on vendor guarantees the applicant has proposed that the emission limitation that represents BACT for CO is 2.75 g/bhp-hr. The proposed CO emission limitation appears consistent with the reported data as the first four entries in Table 1 represents the same manufacturer, model and size of the engines to be used at Trail Ridge Energy.

BACT for CO is therefore represented by combustor design (lean burn engine) and good combustion practices (air to fuel ratio control) to minimize CO emissions. The emission limit chosen to represent BACT for CO is:

2.75 g/bhp-hr

Nitrogen Oxides (NO_X)

Data in the USEPA RBLC (and that specified for Bio Energy Texas and Ocean Energy Corp.) were reviewed to identify control technology determinations issued for the operation of IC engines on LFG fuel. The results of this review indicate that LAER for NOx emissions from IC engines with power ratings greater than 2,000 and less than 4,000 bhp range from 0.5 to 0.6 g/bhp-hr (the CAT G3520C gas IC engine has a power rating of 2,233 hp). The specified USEPA RBLC NOx LAER determinations are applicable to the operation of lean burn engines with air to fuel ratio control or simply specified as 'clean burn engine'.

Table 1 provides USEPA RBLC NOx LAER/BACT determination data and supporting information for LFG fueled IC engine operations.

Due to the presence of siloxanes (and other chemicals) in the LFG fuel, the utilization of NSCR and SCR equipment to control NOx in the exhausts of LFG fueled IC engines is not feasible.

NOx emissions from the LFG fueled CAT 3520C engines are expected to be relatively constant with respect to the number of operating hours and can be maintained at the proposed levels throughout the operating life of the equipment.

Table 1 indicates that most of the NOx emissions limits that were less than 0.6 g/bhp-hr were all LAER determinations. The lowest BACT emission limit proposed for NOx has been 0.6 g/bhp-hr.

Based on vendor guarantees the applicant has proposed that the emission limitation that represents BACT for NOx is 0.6 g/bhp-hr. This will be achieved through the use of air to fuel ratio control technology which minimizes the amount of NOx emissions produced during the LFG combustion process and results in the maximum emissions of 0.6 g/bhp-hr.

BACT for NOx is therefore represented by combustor design (lean burn engine) and good combustion practices (air to fuel ratio control) to minimize NOx emissions. The emission limit chosen to represent BACT for NOx is:

0.6 g/bhp-hr

Particulate Matter less than or equal to 10 microns (PM_{10})

Operational experience obtained by Caterpillar, Inc. and users of its LFG fueled IC engines indicates that PM_{10} emissions for LFG fueled IC engines are dependent on engine operating hours. While PM_{10} emissions from the operation of new LFG fueled IC engines have been initially tested to be very low (i.e., <0.1 g/bhp-hr) subsequent measurements on the same equipment that are representative of increased engine operating hours indicate the presence of higher emission levels. The increased PM_{10} emissions (from new engine operating conditions) has been attributed to particulate contributions from crankcase lubrication oil aerosols, which is the result of normal wear on piston rings and seals (i.e., not additional particulate contributions from the source of the LFG fuel).

Data presented in the USEPA RBLC for IC engines operated on LFG fuel indicate that:

- Permits issued LFG fueled IC engines have limited their PM_{10} emissions to rates that range from 0.04 to 0.34 g/bhp-hr.
- LFG (fuel) pretreatment to remove condensate and particulate matter without the use of add-on control equipment has been specified as BACT.

The Department has required the applicant to use 1 micron primary and polishing filters to remove particulate matter from the LFG fuel pretreatment process. EPA in the New Source Performance Standards for Landfill (40 CFR 60, Subpart WWW) requires removal of particulate matter down to only 10 microns. This additional requirement by the Department to remove particulate matter down to 1 micron will enable the applicant to meet the PM_{10} BACT limit of 0.24 g/bhp-hr.

Due to the presence of siloxanes (and other chemicals) in the LFG, the utilization of post combustion control systems to minimize particulates in the exhaust of LFG fueled IC engines is not feasible.

Based on the preceding information, BACT for the control of PM_{10} emissions from the proposed IC engine operations is treatment of the LFG fuel down to 1 micron and proper equipment maintenance that minimizes the

amount of particulate emissions produced during the LFG combustion process and results in maximum PM_{10} emissions of

0.24 g/bhp-hr.

In addition, an opacity standard of 10% will be established as BACT.

D. Compliance Procedures

Compliance with the emission limits shall be in accordance with the following EPA Reference Methods as contained in 40 CFR 60, Appendix A or as otherwise approved by the Department:

EMISSION UNIT	POLLUTANT	EPA REFERENCE METHOD
Six (6) Caterpillar Model G 3520C Landfill gas fueled Internal Combustion Engines	PM_{10}	201
	NOx	7 or 7E
	CO	10
	VE	9

VI. Air Quality Impact Analysis

A. Introduction

The proposed project will increase PM_{10}, NOx and CO emissions at levels in excess of PSD significant amounts. For modeling purposes the project also includes the predicted impact of the replacement flare. PM_{10} and NOx are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, significant impact levels, and significant monitoring concentrations (de minimis concentrations) defined for them. CO is a criteria pollutant and has only AAQS, significant impact levels and a de minimis concentration defined for it.

The air quality impact analyses required by the Department regulations for this project include:

- An analysis of existing air quality for PM_{10}, NOx and CO;
- A significant impact analysis for PM_{10}, NOx and CO;
- A PSD increment analysis for PM_{10} and NO_x, if necessary;
- An Ambient Air Quality Standards (AAQS) analysis for PM_{10} and NO_x, if necessary;
- An analysis of impacts on soils, vegetation, and visibility and growth-related impacts to air quality.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA and department guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment.

B. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing

representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimis ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimis ambient concentration.

If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from existing representative monitoring data. This background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling. The table below shows maximum predicted project air quality impacts for comparison to these de minimis levels.

MAXIMUM PREDICTED PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE DE MINIMIS CONCENTRATIONS

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Impact Greater than De Minimis? (Yes/No)	De Minimis Concentration ($\mu g/m^3$)
PM_{10}	24-hr	4.6	NO	10
CO	8-hr	96	NO	575
NO_x	Annual	0.8	NO	1

C. Models and Meteorological Data Used in Significant Impact, PSD Increment and AAQS Analyses

PSD Class II Area Model

The EPA-approved American Meteorological Society and EPA Regulatory Model (AERMOD) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing major facilities. In November, 2005, the EPA promulgated AERMOD as the preferred regulatory model for predicting pollutant concentrations within 50 km from a source. AERMOD is a replacement for the Industrial Source Complex Short-Term Model (ISCST3).

The AERMOD model calculates hourly concentrations based on hourly meteorological data. For evaluating plume behavior within the building wake of structures, the AERMOD model incorporates the Plume Rise Enhancement (PRIME) downwash algorithm developed by the Electric Power Research Institute (EPRI). AERMOD can predict pollutant concentrations for annual, 24, 8, 3 and 1-hour. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario, and building downwash effects were evaluated for stacks below the good engineering practice (GEP) stack heights. The stack associated with this project satisfied the good engineering practice (GEP) stack height criteria.

Meteorological data used in the AERMOD model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the Jacksonville International Airport. The 5-year period of meteorological data was from 2001 through 2005. These stations were selected for use in the evaluation because they are the closest primary weather stations to the project area and are most representative of the project site.

Because five years of data are used in AERMOD, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility, and for determining if there are significant impacts occur from the project on any PSD Class I area, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

In reviewing this permit application, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators.

PSD Class I Area Model

The proposed project will be located approximately 45 km from the closest portion of the nearest PSD Class I area, the Okefenokee NWA, and approximately 100 km from the furthest portion of this Class I area. Because the distance between the proposed project and the Class I area is between 45 and 100 km, AERMOD was used to evaluate impacts between 45 and 50 km from the facility and the CALPUFF long range transport model was used for areas located between 50 and 100 km from the facility.

In addition for determining impacts on visibility and regional haze in the Class I area, the VISCREEN model was used for that portion of the Class I area between 45 and 50 km from the facility while the CALPUFF model was used for the portion located 50 and 100 km from the facility. VISCREEN is a screening tool that calculates the potential impact of a plume of specified emissions for specific transport and dispersion condition and is used to assess visibility impacts within 50 km of the facility.

CALPUFF is a non-steady state, Lagrangian, long-range transport model that incorporates Gaussian puff dispersion algorithms. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, line, area, and volume sources. The CALPUFF model has the capability to treat time-varying sources. It is also suitable for modeling domains from tens of meters to hundreds of kilometers, and has mechanisms to handle rough or complex terrain situations. Finally, the CALPUFF model is applicable for inert pollutants as well as pollutants that are subject to linear removal and chemical conversion mechanisms. For this project, CALPUFF was run in the screening mode using 1990-1992 and 1994-1995 meteorological data from Jacksonville, Florida (surface) and Waycross, Georgia (upper air).

D. Significant Impact Analysis

Preliminary modeling is conducted using only the proposed project's worst-case emission scenario for each pollutant and applicable averaging time. Nearly 500 receptors were placed along the facility's restricted property line and out to 1.6 km from the facility, which is located in a PSD Class II area. The Okefenokee NWA PSD Class I areas is located 45 km from the project at its closest point. A total of 1080 receptors were placed in the Okefenokee NWA area.

For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts due to the project were predicted in a PSD Class II area in the vicinity of the facility or in any PSD Class I area. In the event that the maximum predicted impact of a proposed project is less than the appropriate significant impact level, a full impact analysis for that pollutant is not required.

Full impact modeling is modeling that considers not only the impact of the project but also other major sources, including background concentrations, located within the vicinity of the project to determine whether all applicable AAQS or PSD increments are predicted to be met for that pollutant. Consequently, a preliminary modeling analysis, which shows an insignificant impact, is accepted as the required air quality analysis (AAQS and PSD increments) for that pollutant and no further modeling for comparison to the AAQS and PSD increments is required for that pollutant. The tables below show the results of this modeling.

MAXIMUM PREDICTED PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY				
Pollutant	**Averaging Time**	**Maximum Predicted Impact ($\mu g/m^3$)**	**Significant Impact Level ($\mu g/m^3$)**	**Significant Impact?**
PM_{10}	Annual	0.4	1	NO
	24-hr	4.7	5	NO
CO	8-hr	96	500	NO
	1-hr	138	2,000	NO
NO_2	Annual	0.8	1	NO

MAXIMUM PREDICTEDPROJECT IMPACTS IN THE PSD CLASS I AREAS FOR COMPARISON TO THE PSD CLASS I SIGNIFICANT IMPACT LEVELS				
Pollutant	**Averaging Time**	**Maximum Predicted Impact ($\mu g/m^3$)**	**Significant Impact Level ($\mu g/m^3$)**	**Significant Impact? (ug/m^3)**
PM_{10}	Annual	0.08	0.2	NO
	24-hr	0.22	0.3	NO
NO_2	Annual	0.01	0.1	NO

As shown in the tables, less than significant impacts were predicted for all pollutants evaluated for significant impacts; therefore, no further dispersion modeling was required to be performed for these pollutants.

E. Additional Impacts Analysis

Impacts on Soils, Vegetation, Wildlife, and Visibility

The maximum ground-level concentrations predicted to occur due to PM_{10}, NOx and CO emissions as a result of the proposed project are less than the significant impact levels, and consequently are less than the associated AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected. Visibility and regional haze analyses using VISCREEN and the long-range transport model CALPUFF to assess impacts were done for the Okefenokee NWA PSD Class I area. These analyses showed no significant impact on visibility or regional haze in this area.

Growth-Related Air Quality Impacts

The proposed modification will not significantly change employment, population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

VII. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by Trail Ridge Energy, LLC the Department has made a preliminary determination that the proposed project will comply with all applicable state air pollution regulations provided that the Department's Best Available Control Technology Determination is implemented and certain conditions are met. The General and Specific Conditions are listed in the attached draft conditions of approval.

Permit Engineer:	Syed Arif, P.E.
Meteorologist:	Cleve Holladay

PERMITTEE:

Trail Ridge Energy, LLC
29261 Wall Street
Wixom, Michigan 48393

File No.	0310358-004-AC
Permit No.	PSD-FL-374
SIC No.	4953
Project:	Trail Ridge Landfill, Inc. Modification – Landfill Gas Engines
Expires:	October 1, 2008

Secondary Responsible Official (Energy Section):

Mr. Scott Salisbury
Managing Member

Primary Responsible Official (Trail Ridge Landfill, Inc.):

Mr. L. Chris Pearson
Acting Division Chief
City of Jacksonville, Solid Waste Division

PROJECT AND LOCATION:

This permit covers the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The project is located at the Trail Ridge Landfill, Inc. at 5110 US Highway 301 South, Baldwin, Duval County. UTM coordinates are Zone 17; 399.765 km E; 3344.919 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

ATTACHMENTS MADE A PART OF THIS PERMIT:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Joseph Kahn, Director
Division of Air Resource Management

SECTION I – FACILITY INFORMATION

FACILITY DESCRIPTION

Trail Ridge Landfill, Inc. operates a municipal solid waste (MSW) landfill near Baldwin, Duval County consisting of 176 acres which are allocated for Class I MSW. Methane-rich landfill gas produced from the decomposition of disposed waste materials is being collected by a gas recovery system. The collected gas is currently being diverted to the flaring system for control. Trail Ridge Energy, LLC plans to construct and operate an electricity generation plant at the Trail Ridge Landfill facility. In order to reduce the amount of landfill gas (LFG) wasted by flaring, all available LFG from the landfill will be supplied to Trail Ridge Energy for use as fuel to power the proposed internal combustion (IC) engine electricity generation plant. As a result of these changes, significant emission increases will occur for carbon monoxide (CO), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) and nitrogen oxides (NOx).

REGULATORY CLASSIFICATION

The Trail Ridge Landfill Facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 tons per year (TPY).

The provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 63, Subpart A, General Provisions, 40 CFR 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills and 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines applies to the six internal combustion engines.

The proposed landfill gas fueled IC engine electricity generation plant will be subject to Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(164)(a)2, F.A.C. due to its potential CO emissions being greater than 250 TPY. Best Available Control Technology (BACT) determinations are required for each pollutant emitted in excess of the Significant Emission Rates listed in Rule 62-210.200(242), F.A.C. For this project, the permit specifies BACT emissions standards for CO, NOx and PM_{10} emissions.

RELEVANT DOCUMENTS:

The documents listed below are specifically related to this permitting action and form the basis of the permit. They are on file with the Department:

- Application received 02-24-2006
- Department letters dated 03-15-2006, 04-27-2006, 07-05-2006 and 07-31-2006
- Applicant's letters received 04-12-2006, 05-10-2006, 07-25-2006 and 08-15-2006
- Technical Evaluation and Preliminary Determination dated 10-16-2006
- Best Available Control Technology determination (issued concurrently with permit)

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

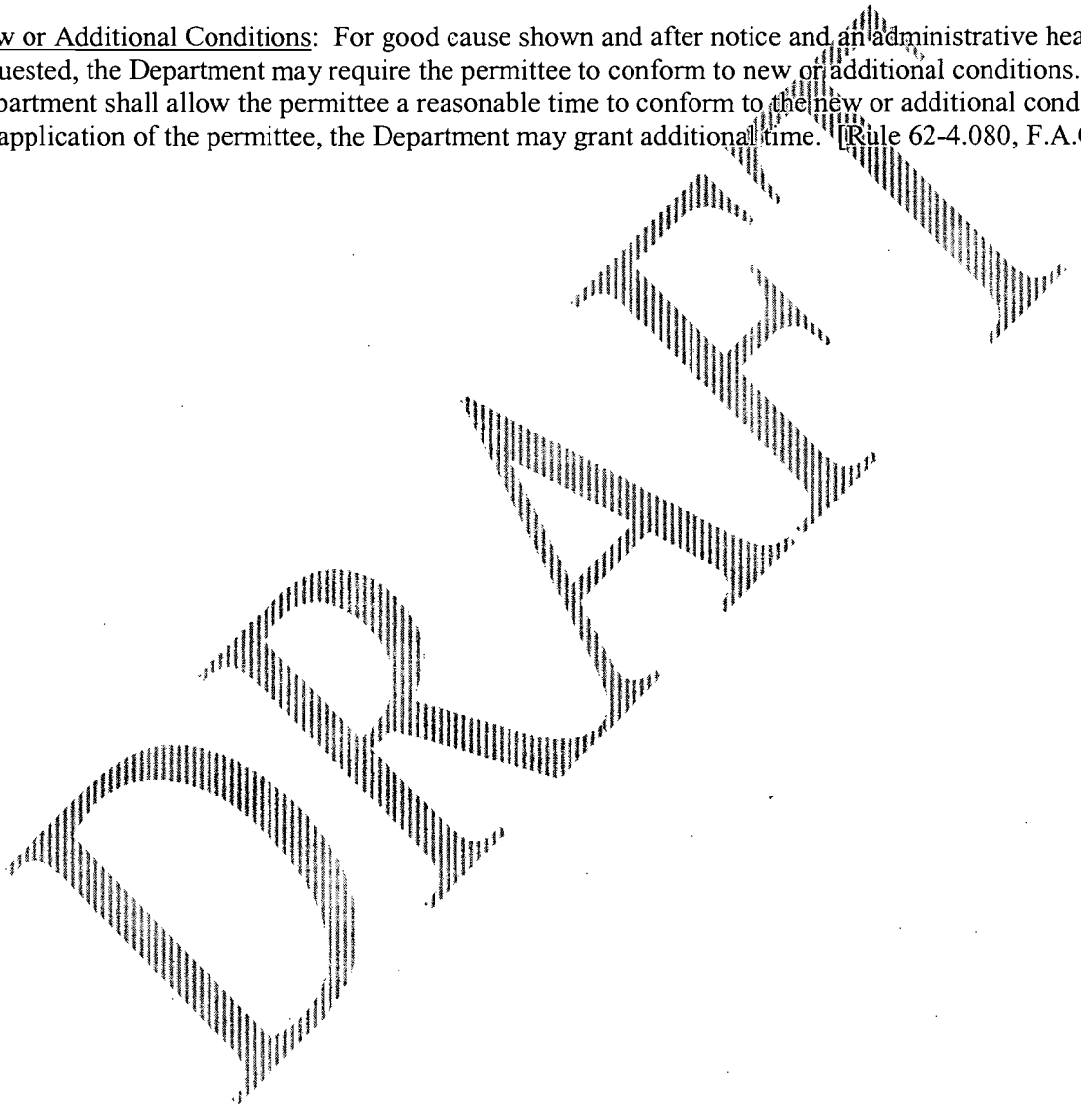
1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Northeast District Office, 7825 Baymeadows Way, Suite 200 B, Jacksonville, Florida 32256-7590. All applications for permits to construct or modify emissions unit(s) subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400 (phone number 850/488-0114).
2. General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Parts 60 and 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Expiration: The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Northeast District Office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C]
6. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213.420, F.A.C.]
7. Source Obligation: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between constructions of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.].
8. BACT Determination: 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. [40 CFR 52.21(j)(4)]

SECTION II – EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

9. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports using DEP Form 62-210.900(4) shall be sent to the DEP's Northeast District office by March 1st of each year.

10. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

11. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]



SECTION III – EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
004 - 009	Six Caterpillar Model G3520C landfill gas fueled internal combustion engines and electricity generators. Each engine has a power generation rating of 2,233 brake horsepower at 100 percent load. The generator has a power output rating of 1,600 kilowatt. The engines will be fueled exclusively with landfill gas generated by and received from the Trail Ridge landfill facility. The landfill gas will go through a gas treatment system prior to combustion in the engines.

A. FUEL SPECIFICATIONS AND WORK PRACTICES

1. This permit authorizes the installation and operation of six (6) Caterpillar, Model G3520C, 2,233 brake-horsepower landfill gas-fired engines for the generation of up to a total of 9.6 megawatts (nominal rating) of electricity. The power generation rating of each engine shall be 2,233 brake horsepower (bhp). **[Rule 62-212.400, F.A.C.]**

   {Permitting Note: The power generation rating of 2,233 bhp is based on a minimum fuel heating value requirement of 467 BTU/scf and landfill gas usage of 580 scfm per engine.}

2. This permit authorizes the installation of a LFG Treatment System including gas compression (via blowers), liquids removal (via knock-out and chilling), and particulate removal (via 1 micron primary and polishing filters). The gas treatment system shall not be equipped with atmospheric vents. **[Rule 62-212.400, F.A.C., 40 CFR 60.752 and Appendix J of the application]**

3. Emissions Units Nos. 004-009 are subject to 40 CFR 60 Subpart WWW and certain sections of 40 CFR 63 Subparts AAAA and ZZZZ adopted by the Department at Rule 62-204.800(8)(b) and 62-204.800(11)(b), F.A.C. **[Rules 62-204.800 and 62-210.300, F.A.C.]**

4. Unless otherwise indicated, the modification/construction and operation of the six Caterpillar internal combustion engines shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

5. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

6. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

7. Fuel fired in the engines is limited to LFG. The use of any other fuel will require an amendment to this permit. **[Rule 62-212.400, F.A.C.]**

8. The permittee shall operate each engine at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C.]**

9. The permittee shall operate each engine within 0.5% of the O_2 content in the exhaust gas at the air-to-fuel ratio that the tested engine operated at during the performance test required by Specific Condition C.2 or the

most recent performance test if a subsequent performance test is conducted. **[Rule 62-212.400, F.A.C. and Appendix F of the application]**

10. The permittee shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of LFG in the event of an engine failure. **[Rule 62-4.070, F.A.C.]**
11. Excess LFG not used as fuel in an engine must be flared in accordance with the requirements of 40 CFR 60 Subpart WWW. **[Rule 62-4.070, F.A.C.]**
12. Each engine/generator set may operate up to 8,760 hours per year. **[Rule 62-210.200(232), F.A.C.]**
13. The subject emissions units shall be subject to the following:
    a. Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) 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. **[Rule 62-210.700, F.A.C.]**
    b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**
    c. In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. **[Rule 62-210.700, F.A.C.]**

B. EMISSION AND PERFORMANCE REQUIREMENTS

1. ***Nitrogen oxides (NOx)***: The emission rate of NOx from each engine/generator set exhaust shall not exceed 0.6 gram per brake horsepower hour (g/bhp-hr) and a maximum of 2.95 pounds per hour (lb/hr) and 12.94 tons per year (TPY). **[Rule 62-212.400(12), F.A.C.]**
2. ***Carbon Monoxide (CO)***: The emission rate of CO from each engine/generator set exhaust shall not exceed 2.75 g/bhp-hr and a maximum of 13.54 lb/hr and 59.30 TPY. **[Rule 62-212.400(12), F.A.C.]**
3. ***Particulate Matter less than 10 microns (PM_{10})***: The emission rate of PM_{10} from each engine/generator set exhaust shall not exceed 0.24 g/bhp-hr and a maximum of 1.18 lb/hr and 5.17 TPY. **[Rule 62-212.400(12), F.A.C.]**
4. ***Volatile Organic Compounds (VOC)***: The emission rate of total VOC from each engine/generator set exhaust shall not exceed 0.28 g/bhp-hr and a maximum of 1.37 lb/hr and 5.99 TPY. **[Rule 62-212.400(12), F.A.C.]**

   {Permitting Note: Project avoids PSD review for VOC based on emission limits.}
5. ***Hydrogen Chloride (HCl)***: The emission rate of HCl from each engine/generator set shall not exceed 10.9 lb/MMscf and 1.66 TPY. **[Rule 62-210.200(184), F.A.C.]**

   {Permitting Note: Facility remains a minor source of HAP emissions based on permit limits.}
6. ***Sulfur Dioxide (SO_2)***: The emission rate of SO_2 from each engine/generator set shall not exceed 27.5 lb/MMscf. **[Rule 62-212.400(12), F.A.C.]**

   {Permitting Note: Project avoids PSD review based on permit limits.}

7. Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity. **[Rule 62-212.400, F.A.C.]**

C. TEST METHODS AND PROCEDURES

1. Sampling Facilities

   The permittee shall design the internal combustion engine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. **[Rule 62-297.310(6), F.A.C.]**

2. Performance Test Methods

   Initial (I), Annual (A) and permit renewal (R) compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 51 Appendix M, adopted by reference in Chapter 62-204.800, F.A.C. Initial, annual and renewal compliance tests shall be conducted on only one of the six engines. A different engine shall be tested each year such that all engines are tested during the six year cycle.

   (a) EPA Method 7 or 7E – Determination of NOx Emissions from Stationary Sources (I,A);

   (b) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources (I,A);

   (c) EPA Method 10 – Determination of CO Emissions from Stationary Sources (I,A);

   (d) EPA Method 18 – Measurement of Gaseous Organic Compounds Emissions (I,R);

   (e) EPA Method 26 – Determination of HCl Emissions from Stationary Sources (I,A);

   (f) EPA Method 201 – Determinations of PM_{10} Emissions (I,A)

   EPA Methods 1 through 4 shall be used as necessary to support other test methods. No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the Department. **[Rule 62-297.310(7), F.A.C.]**

3. The permittee shall comply with the following requirements to monitor the sulfur and chlorine content of the landfill gas:

   a. At least 180 days prior to commercial startup of the engines, the permittee shall sample and analyze the landfill gas for sulfur and chlorine content. The gas sample collected for the analyses shall be a composite sample and collected under normal operating conditions (i.e., with valves open for all operating cells). The gas sample collection and analyses for sulfur and chlorine content shall be done semi-annually. Based on the sampling results and Rule 62-297.310(7)(b), F.A.C., the Department may request additional gas sampling and analyses. Results shall be reported as SO_2 and HCl emission factors in terms of lb/MMscf of landfill gas.

   b. During each required compliance test conducted for HCl, the permittee shall sample and analyze the landfill gas for the chlorine content. Results for the compliance test shall be reported in terms of HCl emissions in lb/hr and the sample analysis result shall be reported as HCl emission factor in terms of lb/MMscf of landfill gas.

c. Analysis of the chlorine content shall be used to track changes in the landfill gas. Based on the analysis, the Compliance Authority may require additional stack testing for HCl emissions to determine compliance with the emissions standard.

d. Compliance with the fuel sulfur specification shall be determined based on each analysis for the sulfur content of the landfill gas.

[Rules 62-210.200(184), 62-210.200(232) and 62-212.400(12), F.A.C.]

4. Within 60 days of achieving the permitted capacity, but no later than 180 days after initial startup, and annually, the subject emissions units as described in Specific Condition C.2 shall be tested for compliance with the applicable emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

D. RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

1. Total landfill gas flow to the engines shall be continuously measured and recorded. **[Rule 62-210.200 (232), F.A.C.]**
2. Gross electrical power generation (kw-hrs) shall be continuously measured and recorded for each engine individually and for the six engines combined. **[Rule 62-210.200(232), F.A.C.]**
3. Each engine/generator set shall be equipped with a non-resetable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. **[Rule 62-210.200(232), F.A.C.]**
4. The permittee shall maintain the following records on a monthly basis:
   a. The hours of operation of each engine/generator set, including any start-up, shutdown or malfunction in the operations of the engine/generator set.
   b. The total landfill gas flow to each engine.
   c. Gross electrical power generation in kw-hr for each engine and the six engines combined.

   [Rule 62-210.200(232), F.A.C.]
5. The permittee shall submit the results and the corresponding data of the site specific HCl emission factor and the SO_2 emission factor within 45 days of gas sampling to the Bureau of Air Regulation. The results shall also be submitted to the Northeast District and the Local Program. **[Rules 62-210.200(232) and 62-210.200(264), F.A.C.]**

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Trail Ridge Energy, LLC
Trail Ridge Landfill, Inc.
PSD-FL-374/0310358-004-AC
Baldwin, Duval County

Trail Ridge Energy, LLC has applied to modify Trail Ridge Landfill facility by installing six (6) lean-burn internal combustion (IC) Caterpillar (CAT) Model G3520C gas IC engines and electricity generators. The electricity generation plant will also consist of landfill gas (LFG) treatment equipment (gas dewatering, filtration and compression equipment and processes) and ancillary equipment that supports the electricity generation operations (e.g., engine oil storage tanks and LFG temperature and moisture conditioning equipment).

The six lean-burn IC engines will be connected to individual electricity generators. Each gas IC engine will be connected to a 1,600 kilowatt electricity generator. The plant will have the potential to generate 9.6 megawatts of electricity under base load operating conditions and will be interconnected to the Jacksonville Electric Authority distribution network through a nearby power line.

The LFG fueled IC engines will be housed in a single building constructed near the existing LFG collection system header and control system flare. A gas transmission line will be connected to the header of the existing LFG collection system and a dedicated gas blower/compressor will be used to draw methane-rich gas (fuel) from the existing LFG collection system to the proposed electricity generation plant.

The Trail Ridge Landfill facility is a major source of air pollution or a Title V source based on Rule 62-210.200(184), Florida Administrative Code (F.A.C.). Additionally, based on this modification, potential emissions of carbon monoxide (CO) will be greater than 250 tons per year (TPY) making the facility a Major Stationary Source for Prevention of Significant Deterioration (PSD) review with respect to Rule 62-210.200(185)(a)2., F.A.C. The increases in emissions of nitrogen oxide (NOx) and particulate matter less than or equal to 10 microns (PM_{10}) will exceed the significant emission rates listed in Rule 62-210.200(264), F.A.C. A Best Available Control Technology (BACT) determination is part of the review required for CO, NOx and PM_{10} by Rule 62-210.200(39), F.A.C.

Descriptions of the process, project, BACT determination, air quality effects, and rule applicability are given in the Technical Evaluation and Preliminary Determination, accompanying the Department's Intent to Issue.

The Department proposes the following as BACT for each engine:

POLLUTANT	EMISSION LIMIT	CONTROL TECHNOLOGY
CO	2.75 g/bhp-hr and 13.54 lb/hr and 59.30 TPY	Combustor design and good combustion practices
NOx	0.6 g/bhp-hr and 2.95 lb/hr and 12.94 TPY	Combustor design and good combustion practices
PM_{10}	0.24 g/bhp-hr and 1.18 lb/hr and 5.17 TPY	Pretreatment of landfill gas and proper engine maintenance

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Compliance with the emission limits shall be in accordance with the following EPA Reference Methods as contained in 40 CFR 60, Appendix A or as otherwise approved by the Department:

EMISSION UNIT	POLLUTANT	EPA REFERENCE METHOD
Six (6) Caterpillar Model G 3520C Landfill gas fueled Internal Combustion Engines	PM_{10}	201
	NOx	7 or 7E
	CO	10
	VE	9

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a) Have access to and copy and records that must be kept under the conditions of the permit;
b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a) A description of and cause of non-compliance; and
b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

a) Determination of Best Available Control Technology (X)
b) Determination of Prevention of Significant Deterioration (X);
c) Compliance with New Source Performance Standards (X). Subpart WWW requirements and
d) Compliance with National Emission Standards for Hazardous Air Pollutants (X). Subpart AAAA and ZZZZ requirements

G.14 The permittee shall comply with the following:

a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Derenzo and Associates, Inc.
Environmental Consultants

September 8, 2006

Mr. Doug Neeley
Chief Air Toxics and Monitoring Branch, Region 4
U.S. ENVIRONMENTAL PROTECTION AGENCY
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Subject: Trail Ridge Energy, L.L.C.
Baldwin, Duval County, Florida
Request for Treated Landfill Gas Exemption Determination (MSW Landfill NSPS)

Dear Mr. Neeley:

Derenzo and Associates, Inc. is submitting to USEPA Region 4 on behalf of Trail Ridge Energy, L.L.C. (Trail Ridge Energy) this request that the regulatory agency determine that equipment and processes planned for operation at its landfill gas fueled electricity generation facility satisfy the definition of treatment in accordance with Title 40 of the Code of Federal Regulations (40 CFR) 60.752 (b) (2) (iii) (C). The use of treated landfill gas as engine generator fuel exempts Trail Ridge Energy from the nonmethane organic compound (NMOC) testing and combustion temperature monitoring and recordkeeping requirements of the Municipal Solid Waste (MSW) landfill New Source Performance Standards (NSPS).

The FDEP is reviewing a PSD permit application for the construction of the Trail Ridge Energy landfill gas fueled electricity generation facility (which will be located at the Trail Ridge Landfill) and requested that the Treated Landfill Exemption Determination for the Trail Ridge Energy operations be submitted to USEPA Region 4 for its review and approval.

USEPA TREATED GAS DETERMINATIONS

USEPA has issued several determinations that support the use of gas treatment equipment, which processes the collected gas for subsequent sale or reuse, as an appropriate landfill gas emissions control method. These determinations (USEPA Region 5) specify that USEPA ... *has stated in the Federal Register Proposed Rule Amendments dated May 23, 2002,* (67 FR 36476-36481) *that compression, de-watering, and filtering the landfill gas down to at least 10 microns is considered treatment for the purposes of 60.752 (b) (2) (iii) (C).* Therefore, equipment that achieves these specifications is compliant with the federal emission standards specified in the MSW Landfill NSPS.

Attachment A provides for reference treated landfill gas determinations that have been issued by USEPA Regions 1, 3, 5, and 9.

TRAIL RIDGE ENERGY PROCESS DESCRIPTION

The Trail Ridge Energy landfill gas to electricity plant will be located at Trail Ridge Landfill, Inc. in Baldwin, Florida. The proposed facility will utilize landfill gas as fuel to power six Caterpillar, Inc. Model G3520C gas internal combustion (IC) engine and electricity generator sets. Since the IC engines will use landfill gas received from the landfill as fuel, they can be considered either combustion control devices for landfill gas emissions or equipment using treated landfill gas under the regulatory provisions of the MSW landfill NSPS. The treated landfill gas is the fuel that will be used at Trail Ridge Energy.

Prior to its use as fuel at the electricity generation facility, the methane-rich gas collected from the Trail Ridge Landfill will be directed (in the specified sequence) through a treatment system that is comprised of the following equipment and processes:

The gas received from the Trail Ridge Landfill is initially de-watered in knockout tanks that are located upstream of the Trail Ridge Energy landfill gas treatment system where portions of the condensate in the landfill gas are removed.

After the initial knockout tank de-watering, the landfill gas is treated in equipment and processes operated by Trail Ridge Energy that consists of:

1. A primary filter vessel that contains a coalescing filter, which is designed to remove particles in the gas stream that are 1.0 micron (μm) and larger. Condensate collected by this coalescing filter falls to the bottom of the vessel where it is immediately transferred by gravity feed to a sump that transfers the liquid back to the landfill for processing.

2. Gas blowers for compression of the de-watered landfill gas.

3. An air-to-gas cooler to reduce the temperature of the gas (which is heated by the blower during gas compression).

4. A polishing filter vessel that contains a coalescing filter, which is designed to remove particles that are 1.0 μm and larger. Condensate collected by this coalescing filter falls to the bottom of the vessel where it is immediately transferred by gravity feed to the sump that transfers the liquid back to the landfill for processing.

Components of the specified gas treatment system are not equipped with atmospheric vents. Therefore, all of the landfill gas to be directed to the IC engines will be processed by the treatment system for engine generator use as a treated fuel. The treatment system design does not have bypass(es) that would allow for landfill gas emissions.

Attachment B provides a flow diagram and operating details for the Trail Ridge Energy landfill gas treatment system.

APPLICABLE REGULATIONS

Standards for Air Emissions from MSW Landfills

The Trail Ridge Landfill (the source of the Trail Ridge Energy fuel) is subject to the Standards of Performance for MSW Landfills (MSW Landfill NSPS, 40 CFR Part 60 Subpart WWW) that regulate NMOC emissions generated by affected landfills. *§60.752 Standards for air emissions from municipal solid waste landfills* specifies that:

> *(b)(2) ... the owner or operator shall: (iii) route all of the collected gas to a control system that complies with either ...*
>
> *(A) An open flare ...*
>
> *(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen ...*
>
> *(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use ...*

Rule Requirements and Exemption Determinations

Performance Tests

Provisions of the MSW landfill NSPS [40 CFR 60.752 (b) (2) (iii) (B)] require that initial tests be conducted on landfill gas control devices to demonstrate the performance of the equipment relative to its NMOC emissions. The specified performance test is not required pursuant to 40 CFR 60.752 (b) (2) (iii) (C) to demonstrate compliance with 40 CFR 60.752 (b) (2) (iii) if the raw gas is processed by a landfill gas treatment system prior to its subsequent sale or use as fuel.

USEPA Region 3 has specified in documents (Determination Detail Control No. 0200019 and October 3, 2002 correspondence provided in Attachment A) that *Based on its technical judgment, EPA considers refrigeration, filtering through the 10 micron screen, and compression for combustion in energy recovery devices such as boilers, process heaters ..., turbines, or internal combustion engines to satisfy the definition of treatment at 40 CFR Sec. 60.752 (b) (2) (iii) (C).* The approved method of de-watering specified in the October 2002 determination is knock-out pots and an air to air cooler.

Based on the documented landfill gas treatment determinations and associated details that have been recorded by USEPA and the design of the landfill gas de-watering, filtering and compression processes that are proposed for operation at Trail Ridge Energy, the landfill gas used to fuel the electricity generation plant will be received from a treatment system that complies with the

provisions of 40 CFR 60.752 (b) (2) (iii). Therefore, the IC engines that will be operated at Trail Ridge Energy are not subject to the NMOC emission performance tests specified in 40 CFR 60.752 (b) (2) (iii) (B).

Combustion Temperature Monitoring and Recordkeeping

Provisions of the MSW landfill NSPS [40 CFR 60.758 (b) (2) (i) and 60.758 (c) (1) (i)] require that combustion temperature monitoring be performed with a device specified in 40 CFR 60.756 (b) (1). The purpose of these measurements is to continuously monitor average combustion temperature for comparison with the value recorded during performance tests required under 40 CFR 60.752 (b) (2) (iii) (B). Therefore, based on the performance test exemption, because the IC engines use treated gas, they are not subject to the testing and combustion temperature monitoring requirements of 40 CFR 60.756 (b).

The December 9, 2003 USEPA, Region 5 determination (provided in Attachment A) specifies that equipment and processes that meet the landfill gas treatment criteria ... *would not be subject to the monitoring and recordkeeping located at 60.756 (b) and 60.758 (b) and (c).*

Trail Ridge Energy, L.L.C. appreciates review of the information presented in this correspondence by USEPA Region 4 and requests that a written notification of the requested determinations be issued.

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

Sincerely,

DERENZO AND ASSOCIATES, INC.

David R. Derenzo
Services Director

attachments
c: Bill Owen, Trail Ridge Energy
Syed Arif, FDEP

ATTACHMENT A

USEPA Region 1
Use of Treatment System Prior to IC Engine Combustion
Control Number 0300121
August 15, 2003

USEPA Region 3
Waiver of Initial Performance Test
Control Number 0200019
February 12, 2002
Request for Initial Performance Test Waiver
October 3, 2002

USEPA Region 5
Clarification of LFG Treatment NSPS Exemption for Dixon/Lee Energy Partners, L.L.C.
December 9, 2003

USEPA Region 9
NSPS Subpart WWW Applicability to Internal Combustion Engines
Connected to LFG Treatment System
April 22, 2004

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Determination Detail

Control Number: 0300121

Category: NSPS
EPA Office: Region 1
Date: 08/15/2003
Title: Use of Treatment System Prior to IC Engine Combustion
Recipient: Douglas McVay
Author: Michael Kenyon
Comments:

Subparts: Part 60, WWW Municipal Solid Waste Landfills

References: 60.752

Abstract:

Q. What constitutes a "treatment system" according to Subpart WWW, and does the treatment system at Ridgewood Power Associates in Johnston, Rhode Island satisfy the requirements of 40 CFR 60.752?

A. The pre-treatment system employed by Ridgewood Power does meet EPA's criteria for a treatment system as defined under 40 CFR 60.752(b)(2)(iii)(C). Treatment of the landfill gas in this manner is a means of compliance with the gas control requirements of the NSPS. Region 1 concurs that the IC engines combusting the treated landfill gas are not subject to the requirements of 40 CFR 60.752(b)(2)(iii)(B).

Letter:

August 15, 2003

Douglas L. McVay
Associate Supervising Engineer
Office of Air Resources
Department of Environmental Management

235 Promenade Street
Providence, RI 02908-5767

Dear Mr. McVay:

Thank you for your June 3, 2003 letter requesting a new NSPS Subpart WWW applicability determination for Ridgewood Providence Power Partners, L.P. RPPP operates a small power plant located at the Central Landfill in Johnston, Rhode Island. The DEM/EPA had previously determined that the RPPP facility, which consists of nine internal combustion engines fired with landfill gas generated by Central Landfill, must comply with the control system requirements found at 40 CFR 60.752(b)(2)(iii)(B).

RPPP is now claiming that they treat the landfill gas prior to combusting the gas in their IC engines. The landfill gas treatment system filters, de-waters and compresses the landfill gas prior to use in the engines, and, according to RPPP, meets the requirements for a "treatment system" in 40 CFR 60.752(b)(2)(iii)(C). Therefore, RPPP maintains that their IC engines combusting the treated gas should not be subject to the control requirements of 40 CFR 60.752(b)(2)(iii)(B).

EPA has reviewed relevant applicability determinations, including two that were presented to the DEM by RPPP, and has also reviewed EPA's proposed definition for "treatment system" contained in a May 23, 2002 Federal Register Notice of proposed rulemaking. [See 67 FR 36480].

As you know, the NSPS does not now contain a definition for the term "treatment system." However, EPA's May 23, 2002 Federal Register Notice contains a proposed definition of the term, which also constitutes EPA's current interpretation of the term as it now appears in the NSPS. The preamble to EPA's May 23, 2002 proposed rulemaking also includes the following statements about the proposed definition of "treatment system":

"At a minimum, the system must filter landfill gas using a dry filter or similar device (e.g., impaction, interception or diffusion device). The filter should reduce particulate matter in the gas stream. This will prolong the life of the combustion device and decrease the buildup of material on combustion device internals, which will support good combustion. Good combustion is essential to ensuring the proper destruction of NMOC. In addition, the system must de-water landfill gas using chillers or other dehydration equipment. The de-watering equipment should reduce moisture content of the gas, which will maintain low water content in the gas and will prevent degradation of combustion efficiencies. Finally, the system must compress landfill gas using gas blowers or similar devices. Compression should further reduce the moisture content of the gas and raise gas pressure to the level required by the end use combustion device."

Thus, if RPPP treats the landfill gas it receives in accordance with EPA's proposed definition of "treatment system" and consistent with the preamble discussion quoted in the preceding paragraph, then Region 1 concurs that the IC engines combusting the treated landfill gas are not subject to the requirements of 40 CFR 60.752(b)(2)(iii)(B). Treatment of the landfill gas in this manner is a means of compliance with the gas control requirements of the NSPS that differs from, and is in the alternative to, the IC engine performance testing and NMOC destruction efficiency compliance method that formed the basis of Region 1's 2001 enforcement action. However, keep in mind that, in accordance with 40 CFR 60.752(b)(2)(iii)(C), any emissions from any atmospheric vent from the gas treatment system, including any compressor, are still subject to the requirements of 40 CFR 60.752(b)(2)(iii)(A) and (B).

Finally, please note that EPA's current interpretation of the term "treatment system," as it now appears in the NSPS, may change based on any changes that might be contained in EPA's final rulemaking.

If you have any questions concerning this applicability determination, please contact John Courcier of my staff at (617) 918-1659, or by email at courcier.john@epa.gov.

Sincerely,

Michael Kenyon, Chief
Air Programs Branch

cc: D. Dart, OES
G. Dain, OES
T. Olivier, OES
J. Courcier, OEP

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Determination Detail

Control Number: 0200019

Category: NSPS
EPA Office: Region 3
Date: 02/12/2002
Title: Waiver of Initial Performance Test
Recipient: Steven C. White
Author: Judith Katz
Comments:

Subparts: Part 60, WWW Municipal Solid Waste Landfills

References: 60.752(b)(2)(iii)

Abstract:

Q: Will EPA grant a waiver from the initial performance test required in 40 CFR Part 60, Subpart WWW, for landfill gas used in a large process heater (more than 44 megawatts)? The landfill gas is to be compressed, filtered, and refrigerated before being sent to the process heater.

A: Yes. EPA considers compressing, filtering, and refrigerating landfill gas for use in an energy recovery project to be "treatment" under WWW. Therefore, no initial performance test is required.

Letter:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

February 12, 2002

Steven C. White, P.E.

Enerdyne Power Systems
7421 Carmel Executive Park
Suite 302
Charlotte, North Carolina 28226

Re: Request for Waiver of Requirement for Initial Performance Test

Dear Mr. White:

This letter responds to your October 10, 2001, letter requesting a waiver of the initial performance test requirement in 40 C.F.R. Sec. 60.752(b)(2)(iii)(B) for the Atlantic Waste Disposal, Inc./Honeywell International, Inc. project. Landfill gas is to be piped from the Atlantic Landfill to the Honeywell ammonia plant in Hopewell, Virginia, and burned in a Kellog Primary Reformer, a process heater.

You indicated in conversations and e-mail correspondence with the U.S. Environmental Protection Agency ("EPA") that the landfill gas will be refrigerated, filtered through a 10 micron screen, and compressed before transmission to Honeywell. 40 C.F.R. Sec. 60.752(b)(2)(iii)(C) states that landfill gas may be controlled by routing the collected gas to a treatment system that processes the collected gas for subsequent sale or use. Based on its technical judgement, EPA considers refrigeration, filtering through the 10 micron screen, and compression for combustion in energy recovery devices such as boilers, process heaters (e.g., the Kellog Primary Reformer), turbines, or internal combustion engines to satisfy the definition of treatment at 40 C.F.R. Sec. 60.752(b)(2)(iii)(C). Part 60, Subpart WWW, does not include an initial performance test for the landfill gas treatment control option. Therefore, once this project has met the treatment standards articulated above, an initial performance test will not be required.

However, emissions from any atmospheric vent from the gas treatment system, including any compressor, are subject to the requirements of 40 C.F.R. Sec. 60.752(b)(2)(iii)(A) and (B). This does not include exhaust from an energy recovery device.

EPA's Office of Enforcement and Compliance Assistance and Office of Air Quality and Planning Standards were consulted for this letter. If you have any questions about this issue, call Bowen ("Chip") Hosford at (215) 814-3158.

Sincerely,

Judith M. Katz, Director
Air Protection Division

cc: Edmund J. Skernolis, Waste Management Incorporated Lisa A. Childress, VADEQ, Piedmont Regional Office Gary E. Graham, VADEQ Michelle Laur, EPA, OAQPS Zofia S. Kosim, EPA, OECA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 0 3 2002

Amy E. Hardy
Environmental Compliance Coordinator
Southeastern Public Service Authority
Regional Office
723 Woodlake Drive
Chesapeake, Virginia 23320

Re: Request for Initial Performance Test Waiver

Dear Ms. Hardy:

This letter is in response to your October 3, 2002, letter requesting a waiver of the initial performance test requirement in 40 C.F.R.§60.752 (b)(2)(iii)(B) for the Southeastern Public Service Authority ("SPSA") landfill gas to energy plant owned and operated by US Energy Biogas located at the SPSA landfill. Landfill gas is piped from the landfill to US Energy and burned in four Caterpillar internal combustion engines.

You indicated in conversations, and by providing Mr. Jamie Margaritis' October 1, 2002, letter to you, that the landfill gas will be de-watered by passing through three knockouts, filtered through two 10 micron screens, cooled in an air-to-air cooler, and compressed to 8 psig in a 300 horsepower blower before transmission to the energy plant. 40 C.F.R. §60.752(b)(2)(iii)(C) states that landfill gas may be controlled by routing the collected gas to a treatment system that processes the collected gas for subsequent sale or use. Based on its technical judgement, EPA considers de-watering, filtering through the 10 micron screen, and compression for combustion in energy recovery devices such as boilers, process heaters, turbines, or internal combustion engines to satisfy the definition of treatment at 40 C.F.R. §60.752(b)(2)(iii)(C). Part 60, subpart WWW, does not include an initial performance test for the landfill gas treatment control option. Therefore, once this project has met the treatment standards articulated above, an initial performance test will not be required.

However, emissions from any atmospheric vent from the gas treatment system, including any compressor, are subject to the requirements of 40 C.F.R. §60.752(b)(2)(iii)(A) and (B). This does not include exhaust from an energy recovery device.

If you have any questions about this issue, call Bowen Hosford at (215) 814-3158.

Sincerely,

Judith M. Katz, Director
Air Protection Division

cc: Ethan Chatfield, SCS Engineers
Gary E. Graham, VADEQ
Steve Hackney, VADEQ
Martha Smith, EPA, OAQPS
Zofia S. Kosim, EPA, OECA

SOUTHEASTERN PUBLIC SERVICE AUTHORITY
SPSA
Regional Office
723 Woodlake Drive, Chesapeake, VA 23320
phone: (757) 420-4700 fax: (757) 424-4133
www.spsa.com

October 3, 2002

Bowen (Chip) Hosford
Environmental Protection Agency- Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Subject: Request for Waiver from Requirement for Initial Performance Test
Southeastern Public Service Authority (SPSA) Regional Landfill

Dear Mr. Hosford:

Per our telephone conversation on October 2, 2002, the Southeastern Public Service Authority (SPSA) Regional Landfill in Suffolk, Virginia is hereby requesting a waiver from the initial performance test requirement in 40 CFR 60.752(b)(2)(iii)(B).

On June 7, 2002, SPSA submitted a Tier 2 test report, as required by the New Source Performance Standards (NSPS), indicating that the facility exceeded the 50 Mg threshold and will therefore be subject to certain provisions of the NSPS requiring installation and operation of the Gas Collection and Control System (GCCS). On August 15, 2002 the Virginia Department of Environmental Quality (VDEQ) issued the subject facility a draft Title V Air Operating Permit. The draft permit requires the landfill gas-to-energy (LFGTE) electrical generation plant, which utilizes landfill gas for fuel, to perform an initial performance test on the 4 Caterpillar internal combustion engines.

In accordance with 40 CFR 60.752(b)(2)(iii)(C), landfill gas collected from a MSW landfill may either be combusted in an appropriate control device or routed to a "treatment system that processes the collected gas for subsequent sale or use". The EPA has recently provided clarification to define the term "landfill gas treatment" in the form of draft NSPS Amendments. This clarification defined landfill gas treatment as "landfill gas processed in a treatment system that filters, de-waters and compresses the gas". Furthermore, the EPA has recently granted other facilities located in Virginia waivers based on similar criteria as outlined above. Specifically, the EPA has granted a waiver from the initial performance test at the Atlantic Waste Disposal, Inc. Landfill in a letter dated February 19, 2002.

The landfill gas treatment process at the SPSA Landfill, prior to the collected gas entering the engines, involves: compression through two Hoffman blowers, de-watering through a minimum of 3 knock-out pots and an air to air cooler, and filtering through a dry 10-micron 4" thick filter. The owner/operator of the LFGTE facility, US Energy Biogas, has outlined this process in correspondence dated September 26, 2002.

P.O. Box 1346
Chesapeake, VA 23320-134(

Since the subject facility routes collected gas from the Landfill to a "treatment system" prior to use in the LFGTE plant, SPSA is requesting a site-specific waiver from the EPA indicating that the SPSA Regional Landfill satisfies the definition of treatment and therefore will be exempt from the initial performance test required by the NSPS and draft Title V permit.

During our discussion on October 2, 2002, background information (correspondence dated September 10, 2002 and September 12, 2002) was forwarded to your office regarding SPSA's response to the draft Title V permit. Although the above request for waiver addresses concerns #3 and 4 of this correspondence, SPSA would also appreciate EPA guidance on concerns #1, 2, 5, 6 and 7.

Per a telephone conversation with Steve Hackney of Tidewater Regional DEQ on October 1, 2002, SPSA requested a delay in the permitting process until a resolution is determined. Mr. Hackney stated the only way the permit could be delayed is by request from the EPA. Therefore, SPSA is asking for guidance from the EPA on this matter in delaying permit finalization. Please contact the undersigned if you have any questions or require additional information.

Sincerely,

Amy E. Hardy

Amy E. Hardy
Environmental Compliance Coordinator

cc: Steve Hackney, DEQ-TRO
Richard Cheliras, SPSA
Ethan Chatfield, SCS Engineers
Bob Dick, SCS Engineers
Jamie Margaritas, US Energy Biogas
Dominic Antignano, US Energy Biogas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 0 9 2003

REPLY TO THE ATTENTION OF:

(AE-17J)

Gregory J. Graetz
Project Engineer
Derenzo and Associates, Inc.
39395 Schoolcraft Road
Livonia, Michigan 48150

Re. Clarification of Landfill Gas Treatment NSPS Exemption for Dixon/Lee Energy Partners, L.L.C. in Dixon, Illinois Facility I.D. No. 103020ACJ

Dear Mr. Graetz:

Thank you for your October 20, 2003, letter to the U.S. EPA asking for clarification regarding the gas treatment exemption for Dixon/Lee Energy Partners landfill to energy facility (Dixon) located near Dixon, Illinois. Dixon utilizes landfill gas as fuel to power internal combustion engines (IC) and electricity generators. Dixon acts as the control device for the landfill gas emissions from two neighboring landfills and is subject to the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW). The landfill gas is the only fuel used at the facility.

Your letter indicates that prior to use as fuel in the IC engines and generators, the landfill gas is first 1) compressed with blowers, 2) chilled with an air-to-air cooler, 3) de-watered with a knock-out pot (tank) and a demister pad, and 4) filtered with a sequence of media that consists of a primary dry 10-micron filter and a secondary dry 1-micron filter. You also indicate that Dixon operates an air-assisted, open candlestick flare that is used to control landfill gas during periods of engine maintenance and repair, and when control is required for excess landfill gas generation.

The regulations at 40 C.F.R. Part 60.752(b)(2)(iii) state that collected landfill gas is required to be routed to a control system that complies with the requirements in either: A) an open flare; B) a control system or enclosed combuster designed to reduce NMOC; or C) a treatment system that processes the collected gas for subsequent sale or use. The landfill gas applicable to Dixon has been treated for sale or use under 60.752(b)(2)(iii)(C). U.S. EPA has made several determinations

and has stated in the Federal Register Proposed Rule Amendments dated May 23, 2002, that compression, de-watering, and filtering the landfill gas down to at least 10 microns is considered treatment for the purposes of 60.752(b)(2)(iii)(C).

Your letter also asks for clarification that once the landfill gas is treated pursuant to 60.752(b)(2)(iii)(C), that the gas is no longer subject to the monitoring and recordkeeping requirements found at 60.756(b) and 60.758(b) and (c), respectively. The Federal Register Proposed Rule Amendments clarify that once the landfill gas is treated, the facilities that buy or use the gas have no further obligations related to the NSPS. Therefore, Dixon would not be subject to the monitoring and recordkeeping requirements located at 70.756(b) and 60.758(b) and (c).

However, emissions from any atmospheric vent from the gas treatment system, including any compressor, are subject to the requirements of 40 C.F.R 60.752(b)(2)(iii)(A) and (B). This does not include exhaust from an energy recovery device.

This determination was based on a previous determinations from Region 3 dated February 12, 2002, and October 3, 2002, and was presented to OAQPS and OECA for comment. The Federal Register Proposed Rule Amendments from 2002 are meant to be a clarification of the existing NSPS, not changes in the rule. If you have any questions, feel free to contact Lynne Roberts, of my staff, at (312) 886-0250.

Sincerely yours,

George T. Czerniak, Chief
Air Enforcement and Compliance Assurance Branch

cc: Julie Armitage, Acting Manager
Bureau of Air - Compliance and Enforcement Section
Illinois Environmental Protection Agency

Mary Ann Warner, OAQPS
Research Triangle Park

Zofia Kosim, OECA
USEPA Headquarters

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

APR 2 2 2004

Gregory Gratz
Project Engineer
Derenzo and Associates, Inc.
39395 Schoolcraft Road
Livonia, MI 48150

Re: Kiefer Landfill

Dear Mr. Gratz:

The United States Environmental Protection Agency (EPA) received your letter dated March 2, 2004 regarding New Source Performance Standard ("NSPS") Subpart WWW applicability to internal combustion ("IC") engines and boilers connected to the Kiefer Landfill Gas ("LFG") Treatment system.

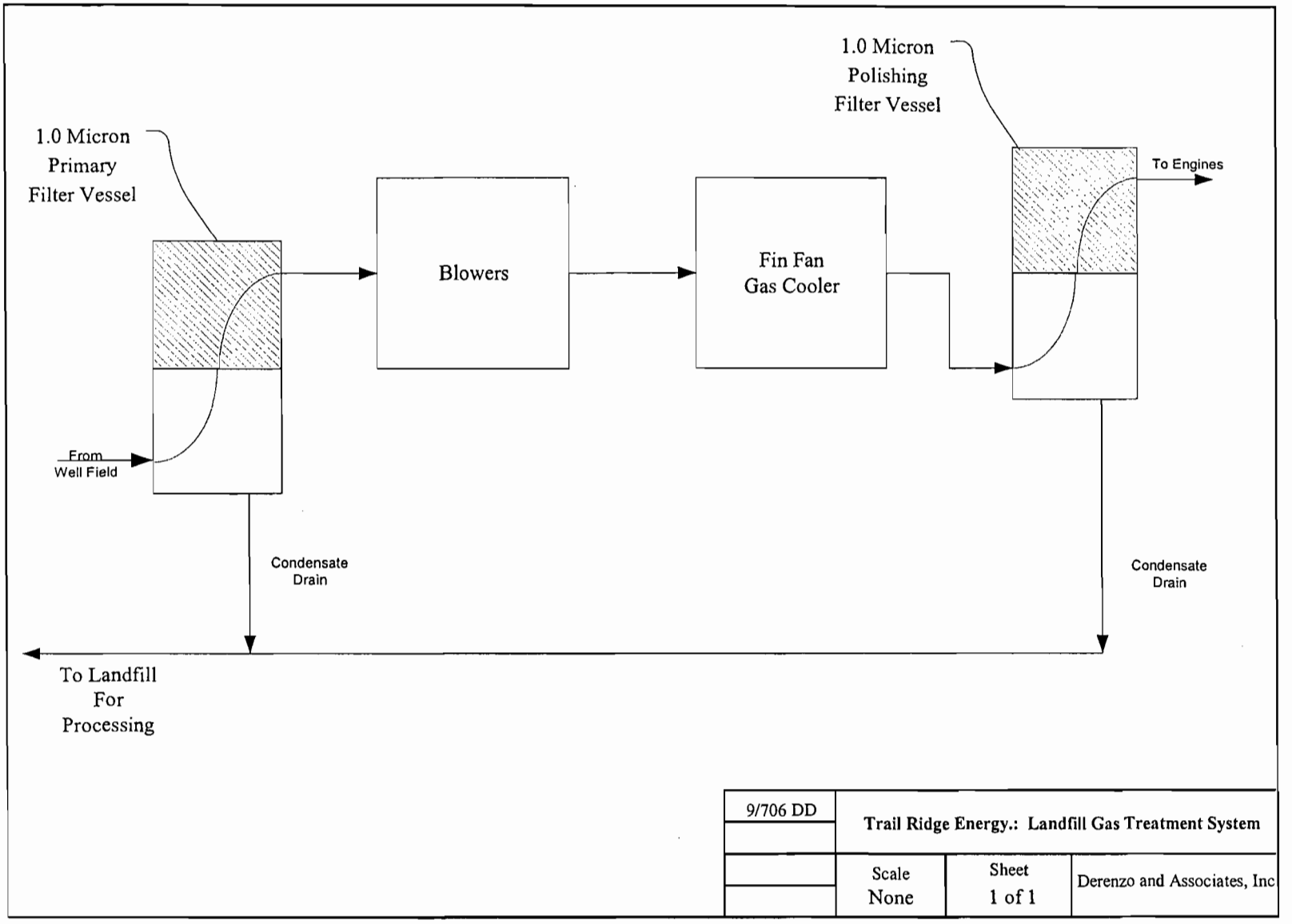
EPA has issued several determinations indicating that compression, de-watering, and landfill gas filtered down to at least 10 microns for use in an energy recovery device is considered treatment for the purposes of 60.752(b)(2)(iii)(C). In accordance with those previous determinations, Region 9 concurs with the statement in your letter dated March 2, 2004 that landfill gas treated in this (compression, de-watering, and filtering landfill gas down to at least 10 microns for use in an energy recovery device) manner is not subject to the requirements of Subpart WWW or 40 CFR Part 63 Subpart AAAA- National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste (MSW) Landfills.

Sincerely,

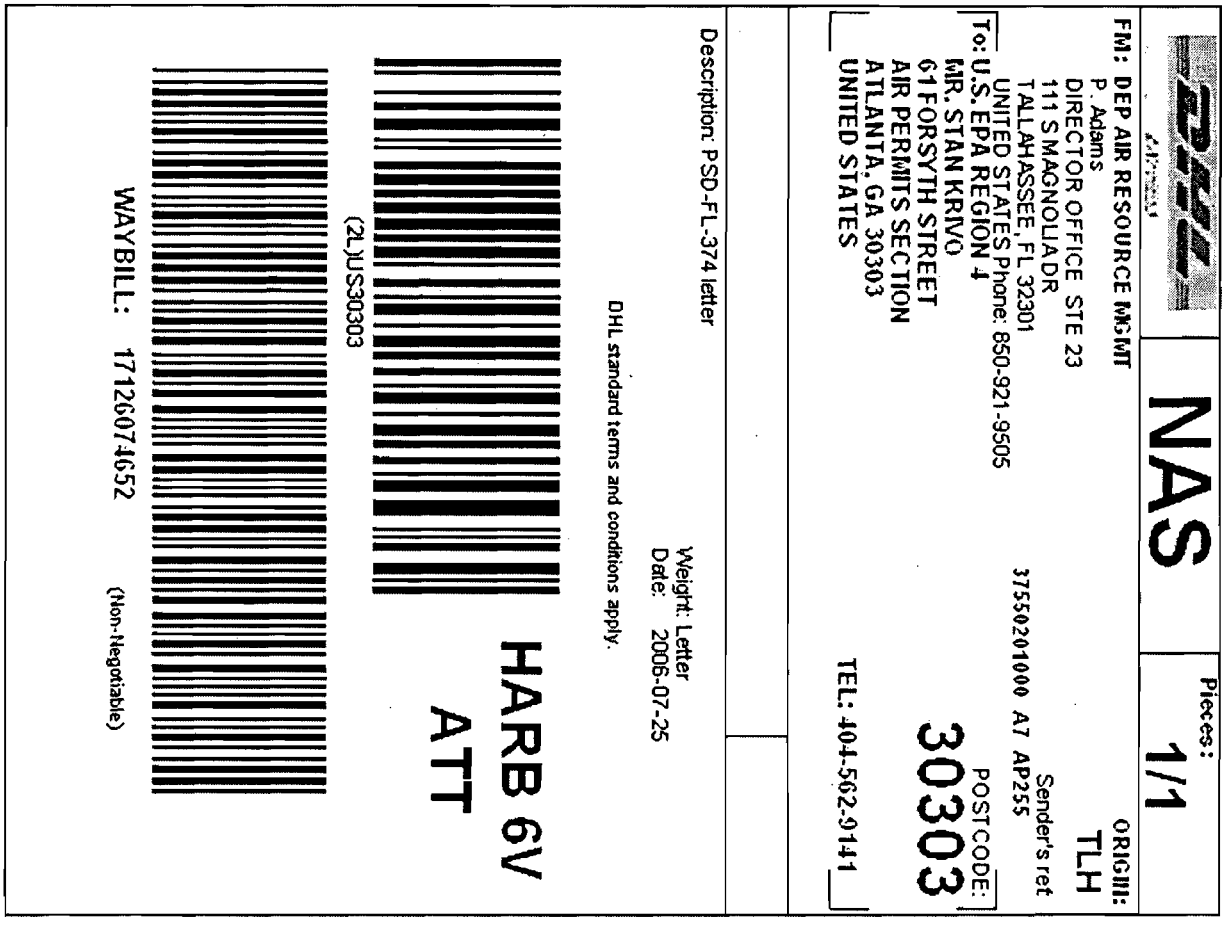
Douglas K. McDaniel
Acting Chief, Air Enforcement

ATTACHMENT B

Trail Ridge Energy, L.L.C.
Landfill Gas Treatment System Process Flow Diagram



9/706 DD	**Trail Ridge Energy.: Landfill Gas Treatment System**		
	Scale None	Sheet 1 of 1	Derenzo and Associates, Inc



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Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

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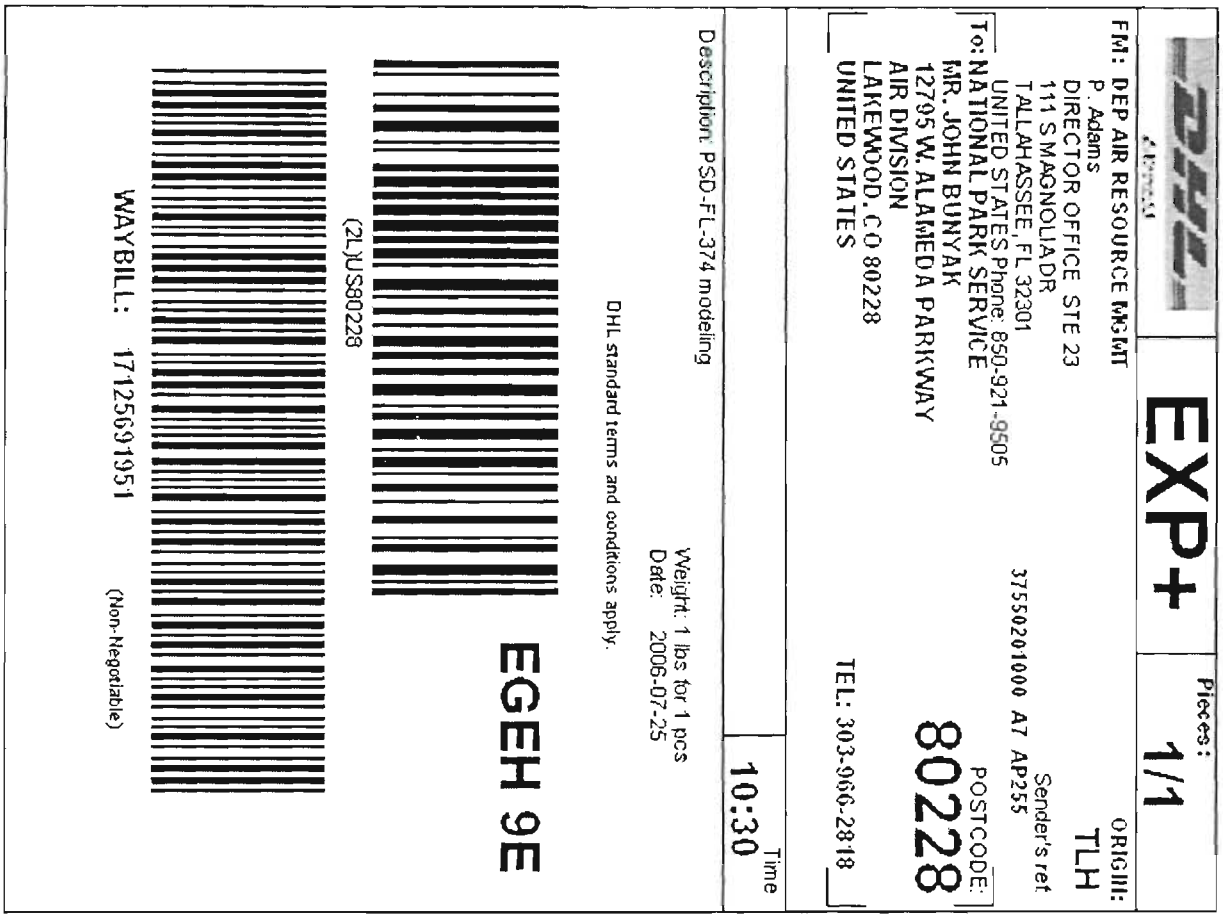

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Phone#: 303-966-2818

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 13.73
Protection: Not Required
Description: PSD-FL-374 modeling

Weight (lbs.): 1
Dimensions: 0 x 0 x 0

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Derenzo and Associates, Inc.
Environmental Consultants

July 24, 2006

Mr. Cleve Holladay
Bureau of Air Regulation
FLORIDA DEPT OF ENVIRONMENTAL PROTECTION
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Revised air quality modeling results for Trail Ridge Energy, L.L.C.
DEP File No. 0310358-004-AC (PSD-FL-374)

Dear Mr. Holladay:

Derenzo and Associates, Inc. (Derenzo and Associates), on behalf of the Trail Ridge Energy, L.L.C. (Trail Ridge Energy) is submitting to the Florida Department of Environmental Protection (DEP), Bureau of Air Regulation revised air quality modeling results for the installation of six (6) landfill gas-fired reciprocating internal combustion engines at the Trial Ridge Landfill in Baldwin, Duval County. Initial air quality modeling results were submitted to the Florida DEP on June 5, 2006. The information in this correspondence is being provided in response to the Florida DEP comments dated July 5, 2006.

Class II Area Significant Impact Analysis

The Florida DEP provided Derenzo and Associates with 2001-2005 Jacksonville meteorological data for use with the AERMOD air pollutant dispersion modeling computer program. AERMOD was executed using this meteorological data and the AERMOD input file (source input parameters were identical to those presented in the original protocol) for the Trail Ridge Landfill gas combustion sources (six internal combustion engines and open utility flare). The highest predicted ambient air impacts are less than the corresponding Class II area PSD significant concentration for all pollutants and averaging periods.

Attachment A presents revised air quality impact results compared to Class II area significant impact levels (Table I-3.5 of the original protocol).

Class I Area Significant Impact Analysis

The AERMOD computer model was executed using the 2001-2005 Jacksonville meteorological data (provided by Florida DEP) to calculate maximum NO_X, PM_{10} and SO_2 impacts for receptors within the Okefenokee National Wilderness Area that are within 50 km of the proposed facility location.

The CALPUFF-Lite computer modeling analysis was repeated to include SO_2 impacts (in addition to NO_X and PM_{10} that were presented in the original protocol) for receptors within the Okefenokee National Wilderness Area that are greater than 50 km from the proposed facility location.

The highest predicted ambient air impacts are less than the corresponding significant impact levels for Class I areas for all pollutants and averaging periods.

Attachment A presents revised air quality impact results compared to significant impact levels for Class I areas (Table I-4.3 of the original protocol).

Class I Area Regional Haze Analysis

The CALPUFF-Lite computer modeling analysis as described in the original protocol was repeated to include SO_2 emissions in the visibility degradation (haze) analysis for receptors within the Okefenokee National Wilderness Area that are greater than 50 km from the proposed facility location. The operating parameters of the CALPUFF-Lite screening model were configured to calculate light extinction values at the receptors identified in the original protocol. The maximum haze visibility degradation for the revised analysis is 4.98% (i.e., visibility degradation calculated with CALPUFF Lite compared to the existing default background visibility impairment (b_{ext}) of 10.0 Mm^{-1}), which is a slight increase compared to 4.94% as presented in the original modeling protocol (which did not include SO_2). This result satisfies the screening requirement for acceptable visibility impairment less than 5%.

Attachment A presents results of CALPUFF Lite visibility impairment analysis for the Okefenokee National Wilderness Area Class I area (Table I-4.4 of the original protocol).

A compact disc containing the computer modeling program input and output files for the revised analyses is enclosed.

Please contact us at (517) 324-1880 or rharvey@derenzo.com should you have any questions or require additional information.

Sincerely,

DERENZO AND ASSOCIATES, INC.

Robert Harvey
Engineering Services Manager

c: Mr. Scott Salisbury, Trail Ridge Energy
Enclosures

Table I-3.5 Air impact results compared to PSD Class II Significant Impact Levels

Pollutant	Averaging Time	Replacement Flare Emission Rate (g/s)	Potential TRE Facility Emission Rate (g/s)	Maximum Predicted Replacement Flare Impact ($\mu g/m^3$)	Maximum Predicted TRE Facility Impact ($\mu g/m^3$)	Combined TRE and Flare Impact ($\mu g/m^3$)	Class II Significant Impact Levels ($\mu g/m^3$)
NO_2	Annual	0.56	1.67	0.05	0.76	0.80	1.0
CO	8-hr	6.85	10.24	9.11	95.5	96.3	500
	1-hr	6.85	10.24	18.6	138	138	2000
SO_2	Annual	0.14	0.73	0.01	0.33	0.34	1.0
	24-hr	0.14	0.73	0.12	3.69	3.73	5.0
	3-hr	0.14	0.73	0.27	8.88	8.88	25.0
PM_{10}	Annual	0.32	0.89	0.03	0.41	0.44	1.0
	24-hr	0.32	0.89	0.45	4.62	4.71	5.0

Table I-4.3 Results of Class I area significant impact analysis

Pollutant	Averaging Period	Met. Year	Maximum Landfill Sources Impact [1] [Distance < 50 km] ($\mu g/m^3$)	Met. Year	Maximum Landfill Sources Impact [2] [Distance > 50 km] ($\mu g/m^3$)	Class I Significant Impact Levels ($\mu g/m^3$)
NO_2	Annual	2004	0.012	1994	0.004	0.1
PM_{10}	Annual	2004	0.007	1992	0.084	0.2
PM_{10}	24-hr	2005	0.217	1992	0.120	0.3
SO_2	Annual	2004	0.005	1990	0.003	0.1
SO_2	24-hr	2005	0.172	1990	0.036	0.2
SO_2	3-hr	2005	0.776	1990	0.113	1.0

1. Determined using AERMOD
2. Determined using CALPUFF-Lite

Table I-4.4 Results of CALPUFF Lite visibility impairment analysis for the Okefenokee National Wilderness Area Class I area

Met. Year	Background Visibility (Mm^{-1})	Days with > 5% Light Extinction	Greatest Light Extinction Change
1990	10.0	0	2.82%
1991	10.0	0	3.40%
1992	10.0	0	4.79%
1994	10.0	0	4.98%
1995	10.0	0	4.27%

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UNITED STATES

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Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

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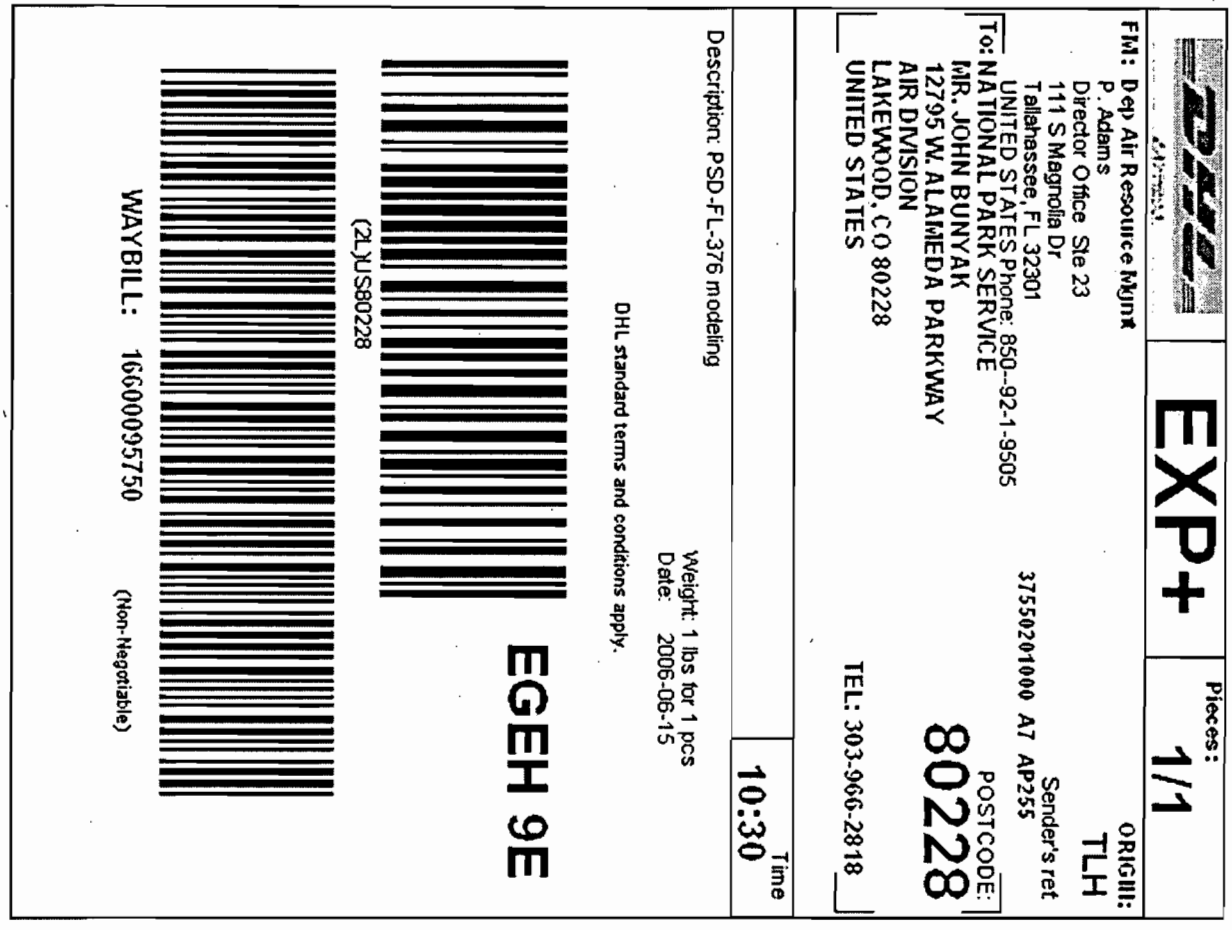

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Lakewood, CO 80228
UNITED STATES

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Phone#: 303-966-2818

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 13.57
Protection: Not Required
Description: PSD-FL-376 modeling

Weight (lbs.): 1
Dimensions: 0 x 0 x 0

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Department of
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Jeb Bush
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Colleen M. Castille
Secretary

July 5, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Energy – Installation of six (6) reciprocating internal combustion engines--Review of Air Quality Modeling Report

Dear Mr. Salisbury:

The Department received the air quality modeling report on June 5, 2006, associated with the February 24, 2006, application to allow Trail Ridge Energy to construct and operate an electric generation facility at the Trail Ridge Landfill Facility in Duval County. Based on our review of the modeling report, 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 department does not accept modeling analyses based on five years of non consecutive meteorological data. The meteorological data period used was for the period 1990 through 1992 and 1994 through 1995. Please redo the air quality modeling for all PSD significant pollutants using 2001-2005 Jacksonville meteorological data, which the Department will provide. In addition the PM_{10} 24 hour significant impact analysis should compare results with the highest value over 5 years, not the sixth highest.
2. Please address the following comment on the regional haze analysis submitted by the federal land manager via e-mail. If the updated results of the regional haze analysis, with SO_2 emissions added, show the greatest light extinction to be greater than 5.00%, the Department will provide 2001-2003 CALPUFF meteorological data for use in any regular CALPUFF modeling runs.

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. You may discuss the modeling requirements with Mr. Cleve Holladay at 850/921-8689.

Sincerely,

Cleve Holladay
Bureau of Air Regulation

/ch

cc: Chris Kirts, DEP-NED
Richard Robinson, ERM/AQB
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS

Enclosure

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

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Derenzo and Associates, Inc.
Environmental Consultants

June 8, 2006

Mr. Cleve Holladay
Engineer-4
2600 Blairstone Road
Mail Stop 5505
Tallahassee, FL 32399-2400

Subject: Trail Ridge Energy, L.L.C.
Air Quality Modeling Protocol (Appendix I of Permit Application Package)
Project No.: 0310358-004, PSD Permit No.: PSD-FL-374

Dear Mr. Holladay:

Derenzo and Associates, Inc. (Derenzo and Associates), on behalf of the Trail Ridge Energy, L.L.C., is submitting to the Florida Department of Environmental Protection, Division of Air Resource Management (FDEP-DARM) the enclosed Air Quality Modeling Protocol document for a new landfill gas (LFG) fueled internal combustion (IC) engine electricity generation facility at the Trail Ridge Landfill.

Preconstruction and Operating Permit Application documents for this project were previously submitted to the FDEP-DARM.

The Air Quality Modeling Protocol (referenced as Appendix I in the permit application documents) is being submitted to the FDEP-DARM for review of the specified modeling analyses.

Please contact us at (517) 324-1880 or arusnak@derenzo.com should you have any questions or require additional information.

Sincerely,

DERENZO AND ASSOCIATES, INC.

Andy Rusnak
Environmental Engineer

Enclosure

Department of Environmental Protection

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

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Secretary

April 26, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Energy – Installation of six (6) reciprocating internal combustion engines

Dear Mr. Salisbury:

The Department has received the response on April 12, 2006, to our initial request for additional information dated March 15, 2006. Trail Ridge Energy plans to construct and operate an electric generation facility at the Trail Ridge Landfill Facility in Duval County. Based on our review of the response, 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. Rule 62-213.202(2) F.A.C states that "Each Title V source may designate more than one responsible official, provided a primary responsible official is designated as responsible for the certifications of all other designated responsible officials. Any action taken by the primary responsible official shall take precedence over any action taken by any other designated responsible official". Based on this, the Department can issue a Title V Operating Permit that has two or more sections with separate associated responsible officials as long as a primary responsible official is designated for the facility that will be responsible for the certifications of the other two responsible officials. The approach taken by Illinois and Michigan where a primary responsible official was not designated cannot be followed by the State of Florida.

   EPA discouraged this approach of having two or more sections within a Title V Operating Permit whereby each section can be looked as a facility by itself. This approach could appear to keep a facility synthetic minor source in regards to PSD regulations. In Florida if the two plants are considered a single facility for the Title V Program, they are also considered a single facility for the purposes of PSD preconstruction review.

   The regulatory analysis section in the August 24, 2001 Staff Report for the Sumpter Energy Associates Operating Permit states that the facility is considered a major Title V source due to the potential to emit NOx and CO exceeds 100 tons, but it's considered a 'synthetic minor' source in regards to PSD regulations. It's not clear to the Department as to the reasons for being a synthetic minor source for PSD purposes as the CO emissions from the two sections (landfill and engines) when aggregated would make it a PSD major facility.

2. Trail Ridge Landfill, Inc. submitted on March 21, 2006, a utility flare modification application to Duval County. The application was submitted as a minor modification. Due to the submittal of the PSD application for Trail Ridge Energy prior to their submittal, the facility is major for PSD as CO emissions were greater than 250 tons per year. The utility flare modification application shows an increase in CO emissions greater than 100 tons per year. Therefore, their application cannot be a minor

modification. The increase in CO emissions from the flare modification should be considered in the ambient impact analyses required for the PSD project. The modeling information under Appendix I of the PSD application has still not been submitted and the CO emissions from the utility flare modification can be included with the analyses.

3. The Department does not concur with your reasoning for the BACT emission limit for PM_{10} emissions to be 0.24 g/bhp-hr. The fact that Bio Energy Texas has the same internal combustion engines and will be used at a similar facility and has given reasonable assurance to the State of Texas that 0.148 g/bhp-hr is achievable sets the BACT limit for this pollutant. Please explain the reasons for a similar internal combustion engine not able to meet the same emission limit under similar circumstances. Are the two landfills accepting different types of waste or are their any other differences between the two landfills that could justify increase in PM_{10} emissions when comparing the two.

4. 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

Syed Arif, P.E.
Bureau of Air Regulation

/sa

cc: Chris Kirts, DEP-NED
Richard Robinson, ERM/AQB
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

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Colleen M. Castille
Secretary

March 15, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Energy – Installation of six (6) reciprocating internal combustion engines

Dear Mr. Salisbury:

The Department has received the application on February 24, 2006, to allow Trail Ridge Energy to construct and operate an electric generation facility at the Trail Ridge Landfill Facility in Duval 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. Please indicate if a comparative emissions study for products of combustion has been done between flare emissions and emissions from internal combustion engines. If such a study was done, please provide the results to the Department.
2. Appendix H-1, Table H-3 of the application calculates fuel weight percent sulfur content. The CO_2 concentration is indicated as 52 percent by volume, whereas Table 1 of the main application shows expected CO_2 gas composition to be less than 40 percent by volume. Additionally, the LFG molecular weight does not match up between the calculated value (30.9 g/mol) and the one used in determining the LFG sulfur content (28 g/mol). Please explain the discrepancy.
3. Appendix H-2, Table H-5 of the application shows a sample calculation for 1,1,1 trichloroethane (TCE) emissions in footnote A. Please explain the reasons for using 0.1 ft3 TCE/MMcf LFG in the calculations. The same factor was used in Tables H-6 and H-7.
4. The application in Section 5.2 states that the Trail Ridge Energy is part of the Trail Ridge Landfill Stationary Source and its approved Air Construction Permit is to be incorporated into the landfill Title V Operating Permit. By doing so, Trail Ridge Landfill will be responsible for the compliance of all the permit conditions in the Air Construction Permit. Please provide a letter signed from the Responsible Official of the Trail Ridge Landfill facility agreeing to comply with all the requirements and being responsible for any violations of the Air Construction Permit.
5. Please explain how the facility will show compliance if the HCl emissions from the proposed engine operations are restricted to less than 10 TPY. Is the facility in agreement to limit the hours of operation of the engines to comply with the 10 TPY restrictions?

6. The application indicates that CAT G3520C gas IC engines have been installed and are operating at Bio Energy Texas. The maximum allowable PM_{10} emissions that is permitted for this facility is 0.148 g/bhp-hr. Please explain the reasons for requesting 0.24 g/bhp-hr for this project when the same IC engines will be utilized at Trail Ridge Energy.
7. Please indicate if the IC engines will operate continuously or whether the engines will frequently start and stop. When the engines do operate, will it be operating at base load or at less than base load? What affect will operating at less than base load have on emissions?

Modeling information under Appendix I of the application has not been submitted. The Department will have 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

Syed Arif, P.E.
Bureau of Air Regulation

/sa

cc: Chris Kirts, DEP-NED
Richard Robinson, ERM/AQB
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS

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1. Article Addressed to:

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

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Mr. Scott Salisbury
Trail Ridge Energy, L.L.C.
29261 Wall Street
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Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

March 8, 2006

Mr. Gregg M. Worley, Chief
Air Permits Section
U.S. EPA, Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8960

RE: Trail Ridge Energy, L.L.C.
Trail Ridge Landfill
0310358-004-AC, PSD-FL-374

Dear Mr. Worley:

Enclosed for your review and comment is a PSD application submitted by Trail Ridge Energy, L.L.C., for a new landfill gas fueled internal combustion engine electricity generation facility at the Trail Ridge Landfill in Baldwin, Duval County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact Syed Arif, Review Engineer, at 850/921-9528.

Sincerely,

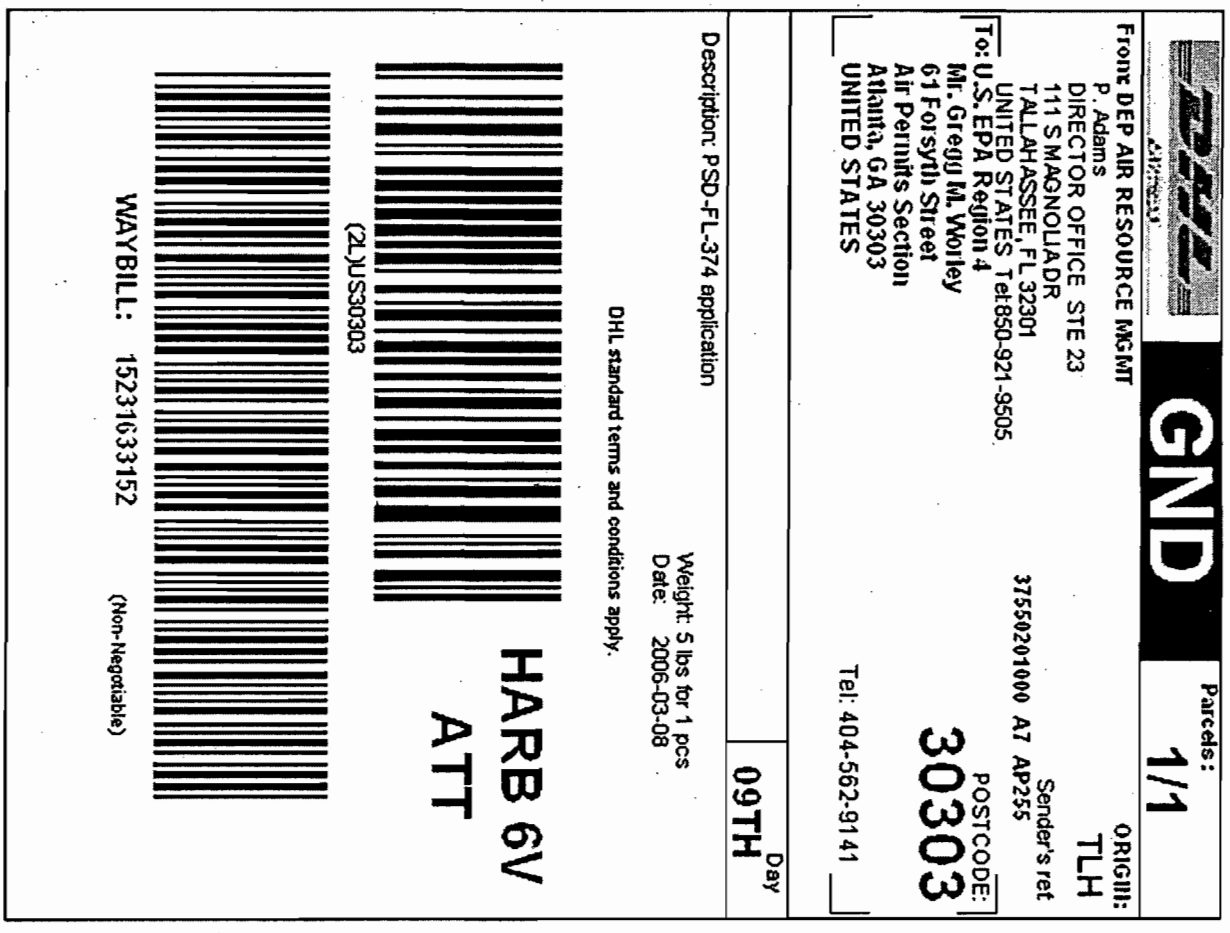
Patty Adams

for Jeffrey F. Koerner, P.E., Administrator
North Permitting Section

JFK/pa

Enclosure

cc: S. Arif



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61 Forsyth Street

Atlanta, GA 30303
UNITED STATES

Attention To: Mr. Gregg M. Worley
Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 3.06
Protection: Not Required
Description: PSD-FL-374 application

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Dimensions: 0 x 0 x 0

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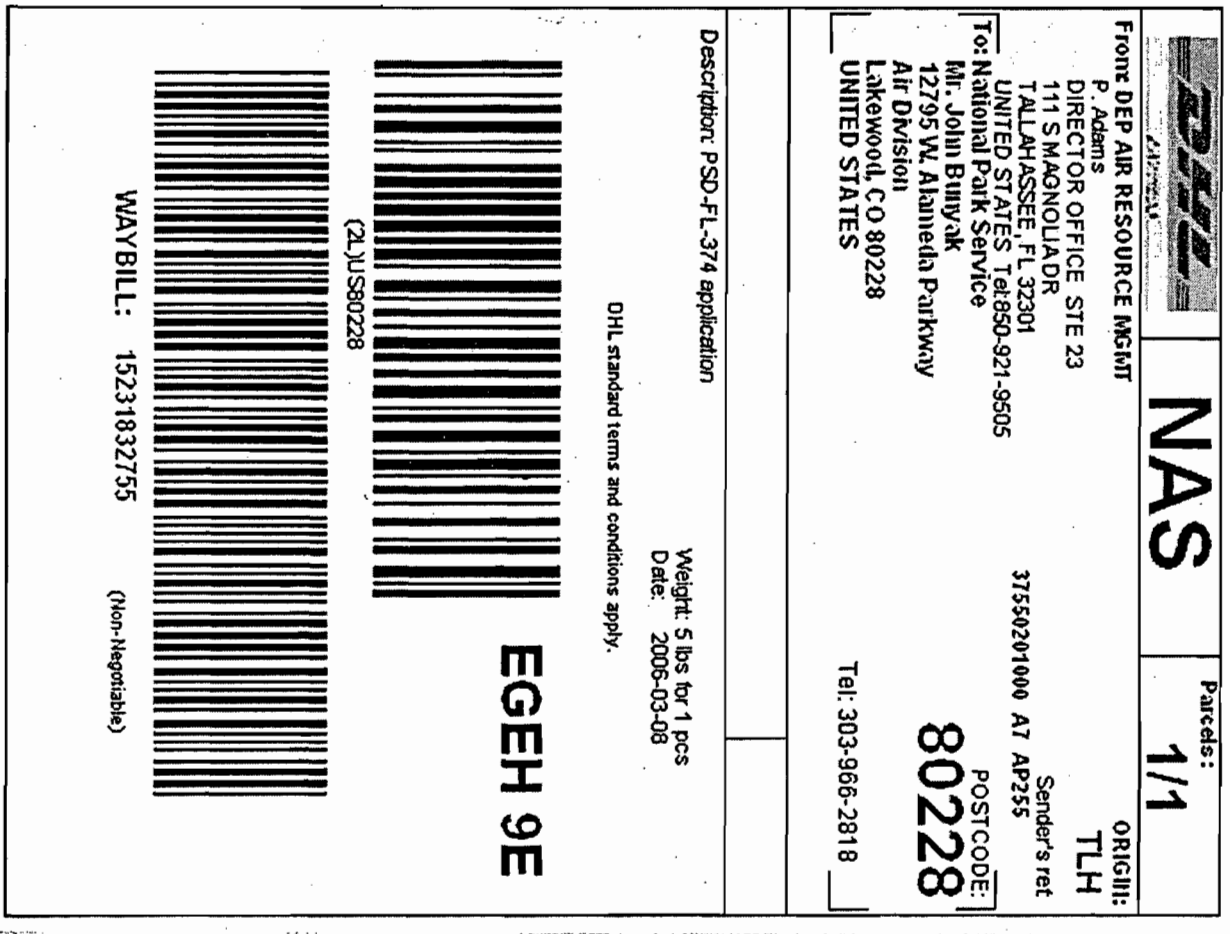

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National Park Service
Air Division
12795 W. Alameda Parkway

Lakewood, CO 80228
UNITED STATES

Attention To: Mr. John Bunyak
Phone#: 303-966-2818

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 14.21
Protection: Not Required
Description: PSD-FL-374 application

Weight (lbs.): 5
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Next Day 3:00 (Next business day by 3 PM)

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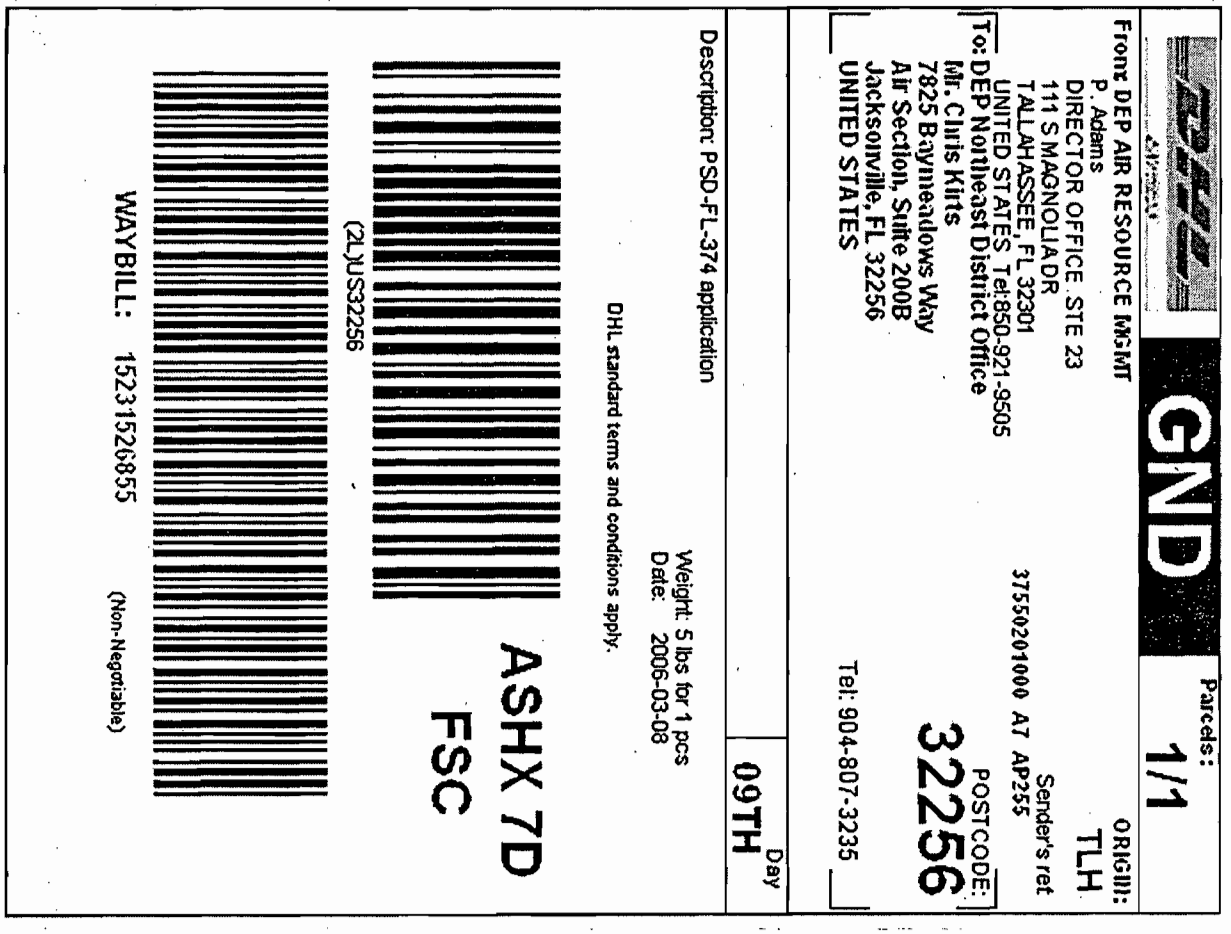

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To(Company):
DEP Northeast District Office
Air Section, Suite 200B
7825 Baymeadows Way

Jacksonville, FL 32256
UNITED STATES

Attention To: Mr. Chris Kirts
Phone#: 904-807-3235

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 3.06
Protection: Not Required
Description: PSD-FL-374 application

Weight (lbs.): 5
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Ground (Est. delivery in 1 business day(s))

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Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

March 8, 2006

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS – Air Quality Division
P. O. Box 25287
Denver, Colorado 80225

RE: Trail Ridge Energy, L.L.C.
Trail Ridge Landfill
0310358-004-AC, PSD-FL-374

Dear Mr. Bunyak:

Enclosed for your review and comment is a PSD application submitted by Trail Ridge Energy, L.L.C., for a new landfill gas fueled internal combustion engine electricity generation facility at the Trail Ridge Landfill in Baldwin, Duval County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact Syed Arif, Review Engineer, at 850/921-9528.

Sincerely,

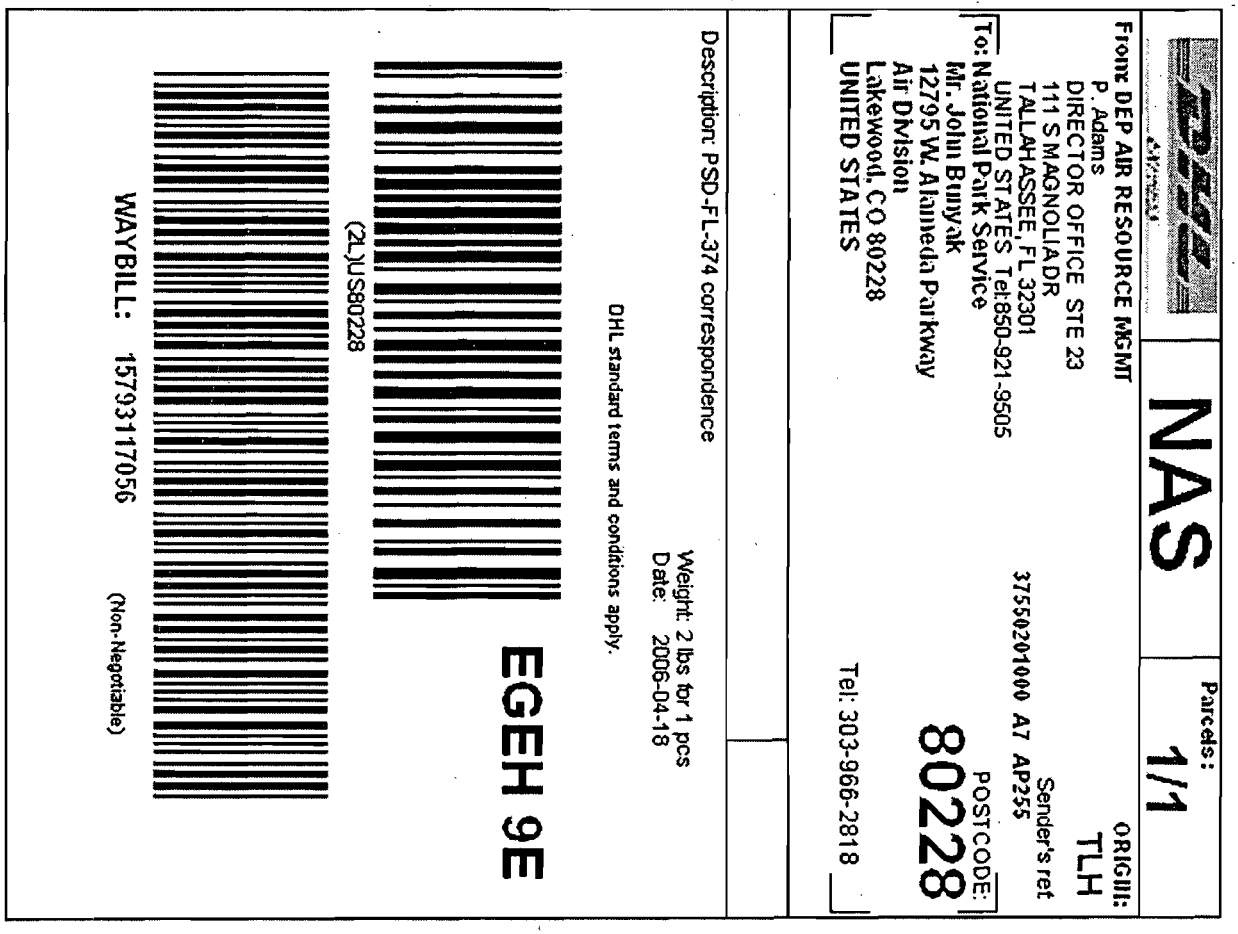
Patty Adams

for Jeffrey F. Koerner, P.E., Administrator
North Permitting Section

JFK/pa

Enclosure

cc: S. Arif



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National Park Service
Air Division
12795 W. Alameda Parkway

Lakewood, CO 80228
UNITED STATES

Attention To: Mr. John Bunyak
Phone#: 303-966-2818

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 11.49
Protection: Not Required
Description: PSD-FL-374 correspondence

Weight (lbs.): 2
Dimensions: 0 x 0 x 0

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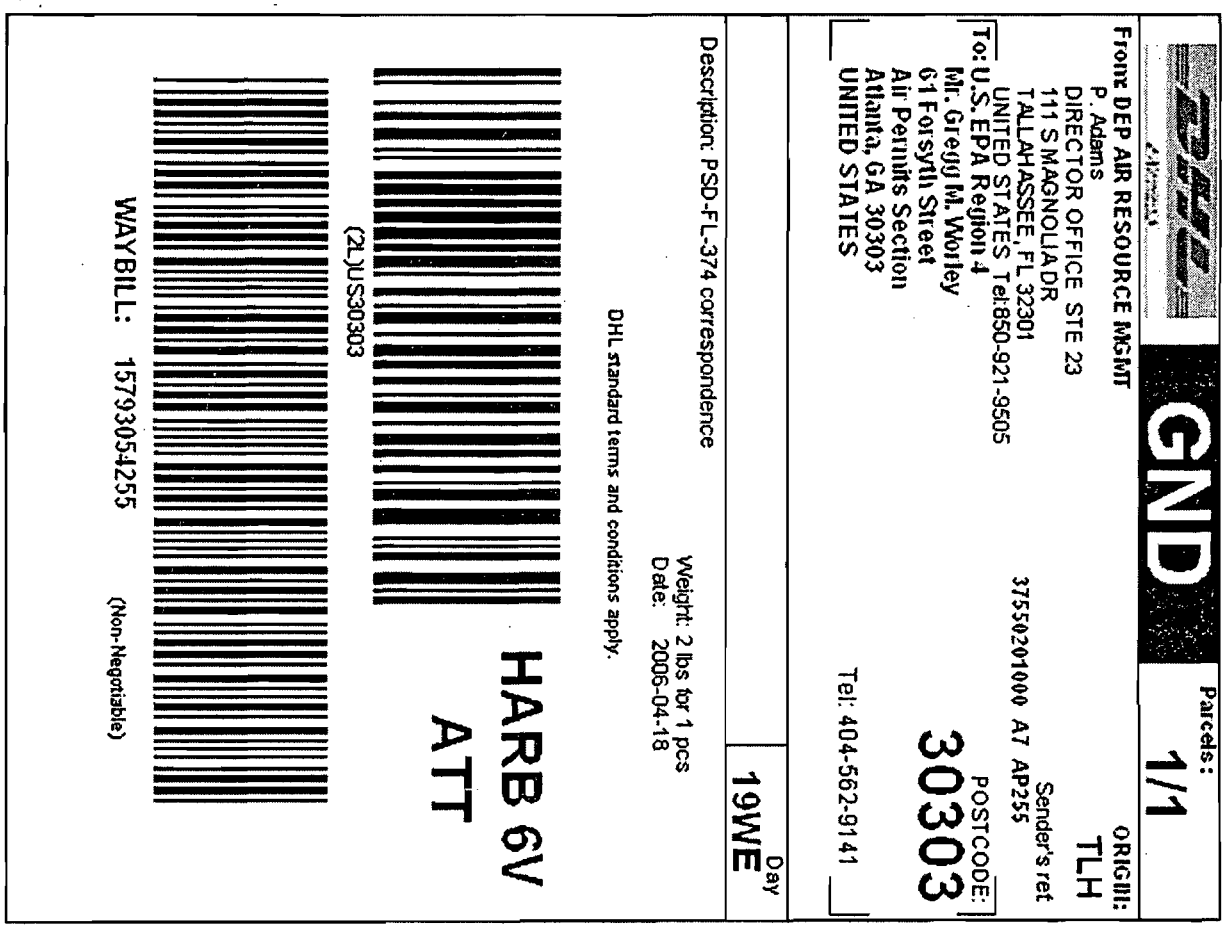

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To(Company):
U.S. EPA Region 4
Air Permits Section
61 Forsyth Street

Atlanta, GA 30303
UNITED STATES

Attention To: Mr. Gregg M. Worley
Phone#: 404-562-9141

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 3.06
Protection: Not Required
Description: PSD-FL-374 correspondence

Weight (lbs.): 2
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
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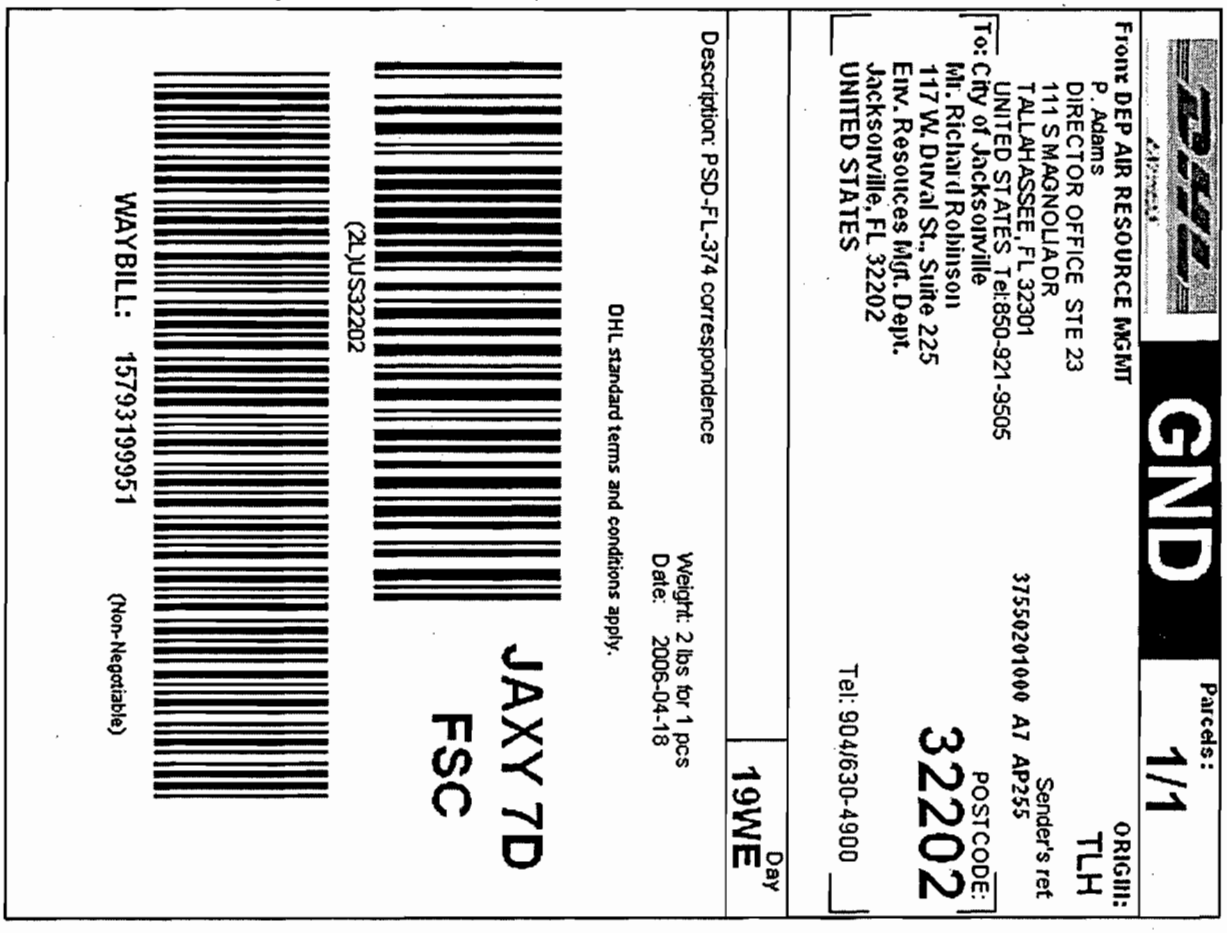

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To(Company):
City of Jacksonville
Env. Resouces Mgt. Dept.
117 W. Duval St., Suite 225

Jacksonville, FL 32202
UNITED STATES

Attention To: Mr. Richard Robinson
Phone#: 904/630-4900

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 3.06
Protection: Not Required
Description: PSD-FL-374 correspondence

Weight (lbs.): 2
Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255
Service Level: Ground (Est. delivery in 1 business day(s))

Special Svc:

Date Printed: 4/18/2006
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Derenzo and Associates, Inc.
Environmental Consultants

April 10, 2006

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: Trail Ridge Energy, L.L.C.
DEP File No. 0310358-004-AC (PSD-FL-374)
Response to March 15, 2006 request for information

Dear Mr. Arif:

Derenzo and Associates, Inc. (Derenzo and Associates), on behalf of Trail Ridge Energy, L.L.C, 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 March 15, 2006.

Attachment A provides for reference the March 15, FDEP-DARM communication.

Item 1 – Comparative Emissions Study

No comparative emissions study for products of combustion has been done between flare emissions and emissions from internal combustion engines.

Item 2 – Appendix H-1, Table 3

Attachment B provides corrected:

1. Appendix H-1, Table 3 data (based on LFG methane concentration of 45%, carbon dioxide concentration of 40%, nitrogen concentration of 10%, oxygen concentration of 5%, as presented in Table 1 of the main application document).

2. Landfill gas molecular weight information.

3. Page 41 of the main permit application document (the Trail Ridge Landfill LFG sulfur content is expected to be 0.018%).

Item 3 – Appendix H-2, Table 5

Attachment C provides corrected Appendix H-2, Table H-5, H-6 and H-7 footnote data. The sample calculation used an incorrect TCE ppmv concentration of 0.1 ppmv instead of the 0.48 ppmv value presented in the table. The calculations presented in the previously submitted documents are correct and not influenced by the correction.

Item 4 – Trail Ridge Landfill Stationary Source

Derenzo and Associates contacted Mr. Jeff Koerner prior to the submittal of the Trail Ridge Energy Air Construction Permit application to discuss the project and Title Operating Permit requirements. Mr. Koerner recommended that the Air Construction permit for the project be secured and subsequent permit application documents be submitted to the FDEP-DARM to incorporate the new air pollutant emission facility applicable requirements into the Title V Operatng Permit that was issued the stationary source (Trail Ridge Landfill).

Derenzo and Associates informed Mr. Koerner that based on the independent operating nature of the users of gas generated by landfills (i.e, the gas rights are typically held by a third party; the LFG electricity generation facility purchases gas from the gas rights holder, leases land from the landfill and has no involvement with the landfill operations; and the landfill has no involvement in the power generation operations), states such as Michigan and Illinois have issued Title V Operating Permits that have two or more sections with separate associated responsible officials and regulatory contacts. These operating permits are issued as separate documents (to each facility at the stationary source with appropriate applicable requirements) that are connected to the same stationary source by an identification number (Illinois) or one document (Michigan) with two (or more) sections (one for each facility at the stationary source).

Mr. Koerner appeared to understand the potential complexities of the compliance issues that are associated with incorporating the applicable requirements of the LFG gas user (electricity generation facility) and landfill owner/operator into a single combined Title V Operating Permit and informed Derenzo and Associates that the FDEP-DARM would try to accommodate a request for a sectionalized (or partitioned) operating permit.

Attachment D provides the Title V Operating Permit (State of Michigan Renewable Operating Permit) that has been issued Sumpter Energy Associates at the Pine Tree Landfill (SEA – PTA). Sumpter Energy Associates is a sister company of Trail Ridge Energy. This operating permit has two sections, one has the applicable requirements of the landfill owner/operator and the other has the applicable requirements of the LFG user (electricity generation facility).

Trail Ridge Energy will provide the FDEP-DARM with a letter from the Trail Ridge Landfill that indicates the construction and operation of the proposed electricity at the landfill stationary source is acceptable to the owner/operator.

Item 5 – HCl Emission Compliance

Trail Ridge Energy will demonstrate compliance with a 10 ton per year hydrogen chloride (HCl) facility emission limit through the collection and analysis of samples of the landfill gas (LFG) used to fuel the IC engines. The HCl emission factor developed from the LFG analyzes (pounds of HCl per million cubic feet LFG fuel combustion) times the annual totalized measurement of treated gas (fuel) flow to the facility (million cubic feet of gas) will result in the actual amount of HCl emitted by the six IC engine operations

Attachment E provides a proposal that presents services to measure the chlorinated content of the SEA – PTA LFG fuel for use in the development of an IC engine fuel combustion HCl emission factor.

There is no need to limit engine-generator operating hours in order to demonstrate compliance with a 10 TpY HCl facility limit. The main function of the facility is to produce as much electricity as possible for sale to the local utility. Any restriction on the number of hours that the engine-generators are allowed to operate annually has an adverse effect on the project economics and operating revenues.

Item 6 - IC Engine PM-10 Emissions

Trail Ridge Energy has submitted permit application data to the FDEP-DARM for its proposed electricity generation facility that indicate and justify that BACT for PM-10 emitted from the LFG fueled engines (CAT 3520C) is 0.24 g/bhp-hr. This value is supported by data on IC LFG fueled engines that is presented in the USEPA RBL Clearinghouse for LFG fueled IC engines. Permits issued LFG fueled IC engines have limited their PM-10 emissions to rates that range from 0.04 to 0.34 g/bhp-hr.

The information previously submitted to the FDEP-DARM states that:

Operational experience obtained by Caterpillar, Inc. and users of its LFG fueled IC engines indicates that PM-10 emissions for LFG fueled IC engines are dependent on engine operating hours. While PM-10 emissions from the operation of new LFG fueled IC engines have been initially tested to be very low (i.e., <0.06 g/bhp-hr) subsequent measurements on the same equipment that are representative of increased engine operating hours indicate the presence of higher emission levels. The increased PM-10 emissions (from new engine operating conditions) has been attributed to particulate contributions from crankcase lubrication oil aerosols, which is the result of normal wear on piston rings and seals (i.e., not additional particulate contributions from the source of the LFG fuel).

Trail Ridge Energy representatives recorded in 2001 and a portion of 2002 the average daily crankcase oil consumption for CAT 3616 gas IC engines operated on LFG.

Attachment F provides the specified CAT 3616 gas IC engine oil use records.

Particulate (PM-10) emission tests that were performed on these engines indicate that the results of the initial compliance tests (that reflect new engine operations) varied from results of subsequent compliance tests (over a three year period) by a maximum value of approximate 300 % (300% increase).

The results of the same tests indicate that the highest PM-10 emission measurement exceeds the permitted limit (over a three year period) by a maximum factor of approximately 3.

The PM-10 emission limit for the specified engines was set at a value <0.1 g/bhp-hr that was obtained from the results of tests performed on new identical engines operated at another landfill. Caterpillar does not provide particulate emission guarantees for the CAT 3616 gas IC engine, which is also the case for the CAT 3520C gas IC engine. Therefore, in the absence of operational and emission compliance experience with this equipment (which was newly introduced to the LFG energy development market in the mid 1990s like the CAT 3520C engine was in 2005 with ordering allowed in early 2005 for delivery in late 2005) as presented in the preceding text, the identical equipment test results (which served as the basis for the permitted limit) were believed to be representative of particulate emissions that would occur over all engine operating conditions (which proved not to be the case for the reasons specified).

Trail Ridge Energy representatives, which have over 15 years experience with permitting and operating LFG fueled IC engine operations and have a relationship with Caterpillar of a similar duration, are not aware of any new data that supports a claim that the CAT 3520C gas IC engine can achieve a PM-10 emission limit of 0.148 g/bhp-hr (or less) over the operating life of the equipment (under all LFG applications, site specific fuel quality variation and engine operating conditions).

The fact that Bio Energy Texas facility has been permitted with PM-10 emissions of 0.148 g/bhp-hr is not a basis for a determination that the value is BACT.

The federal *40 CFR Part 52.21(b) Definitions (12) Best available control technology* specifies that *Best available control technology means an emission limitation based on the maximum degree of reduction ...on a base-by-case basis, taking into account energy, environmental and economic factors and other costs, determines is achievable ...*

BACT is not a value or control specified:

1. By unsupported and potentially erroneous information that is used to establish permit limits.

2. By results of a limited set of compliance demonstration data that do not provide a basis that the limit can be continuously achieved over the operating conditions of the equipment.

3. In the absence of a detailed review of technical data on the equipment and an understanding of operating variables that properly address its potential emissions (as has been provided by Trail Ridge Energy).

Therefore, based on the preceding information and the previous permit application data submitted to the FDEP-DARM, PM-10 BACT for the CAT 3520C gas IC engine is 0.24 g/bhp-hr.

Item 7 - IC Engine Operations

The CAT® G3520C gas IC engines will operate under base load conditions (100% design capacity). There will be no periods of primary electrical generation when the engines are operated at partial loads. The main function of the facility is to produce as much electricity as possible for sale to the local utility. Engine down time and partial load electricity generation conditions have adverse effects on operating revenues. Engine startup and shutdown occurrences will be relatively infrequent.

Trail Ridge Energy expects to maintain a combined engine base load utilization factor of approximately 95% (i.e., on an annual basis, the combined facility engines will be operated at base load 95% of the time). Engine operations will be periodically stopped as necessary to perform equipment maintenance activities (i.e., on an annual basis, the combined facility engines will be stopped for maintenance approximately 5 % of the time).

The amount of time that is required to commence engine operations and ramp up power to base load conditions is less than 10 minutes. The amount of time that is required stop engine operations and ramp down power is less than 10 minutes. These infrequent periods of engine start up and shutdown will not have an impact on the potential hourly and annual air pollutant emission rates that are presented in the permit application documents.

Trail Ridge Energy , L.L.C.. 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
C. Kirts, WED
R. Robinson, Duval Co.
B. Worley, EPA
G. Demyd, NPS
C. Halladay

ATTACHMENT A

March 15, 2006 FDEP-DARM Communication

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

March 15, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: DEP File No. 0310358-004-AC (PSD-FL-374)
Trail Ridge Energy – Installation of six (6) reciprocating internal combustion engines

Dear Mr. Salisbury:

The Department has received the application on February 24, 2006, to allow Trail Ridge Energy to construct and operate an electric generation facility at the Trail Ridge Landfill Facility in Duval 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. Please indicate if a comparative emissions study for products of combustion has been done between flare emissions and emissions from internal combustion engines. If such a study was done, please provide the results to the Department.
2. Appendix H-1, Table H-3 of the application calculates fuel weight percent sulfur content. The CO_2 concentration is indicated as 52 percent by volume, whereas Table 1 of the main application shows expected CO_2 gas composition to be less than 40 percent by volume. Additionally, the LFG molecular weight does not match up between the calculated value (30.9 g/mol) and the one used in determining the LFG sulfur content (28 g/mol). Please explain the discrepancy.
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4. The application in Section 5.2 states that the Trail Ridge Energy is part of the Trail Ridge Landfill Stationary Source and its approved Air Construction Permit is to be incorporated into the landfill Title V Operating Permit. By doing so, Trail Ridge Landfill will be responsible for the compliance of all the permit conditions in the Air Construction Permit. Please provide a letter signed from the Responsible Official of the Trail Ridge Landfill facility agreeing to comply with all the requirements and being responsible for any violations of the Air Construction Permit.
5. Please explain how the facility will show compliance if the HCl emissions from the proposed engine operations are restricted to less than 10 TPY. Is the facility in agreement to limit the hours of operation of the engines to comply with the 10 TPY restrictions?

6. The application indicates that CAT G3520C gas IC engines have been installed and are operating at Bio Energy Texas. The maximum allowable PM_{10} emissions that is permitted for this facility is 0.148 g/bhp-hr. Please explain the reasons for requesting 0.24 g/bhp-hr for this project when the same IC engines will be utilized at Trail Ridge Energy.
7. Please indicate if the IC engines will operate continuously or whether the engines will frequently start and stop. When the engines do operate, will it be operating at base load or at less than base load? What affect will operating at less than base load have on emissions?

Modeling information under Appendix I of the application has not been submitted. The Department will have 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

Syed Arif, P.E.
Bureau of Air Regulation

/sa

cc: Chris Kirts, DEP-NED
Richard Robinson, ERM/AQB
Jeff Pope, P.E., Clayton Group Services, Inc.
Gregg Worley, EPA Region 4
John Bunyak, NPS

ATTACHMENT B

Corrected Appendix H-1, Table H-3 Data
Main permit application document page 41

Fuel Sulfur Content Calculation (% Weight)

Expected fixed gas concentrations[A]:		
	CH_4	45.0% vol.
	CO_2	40.0% vol.
	O_2	5.0% vol.
	Balance N_2	10.0% vol.

Calculated LFG molecular weight:

$(16)(\%CH_4) + (44)(\%CO_2) + (32)(\%O_2) + (28)(\%N_2) =$ 29.2 g/mol

LFG sulfur content: **164.2 ppm H_2S**

LFG sulfur content

$(164.2 \text{ mol } H_2S) / (10^6 \text{ mol LFG}) (32 \text{ g S/mol } H_2S) / (29.2 \text{ g LFG/mol}) =$ 0.018% wt.

A. Expected at LHV of 450 Btu/scf based on Landfill Energy Systems analyses (see Table 1 of main document)

Appendix O provides a draft SSM plan for the LFG treatment equipment and processes.

7.3 Federal Acid Rain Program

The federal Acid Rain Program (40 CFR Part 72) has been promulgated pursuant to requirements of Title IV of the 1990 Clean Air Act Amendments. New unit exemption provisions of §72.7 specify that utility units:

1. Having a total nameplate capacity of 25 MW or less;

2. Not burning coal or coal-derived fuel; and

3. Burning gaseous fuel with an annual average sulfur content of 0.05% by weight or less,

are exempt from the Acid Rain Program, except for its notification and recordkeeping requirements (§§72.2 through 72.7 and §§72.10 through 72.13).

Utility unit is defined for the purposes of Part 72 as *any person that sells electricity.* Therefore, the proposed electricity generation facility:

1. Is an utility that has a total nameplate capacity of 9.6 MW,

2. Does not burn coal or any coal-derived fuel, and

3. Only burns gaseous fuel (LFG) with an annual average sulfur content of less than 0.05% by weight (Appendix H, Table H-3 data indicate that the Trail Ridge Landfill LFG sulfur content is expected to be 0.018% by weight).

Based on the preceding information, the proposed LFG fueled IC engine electricity generation facility is only subject to the notification and recordkeeping requirements of the federal Acid Rain Program.

8.0 ADDITIONAL AIR IMPACT ANALYSES

Federal and State of Florida PSD regulations require (in addition to appropriate air pollutant emission BACT and air quality impact demonstrations) that new major sources address air quality issues that pertain to visibility degradation, and vegetation, soil and growth impacts.

Table 1. Measured and expected gas composition and fuel properties for LFG recovered from the Trail Ridge Landfill

Component	Sample Date[1] January 28, 2003	Expected[2] For IC Engine Fuel
Methane (% vol.)	48.7	>45
Carbon Dioxide (% vol.)	38.3	<40
Nitrogen (% vol.)	11.9	<10
Oxygen (% vol.)	2.3	<5
Fuel LHV (Btu/scf)	443.5[A]	>420

Notes

1. See Appendix E (Waste Energy Technology, LLC report dated February 2003)
2. Based on engine operator analysis.

ATTACHMENT C

Corrected Appendix H-2, Table H-5, H-6, H-7 Data

LFG Constituent Combustion Potential Air Contaminant Emissions
Internal Combustion Engine

LFG Constituent	Landfill Gas Concentration[1] (ppm)	(mg/m^3)	Molecular Weight (g/mol)	Destruction Effeciency[2] (%)	Emission (lb./hr)	Emission (TpY)
1,1,1-trichloroethane*	0.480	2.66	133.42	93.0%	0.000404	0.00177 [A]
1,1,2,2-tetrachloroethane*	1.110	7.75	167.85	93.0%	0.001175	0.00515
1,1-dichloroethane*	2.350	9.67	98.97	93.0%	0.001466	0.00642
1,1-dichloroethene*	0.200	0.81	96.94	93.0%	0.000122	0.00054
1,2-dichloroethane*	0.410	1.69	98.96	93.0%	0.000256	0.00112
1,2-dichloropropane*	0.180	0.85	112.98	93.0%	0.000128	0.00056
2-propanol (isopropyl alcohol)	50.100	125.22	60.11	86.1%	0.037703	0.16514
Acetone	7.010	16.93	58.09	86.1%	0.005098	0.02233
Acrylonitrile*	6.330	13.97	53.06	86.1%	0.004205	0.01842
Bromodichloromethane	3.130	21.32	163.83	93.0%	0.003233	0.01416
Butane	5.030	12.16	58.14	86.1%	0.003661	0.01604
Carbon disulfide*	0.580	1.84	76.13	86.1%	0.000553	0.00242
Carbon monoxide	141.000	164.22	28.01	86.1%	0.049446	0.21657
Carbon tetrachloride*	0.004	0.03	153.84	93.0%	0.000004	0.00002
Carbonyl sulfide*	0.490	1.22	60.07	86.1%	0.000369	0.00161
Chlorobenzene*	0.250	1.17	112.56	93.0%	0.000177	0.00078
Chlorodifluoromethane (Freon 22)	1.300	4.67	86.47	93.0%	0.000709	0.00310
Chloroethane*	1.250	3.35	64.52	93.0%	0.000508	0.00223
Chloroform*	0.030	0.15	119.39	93.0%	0.000023	0.00010
Chloromethane (methyl chloride)*	1.210	2.54	50.49	93.0%	0.000385	0.00169
Dichlorobenzene	0.210	1.28	147.00	93.0%	0.000195	0.00085
Dichlorodifluoromethane	15.700	78.93	120.91	93.0%	0.011969	0.05242
Dichlorofluoromethane	2.620	11.21	102.92	93.0%	0.001700	0.00745
Dichloromethane (methylene chloride)*	14.300	50.50	84.94	93.0%	0.007658	0.03354
Dimethyl sulfide (methyl sulfide)	7.820	20.20	62.13	93.0%	0.003063	0.01342
Ethane	889.000	1,111.90	30.08	86.1%	0.334792	1.46639
Ethanol	27.200	52.12	46.08	86.1%	0.015692	0.06873
Ethyl mercaptan (ethanethiol)[B]	2.280	5.89	62.13	99.0%	0.000128	0.00056
Ethylbenzene*	4.610	20.35	106.16	99.0%	0.000441	0.00193
Ethylene dibromide*	0.001	0.01	187.88	86.1%	0.000002	0.00001
Fluorotrichloromethane (Freon 11)	0.760	4.34	137.36	93.0%	0.000658	0.00288
Hexane*	6.570	23.54	86.17	86.1%	0.007088	0.03104
Hydrogen chloride*[C]	NA	NA	36.46	0.0%	0.416655	1.82495
Hydrogen sulfide*[D]	124.000	175.71	34.08	99.0%	0.003806	0.01667
Mercury (total)*	0.0003	0.00	200.61	0.0%	0.000005	0.00002

Notes

* 1990 CAA Amendments HAPs

1. Default concentration for LFG constituents from USEPA Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I: Stationary Point and Area Sources (AP-42), Table 2.4-1, which is provided at the end of this Appendix

2. AP-42 default control efficiency values for IC engines, Table 2.4-3, which are provided at the end of this Appendix.

A. Sample calculation, 1,1,1 trichloroethane (TCE) emissions

(0.48 ft^3 TCE/MMcf LFG) (133.42 lb. TCE/mol) (1-0.93) / (387 ft^3 TCE/mol) (0.034857 MMscf/hr) = 0.000404 lb./hr. TCE

(0.000404 lb./hr. TCE) (8,760 hr./yr.) (1.0 ton/2,000 lb) = 0.00177 TpY

B. Ethyl mercaptan has an autoignition temperature of 570 F, therefore a 99% DE was used.

C. Based on the Hydrogen chloride emission factor presented in Table F-7.

D. Hydrogen sulfide has an autoignition temperature of 500 F, therefore a 99% DE was used..

LFG Combustion Hydrogen Chloride Emission Factor

Influent Chlorine Compounds	Landfill Gas Concentration[1] (ppm)	Molecular Formula	No. Chlorine Atoms	HCl Emission Factor (lb./MMcf)
1,1,1-trichloroethane	0.48	$C_2H_3Cl_3$	3	0.14 [a,b]
1,1,2,2-tetra chloroethane	1.11	$C_2H_2Cl_4$	4	0.42 [b]
1,1-dichloroethane	2.35	$C_2H_4Cl_2$	2	0.44 [b]
1,1-dichloroethene	0.2	$C_2H_2Cl_2$	2	0.04 [b]
1,2-dichloroethane	0.41	$C_2H_4Cl_2$	2	0.08 [b]
1,2-dichloropropane	0.18	$C_3H_6Cl_2$	2	0.03 [b]
Bromodichloromethane	3.13	$CBrCl_2$	2	0.59 [b]
Carbon tetrachloride	0.004	CCl_4	4	0.00 [b]
Chlorobenzene	0.25	C_6H_5Cl	1	0.02 [b]
Chlorodifluoromethane	1.3	CHFCl	1	0.12 [b]
Chloroethane	1.25	C_2H_5Cl	1	0.12 [b]
Chloroform	0.03	$CHCl_3$	3	0.01 [b]
Chloromethane	1.21	CH_3Cl	1	0.11 [b]
Dichlorobenzene	0.21	$C_6H_4Cl_2$	2	0.04 [b]
Dichlorodifluoromethane	15.7	CF_2Cl_2	2	2.96 [b]
Dichlorofluoromethane	2.62	$CHFCl_2$	2	0.49 [b]
Dichloromethane	14.3	CH_2Cl_2	2	2.69 [b]
Fluorotrichloromethane	0.76	$CFCl_3$	3	0.21 [b]
Perchloroethylene	3.73	C_2Cl_4	4	1.41 [b]
Trichloroethylene	2.82	C_2HCl_3	3	0.80 [b]
t-1,2-dichloroethane	2.84	$C_2H_2Cl_2$	2	0.54 [b]
Vinyl chloride	7.34	C_2HCl	1	0.69 [b]
Total hydrogen chloride emission factor (lb./MMcf)				**11.95**

Notes

1. From AP-42 default concentrations as presented in Table H-5.

a. Assumes complete conversion of chloride to HCl, calculation for 1,1,1-trichloroethane (TCE):
(0.48 ft^3 TCE/MMcf LFG) (3 mol HCl/mol TCE) (36.46 lb. HCl/mol) / (387 ft^3/mol)
= 0.14 lb. HCl/MMcf LFG

b. Based on AP-42 default concentrations, which are provided at the end of this Appendix.

LFG Combustion Hazardous Air Pollutant Emission Factor
Internal Combustion Engine

HAPs[1]	Landfill Gas Concentration[2] (ppm)	Landfill Gas Concentration[2] (mg/m^3)	Molecular Weight (g/mol)	Destruction Effeciency[3] (%)	HAP Emission Factor (lb./MMcf)
1,1,1-trichloroethane	0.48	2.66	133.42	93.0%	0.012 [A]
1,1,2,2-tetrachloroethane	1.11	7.75	167.85	93.0%	0.034
1,1-dichloroethane	2.35	9.67	98.95	93.0%	0.042
1,1-dichloroethene	0.2	0.81	96.94	93.0%	0.004
1,2-dichloroethane	0.41	1.69	98.96	93.0%	0.007
1,2-dichloropropane	0.18	0.85	112.98	93.0%	0.004
Acrylonitrile	6.33	13.97	53.06	86.1%	0.121
Carbon disulfide	0.58	1.84	76.13	86.1%	0.016
Carbon tetrachloride	0.004	0.03	153.84	93.0%	0.000
Carbonyl sulfide	0.49	1.22	60.07	86.1%	0.011
Chlorobenzene	0.25	1.17	112.56	93.0%	0.005
Chloroethane	1.25	3.35	64.52	93.0%	0.015
Chloroform	0.03	0.15	119.39	93.0%	0.001
Chloromethane	1.21	2.54	50.49	93.0%	0.011
Dichloromethane	14.3	50.50	84.94	93.0%	0.220
Ethyl Benzene	4.61	20.35	106.16	86.1%	0.176
Ethylene dibromide	0.001	0.01	187.88	86.1%	0.000
Hexane	6.57	23.54	86.17	86.1%	0.203
Hydrogen chloride	NA	NA	36.46	0.0%	11.953 [B]
Mercury (total)	2.92E-04	0.00	200.61	0.0%	0.000
Methyl ethyl ketone	7.09	21.26	72.10	86.1%	0.184
Methyl isobutyl ketone	1.87	7.79	100.16	86.1%	0.067
Perchloroethylene	3.73	25.72	165.83	93.0%	0.112
Trichloroethylene	2.82	15.41	131.40	93.0%	0.067
Vinyl chloride	7.34	19.07	62.50	93.0%	0.083
Xylene	12.1	53.41	106.16	86.1%	0.461
Total HAP emission factor (lb./MMcf)					**13.81**

Notes

1. 1990 CAA Amendments Section 112(b) HAP

2. From AP-42 default concentrations as presented in Table H-5.

3. AP-42 default control efficiency values for IC engines, Table 2.4-3, which are provided at the end of this

A. Sample calculation, 1,1,1 trichloroethane (TCE) emissions
(0.48 ft^3 TCE/MMcf LFG) (133.42 lb. TCE/mol) (1-0.93) / (387 ft^3 TCE/mol)
=0.012 lb. TCE/MMcf LFG

B. Hydrogen chloride emission factor from Table H-6.

ATTACHMENT D

Sumpter Energy Associates - Pine Tree Landfill
State of Michigan Renewable Operating Permit

DEQ

Michigan Department Of Environmental Quality
Air Quality Division

State Registration Number
N5984

RENEWABLE OPERATING PERMIT

RO Permit Number
199600384

IS HEREBY ISSUED TO

PINE TREE ACRES INC. (LANDFILL)
AND
SUMPTER ENERGY ASSOCIATES (LANDFILL GAS CONTROL)

SRN: N5984

LOCATED AT

36600 29 MILE ROAD
LENOX TOWNSHIP, MI 48062

Permit Number: 199600384

Effective Date: December 12, 2002

Revision Date: March 2, 2006

Expiration Date: December 12, 2007

This permit is issued in accordance with and subject to Part 5506(3) of Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Pursuant to Air Pollution Control Rule 336.1210(1), this permit constitutes the permittee's authority to operate the major stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the major stationary source and all emission unit/process groups listed in the permit are subject to all applicable future or amended rules and regulations pursuant to P.A. 451 and the Clean Air Act.

This permit does not relieve the permittee from the responsibility to obtain the necessary permits to install pursuant to Air Pollution Control Rule 336.1201 for new or modified process or process equipment. In addition, issuance of this Renewable Operating Permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

Michigan Department of Environmental Quality

_____

Teresa Seidel
Southeast Michigan District Supervisor
Air Quality Division

Table of Contents

STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT

SECTION 1

PINE TREE ACRES INC. (LANDFILL)
AND
SUMPTER ENERGY ASSOCIATES (LANDFILL GAS CONTROL SYSTEM)

SRN: N5984

LOCATED AT

36600 29 MILE ROAD
LENOX TOWNSHIP, MI 48062

Permit Number: 199600384

Effective Date: December 12, 2002

Revision Date: March 2, 2006

Expiration Date: December 12, 2007

A-1. General Requirements

For the purpose of this Renewable Operating (RO) Permit, the **permittee** is defined as any person who owns or operates an emission unit/process group at a stationary source for which a RO Permit has been issued. This permit is issued to **Pine Tree Acres (Landfill) and Sumpter Energy Associates (Landfill gas control)**, hereinafter the permittee for this RO Permit. The department is defined in R 336.1104(d) as the Director of the Department of Environmental Quality or his or her designee.

Enforceability

All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. Those requirements which are enforceable by the state only are designated by an asterisk. (R 336.1213(5))

General Conditions

1. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this RO Permit shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this RO Permit. (R 336.1213(1)(f))

2. Except as provided in Subrules 2, 3, and 4 of R 336.1301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of R 336.1301(1)(a) or (b) unless otherwise specified in this RO Permit. The grading of visible emissions shall be determined in accordance with R 336.1303. (R 336.1301(1) in pertinent part):
   a) A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
   b) A limit specified by an applicable federal new source performance standard.

3. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). (R 336.1370)

4. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. (R 336.1910)

5. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001(1). (R 336.2001)

6. A change in ownership or operational control of a stationary source covered by a RO Permit shall be made pursuant to R 336.1216(1). (R 336.1219(3))

7. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
   a) Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. (R 336.1901(a)) *
   b) Unreasonable interference with the comfortable enjoyment of life and property. (R 336.1901 (b)) *

8. The permittee shall comply with all conditions of this RO Permit. Any permit noncompliance constitutes a violation of Act 451 of 1994, as amended, Part 55, (Air Pollution Control) and is grounds for enforcement action, for permit revocation or revision, or for denial of the renewal of the RO Permit. All terms and conditions of this RO Permit that are designated as federally enforceable are enforceable by the Administrator of the EPA

and by citizens under the provisions of the CAA. Any terms and conditions based on applicable requirements, which are designated as "state only", are not enforceable by the EPA or citizens pursuant to the CAA. (R 336.1213(1)(a))

9. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this RO Permit. (R 336.1213(1)(b))

10. This RO Permit may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Pursuant to R 336.1215 and R 336.1216, the permittee may make changes at a stationary source at his/her own risk. (R 336.1213(1)(c))

11. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the RO Permit or to determine compliance with this RO Permit. Upon request, a person shall also furnish to the department copies of any records that are required to be kept as a term or condition of this RO Permit. (R 336.1213(1)(e))

12. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities (R 336.1213(1)(d)):
    a) Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the permit.
    b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
    c) Inspect, at reasonable times, any of the following:
        i) Any stationary source.
        ii) Any process.
        iii) Any process equipment, including monitoring and air pollution control equipment.
        iv) Any work practices or operations regulated or required under the Renewable Operating Permit.
    d) As authorized by Section 5526 of the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

13. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Part 5522 of Act 451, P.A. 1994. (R 336.1213(1)(g))

14. This RO Permit does not convey any property rights or any exclusive privilege. (R 336.1213(1)(h))

15. For renewal of this RO Permit, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the RO Permit. (R 336.1210(7))

16. For modifications to this RO Permit, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in R 336.1216. (R 336.1210(9))

17. For changes to any process or process equipment covered by this RO Permit that do not require a revision of the RO Permit pursuant to R 336.1216, the permittee must comply with R 336.1215. (R 336.1215 and R 336.1216)

18. A RO Permit shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a) If additional requirements become applicable to this stationary source with three or more years remaining in the term of the permit, but not if the effective date of the new applicable requirement is later than the RO Permit expiration date. (R 336.1217(2)(a)(i))
    b) If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. (R 336.1217(2)(a)(ii))

c) If the department determines the permit contains a material mistake, that information required by any applicable requirement was omitted, or that inaccurate statements were made in establishing emission limits or the terms or conditions of the permit. (R 336.1217(2)(a)(iii))
d) If the department determines the permit must be revised to ensure compliance with the applicable requirements. (R 336.1217(2)(a)(iv))

19. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. (R 336.2001(2), R 336.2001(3) and R 336.2003(1))

20. Any required test results shall be submitted to the AQD in the format prescribed by the applicable reference test method within 60 days following the last date of the test. (R 336.2001(4))

Recordkeeping and Reporting

21. Records of any periodic emission or parametric monitoring required by Parts B, E and F and Appendices of this RO Permit, shall include the following information specified in R 336.1213(3)(b)(i), where appropriate (R 336.1213(3)(b)):
    a) The date, location, time, and method of sampling or measurements.
    b) The dates analyses of the samples were performed.
    c) The company or entity that performed the analyses of the samples.
    d) The analytical techniques or methods used.
    e) The results of the analyses.
    f) The related process operating conditions or parameters that existed at the time of sampling or measurement.

22. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the RO Permit. (R 336.1213(1)(e) and R 336.1213(3)(b)(ii))

23. Semiannually for the term of the permit as detailed in the requirement tables, or more frequently if specified in an applicable requirement in this RO Permit, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from permit requirements during the reporting period shall be clearly identified in the reports. (R 336.1213(3)(c)(i))

24. The permittee shall promptly report any deviations from permit requirements and certify the reports. The prompt reporting of deviations from permit requirements is defined in R 336.1213(3)(c)(ii) as follows, unless otherwise described in this RO Permit (R 336.1213(3)(c)):

    a) For deviations that exceed the emissions allowed under the RO Permit, prompt reporting means reporting consistent with the requirements of R 336.1912 as detailed in Condition 26. All reports submitted pursuant to this paragraph shall be promptly certified as specified in R 336.1213(3)(c)(iii).

    b) For deviations which exceed the emissions allowed under the RO Permit and which are not reported pursuant to R 336.1912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by R 336.1213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.

    c) For deviations that do not exceed the emissions allowed under the RO Permit, prompt reporting means the reporting of all deviations in the semiannual reports required by R 336.1213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

For reports required pursuant to R 336.1213(3)(c)(ii), prompt certification of the reports is described in R 336.1213(3)(c)(iii) as either of the following (R 336.1213(3)(c)):

d) Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

e) Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the permit were submitted to the department pursuant to R 336.1213(3)(c)(ii), a certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to R 336.1213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

25. Except for the alternate certification schedule provided in R 336.1213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this RO Permit shall contain a certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R 336.1213(3)(c))

26. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in R 336.1912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under R 336.1912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in R 336.1912(5) and shall be certified by a Responsible Official in a manner consistent with the Clean Air Act. (R 336.1912)

27. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in R 336.1212(7) for each emission unit/process group utilizing the emissions inventory forms provided by the department. (R 336.1212(7))

Compliance Reporting and Certification

28. A Responsible Official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the RO Permit except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Condition 24. This certification shall include all the information specified in R 336.1213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. (R 336.1213(4)(c))

29. The certification of compliance shall be submitted annually for the term of this RO Permit as detailed in the requirement tables, or more frequently if specified in an applicable requirement or in this RO Permit. (R 336.1213(4)(c))

Permit Shield

30. Compliance with the conditions of the RO Permit shall be considered compliance with any applicable requirements as of the date of RO issuance, if either of the following provisions is satisfied (R 336.1213(6)(a)(i) and (ii)):
    a) The applicable requirements are included and are specifically identified in the permit.
    b) The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part G of this RO Permit have been identified as non-applicable to this RO Permit and are included in the permit shield.

31. Nothing in this RO Permit shall alter or affect any of the following:
    a) The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the Act. (R 336.1213(6)(b)(i))
    b) The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this permit issuance. (R 336.1213(6)(b)(ii))
    c) The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. (R 336.1213(6)(b)(iii))
    d) The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. (R 336.1213(6)(b)(iv))

32. The permit shield shall not apply to provisions incorporated into this permit through procedures for any of the following:
    a) Changes for operational flexibility made pursuant to R 336.1215. (R 336.1215(5))
    b) Administrative amendments made pursuant to R 336.1216(1)(a)(i-iv) until the changes have been approved by the department. (R 336.1216(1)(b)(iii))
    c) Administrative amendments made pursuant to R 336.1216(1)(a)(v) until the amendment has been approved by the department. (R 336.1216(1)(c)(iii))
    d) Minor permit modifications made pursuant to R 336.1216(2). (R 336.1216(2)(f))
    e) State-only modifications made pursuant to R 336.1216(4) until the changes have been approved by the department. (R 336.1216(4)(e))

33. Expiration of this RO Permit results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the RO Permit, but the department fails to take final action before the end of the permit term, the existing RO Permit does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original permit term until the department takes final action. (R 336.1217(1)(c), R 336.1217(1)(a))

Stratospheric Ozone Protection

34. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

35. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Sub-part B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using HCFC-22 refrigerant.

Risk Management Plan

36. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).

37. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
    a) June 21, 1999,
    b) Three years after the date on which a regulated substance is first listed under 68.130, or
    c) The date on which a regulated substance is first present above a threshold quantity in a process.

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r), as detailed in Conditions 28 and 29 of this RO Permit. (40 CFR Part 68)

B-1. Source-Wide Requirements

At the time of RO permit issuance, the AQD has determined that there are no additional specific source-wide applicable requirements which apply to all emission unit/process groups at this stationary source. Therefore, the Permittee is subject to the General Requirements in Part A and any other terms and conditions contained in this RO permit.

C-1. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EULANDFILL(TREAT)	This emission unit represents the general Municipal Solid Waste (MSW) Landfill. Control Devices include three Skid-Mounted Utility Flares EUOPENFLARE and seven Internal Combustion Engines EUICENGINE1 through EUICENGINE7.	July 30, 1986/ June 15, 1999 / July, 2005 (third flare)	NA
EUACTIVECOLL	This emission unit represents the active landfill gas collection system at the landfill that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment.	Prior to June 1999	NA
EUTREATMENTSYS	Processing equipment that treats collected landfill gas for subsequent sale or use.	07/24/2001	FGENGINES
EUOPENFLARE	Open flare is an open combustor without enclosure or shroud. Skid-Mounted Utility Flare System with (2) 12 x 35 Flare stacks.	04/19/2002	NA
EUASBESTOS	Any active or inactive asbestos disposal site.	future	NA
EUCOLDCLEANER	This emission unit consists of one or more small coldcleaners/degreasers, which are exempt from the requirements of R336.1201 and which were installed after July 1, 1979.	01/01/1999	FGCOLDCLEANERS

TABLE E-1.1 EULANDFILL(TREAT) EMISSION UNIT CONDITIONS

DESCRIPTION – This emission unit represents the general Municipal Solid Waste (MSW) Landfill in which the collected landfill gas is sent primarily to a treatment system.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT – Three Skid-mounted Utility flare systems are used as supplemental and back-up control for the landfill gas to electric plant. The landfill gas is treated by a treatment system before the landfill gas is used as fuel or sold for subsequent use.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Methane concentration	500 ppm above background level	Calendar quarter	Surface of Landfill	V.1., V.2.	**40 CFR 60.753(d), 40 CFR 60.755(c), 40 CFR 63.1955(a)(1)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall comply with the requirements in 40 CFR 63.1955(b) and 40 CFR 63.1960 through §63.1980. **(40 CFR 63.1945(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall have installed a collection and control system that captures the landfill gas generated within the landfill as required by 40 CFR 60.752(b)(2)(i)(C), 60.752(b)(2)(ii), and 40 CFR 60.752(b)(2)(iii). **(40 CFR 60.752(b)(2)(i)(C), 60.752(b)(2)(ii), (40 CFR 60.752(b)(2)(iii), 40 CFR 63.1955(a)(1))**

2. The permittee shall route all the collected landfill gas to at least one of the following:
   a. A flare designed in accordance with §60.18 **(40 CFR 60.752(b)(2)(iii)(A), 40 CFR 63.1955(a)(1))**
   b. A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in § 60.754(d). **(40 CFR 60.752(b)(2)(iii)(B), 40 CFR 63.1955(a)(1))**

c. To a treatment system that processes the collected gas for subsequent sale or use. The treatment system shall be designed so that all emissions from any atmospheric vent(s) shall be subject to 40 CFR 60.752(b)(2)(iii)(B) or (C). **(40 CFR 60.752(b)(2)(iii)(C), 40 CFR 63.1955(a)(1))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. To determine if the methane concentration is less than 500 ppm above background at the surface of the landfill is exceeded, the permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. **(40 CFR 60.753(d), 40 CFR 63.1955(a)(1))**

2. The permittee shall use the following procedures for compliance with the surface methane operational standard as provided above in §60.753(d)

   a. The permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing approved by the AQD) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in §60.755(d). **(40 CFR 60.755(c)(1), 40 CFR 63.1955(a)(1))**

   b. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. **(40 CFR 60.755(c)(2), 40 CFR 63.1955(a)(1))**

   c. Surface emission monitoring shall be performed in accordance with Section 4.3.1 of Method 21 of Appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions. **(40 CFR 60.755(c)(3), 40 CFR 63.1955(a)(1))**

   d. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of §60.753(d). **(40 CFR 60.755(c)(4), 40 CFR 63.1955(a)(1))**

      i. The location of each monitored exceedance shall be marked and the location recorded. **(40 CFR 60.755(c)(4)(i), 40 CFR 63.1955(a)(1))**

      ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance. **(40 CFR 60.755(c)(4)(ii), 40 CFR 63.1955(a)(1))**

      iii. If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in §60.755(c)(4)(v) (below in condition **V.2.d.v.)** shall be taken, and no further monitoring of that location is required until the action specified in §60.755(c)(4)(v) (below in condition **V.2.d.v.)** has been taken. **(40 CFR 60.755(c)(4)(iii), 40 CFR 63.1955(a)(1))**

      iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 60.755(c)(4) (ii) or (iii) (above in conditions **V.2.d.ii.** or **iii.)** shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above backgrounds, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in §60.755(c)(4)(iii) (above in condition

V.2.d.iii.) or in §60.755(c)(4)(v) (below in condition **V.2.d.v.**) shall be taken. **(40 CFR 60.755(c)(4)(iv), 40 CFR 63.1955(a)(1))**

v. For any location where monitored methane concentration equals or exceeds 500 parts per million above backgrounds three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the AQD for approval. **(40 CFR 60.755(c)(4)(v), 40 CFR 63.1955(a)(1))**

3. The permittee shall comply with the provisions in §60.755(c) with the following instrumentation specifications and procedures for surface emission monitoring devices: **(40 CFR 60.755(d), 40 CFR 63.1955(a)(1))**
   a. The portable analyzer shall meet the instrument specifications provided in Section 3 of Method 21 of Appendix A of 40 CFR Part 60, except that "methane" shall replace all references to VOC. **(40 CFR 60.755(d)(1), 40 CFR 63.1955(a)(1))**
   b. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air. **(40 CFR 60.755(d)(2), 40 CFR 63.1955(a)(1))**
   c. To meet the performance evaluation requirements in Section 3.1.3 of Method 21 of Appendix A of 40 CFR Part 60, the instrument evaluation procedures of Section 4.4 of Method 21 of Appendix A of 40 CFR Part 60 shall be used. **(40 CFR 60.755(d)(3), 40 CFR 63.1955(a)(1))**
   d. The calibration procedures provided in Section 4.2 of Method 21 of Appendix A of 40 CFR Part 60 shall be followed immediately before commencing a surface monitoring survey. **(40 CFR 60.755(d)(4), 40 CFR 63.1955(a)(1))**

4. The permittee shall keep the following written records pertaining to surface methane monitoring: **(R 336.1213(3))**
   a. The route traversed including any areas not monitored because of unsafe conditions (ie. Truck traffic, construction, active face, dangerous areas, etc.) and areas included where visual observations indicate elevated levels of landfill gas,
   b. The location(s) and concentrations of any reading above 500 ppm above background,
   c. The meteorological conditions the day of the testing including wind speed, wind direction, temperature, and cloud cover).

5. The permittee shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in §60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. **(40 CFR 60.756(f), 40 CFR 63.1955(a) (1))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall implement a program to monitor on a monthly basis for cover integrity and implement cover repairs as necessary. **(40 CFR 60.755(c)(5), 40 CFR 63.1955(a)(1))**

2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall maintain up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. **(40 CFR 60.758(a), 40 CFR 63.1955(a)(1))**

3. Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may

be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. **(40 CFR 60.758(f), 40 CFR 63.1955(a)(1))**

4. The permittee shall calculate and record the NMOC emission rate for purposes of determining when the system can be removed as provided in 40 CFR 60.752(b)(2)(v), using the equation presented in 40 CFR 60.754(b). **(40 CFR 60.754(b))**

5. If the permittee adds any liquids other than leachate in a controlled fashion to the waste mass and does not comply with the bioreactor requirements in 40 CFR 63.1947, §63.1955(c), and §63.1980(c) through (f), the permittee shall keep a record of calculations showing that the percent moisture by weight expected in waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of the water added to the waste including leachate recirculation and other liquids addition, and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. The permittee shall document the calculations and the basis of the assumptions. **(40 CFR 63.1980(g))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Condition 24 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 28 and 29 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit an equipment removal report to the appropriate AQD District Supervisor 30 days prior to removal or cessation of operation of the control equipment. **(40 CFR 60.757(e), 40 CFR 63.1955(a)(1))**
   a. The equipment removal report shall contain all of the following items:
      i. A copy of the closure report submitted in accordance with §60.757(d) **(40 CFR 60.757(e)(1)(i), 40 CFR 63.1955(a)(1))**
      ii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year **(40 CFR 60.757(e)(1)(iii), 40 CFR 63.1955(a)(1))**
      iii. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired. **(40 CFR 60.757(e)(1)(ii), 40 CFR 63.1955(a)(1))**
   b. The AQD may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met. **(40 CFR 60.757(e)(2), 40 CFR 63.1955(a)(1))**

5. The permittee shall submit reports which shall be received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. The report shall include the location of each exceedance of the 500 parts per million methane concentrations as provided above (in condition **V.1.)** and the concentration recorded at each location for which an exceedance was recorded in the previous month. The report shall also contain include information on all deviations that occurred during the 6-month reporting period. **(40 CFR 60.757(f)(5), 40 CFR 63.1955(a)(1), 40 CFR 63.1955(c), 40 CFR 63.1980(a))**

6. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**

See Appendix 1-8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The collection and control system may be capped or removed provided that all the following conditions are met:
   a. The landfill shall be a closed landfill as defined in §60.751. A closure report shall be submitted to the appropriate AQD District Office as provided in §60.757(d) **(40 CFR 60.752(b)(2)(v)(A), 40 CFR 63.1955(a)(1))**
   b. The collection and control system shall have been in operation a minimum of 15 years; and **(40 CFR 60.752(b)(2)(v)(B), 40 CFR 63.1955(a)(1))**
   c. Following the procedures specified in §60.754(b), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart. **(40 CFR 60.752(b)(2)(v)(C), 40 CFR 63.1955(a)(1))**
2. The permittee shall submit a closure report to the appropriate AQD District Office within 30 days of waste acceptance cessation. The AQD may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the AQD, no additional wastes may be placed into the landfill without filing a notification of modification as described under §60.7(a)(4). **(40 CFR 60.757(d), 40 CFR 63.1955(a)(1))**
3. If monitoring demonstrates that the operational requirements above in §60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c). If corrective actions are taken as specified in condition §60.755, the monitored exceedance is not a violation of the operational requirements in this section.
   (40 CFR 60.753(g), 40 CFR 63.1955(a)(1))
4. For the approval of collection and control systems that includes any alternatives to the operational standards, test methods, procedures, compliance measures, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, the permittee shall follow the procedures in 40 CFR 60.752(b)(2). **(40 CFR 63.1955(c))**
5. The permittee shall comply with the requirements of 40 CFR Part 60, Subpart WWW. **(40 CFR 63.1955(a)(1))**
6. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart AAAA, including the general provisions specified in Table 1 and the SSM requirements in 40 CFR Part 63.6. **(40 CFR 63.1955, 40 CFR 63.6)**
7. The permittee is no longer required to comply with the requirements of Subpart AAAA of Part 63 when it is no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of Subpart WWW. **(40 CFR 63.1950)**

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE E-1.2 EUACTIVECOLL
EMISSION UNIT CONDITIONS

DESCRIPTION – This emission unit represents the active landfill gas collection system at the landfill that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour. **(40 CFR 60.753(e), 40 CFR 63.1955(a))**

2. The permittee shall operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
   a. 5 years or more if active; or **(40 CFR 60.753(a)(1), 40 CFR 63.1955(a))**
   b. 2 years or more if closed or at final grade **(40 CFR60.753(a)(2), 40 CFR 63.1955(a))**

3. The permittee shall operate the collection system with negative pressure at each wellhead except under the following conditions: **(40 CFR 60.753(b), 40 CFR 63.1955(a))**
   a. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the semi-annual reports as provided in §60.757(f)(1). **(40 CFR 60.753(b)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   b. Use of a geo-membrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan **(40 CFR 60.753(b)(2), 40 CFR 63.1955(a))**
   c. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the AQD **(40 CFR 60.753(b)(3), 40 CFR 63.1955(a))**

4. The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. **(40 CFR 60.753(c), 40 CFR 63.1955(a))**

5. The permittee shall operate the installed collection system to comply with in accordance with the provisions in §60.753, §60.755, and §60.756. **(40 CFR 60.752(b)(2)(iv), 40 CFR 63.1955(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. An active collection system shall:
   a. Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment **(40 CFR 60.752(b)(2)(ii)(A)(1), 40 CFR 63.1955(a))**
   b. The permittee shall place each well or design component in the collection system as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed at final grade. **(40 CFR 60.755(b), 40 CFR 60.752(b)(2)(ii)(A)(2), 40 CFR 63.1955(a))**
   c. Collect gas at a sufficient extraction rate **(40 CFR 60.752(b)(2)(ii)(A)(3), 40 CFR 63.1955(a))**
   d. Be designed to minimize off-site migration of subsurface gas. **(40 CFR 60.752(b)(2)(ii)(A)(4), 40 CFR 63.1955(a))**

2. The permittee shall design the collection system so that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). **(40 CFR 60.753(e), 40 CFR 63.1955(a))**

3. When adding gas collectors to the active gas collection system, a sufficient density of gas collectors shall be installed in compliance with §60.752(b)(2)(ii)(A)(2) (as specified above in condition **IV.1.)**. The permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the appropriate AQD District Office, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards in NSPS WWW. **(40 CFR 60.755(a)(2), 40 CFR 63.1955(a))**
   a. If the permittee is seeking to demonstrate compliance through the use of a collection system not conforming to the specifications provided in §60.759, then the permittee shall provide information that satisfies the AQD District Supervisor as specified in §60.752(b)(2)(i)(C), demonstrating that off site migration is being controlled. **(40 CFR 60.755(a)(6), 40 CFR 63.1955(a))**

4. The permittee shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead. **(40 CFR 60.756(a), 40 CFR 63.1955(a))**

5. The permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the appropriate AQD District Supervisor as provided in §60.752(b)(2)(i)(C) and (D):
   a. The collection devices within the interior and along the perimeter areas shall be certified, by a professional engineer, to achieve comprehensive control of surface gas emissions. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat. **(40 CFR 60.759(a)(1), 40 CFR 63.1955(a))**
   b. The sufficient density of gas collection devices determined in §60.759(a)(1) (above in condition **IV.5.a.**) shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior. **(40 CFR 60.759(a)(2), 40 CFR 63.1955(a))**
   c. The placement of gas collection devices determined in §60.759(a)(1) (above in condition **IV.5.a.**) shall control all gas producing areas, except as provided in §60.759(a)(3) (i) and (ii) (below in conditions **IV.5.c.i.** and **ii**). **(40 CFR 60.759(a)(3), 40 CFR 63.1955(a))**
      i. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the District Supervisor upon request. **(40 CFR 60.759(a)(3)(i), 40 CFR 63.1955(a))**

ii. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the AQD District Supervisor upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the equation in Appendix 7. **(40 CFR 60.759(a)(3)(ii), 40 CFR 63.1955(a)) See Appendix 7**

6. The permittee shall construct the gas collection devices using the following equipment or procedures:
   a. The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration. **(40 CFR 60.759(b)(1), 40 CFR 63.1955(a))**
   b. Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations. **(40 CFR 60.759(b)(2), 40 CFR 63.1955(a))**
   c. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness. **(40 CFR 60.759(b)(3), 40 CFR 63.1955(a))**

7. The active gas collection system shall be designed convey the landfill gas to a control system in compliance with §60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures: **(40 CFR 60.759(c), 40 CFR 63.1955(a))**
   a. For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in §60.759(c)(2) shall be used. **(40 CFR 60.759(c)(1), 40 CFR 63.1955(a))**
   b. For new collection systems, the maximum flow rate shall be in accordance with §60.755(a)(1). **(40 CFR 60.759(c)(2), 40 CFR 63.1955(a))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(3), the permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b) (above in conditions **III.3.a-c**). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the AQD for approval. **(40 CFR 60.755(a)(3), 40 CFR 60.756(a)(1), 40 CFR 63.1955(a))**

a. If monitoring demonstrates that the negative pressure is not being met, then corrective action shall be taken as noted in §60.755(a)(3) (above in condition **VI.1.**). If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements. **(40 CFR 60.753(g), 40 CFR 63.1955(a))**

2. The permittee is not required to expand the gas collection system as required in §60.755(a)(3) (above in condition **VI.1.**) during the first 180 days after gas collection system startup. **(40 CFR 60.755(a)(4), 40 CFR 63.1955(a))**

3. For the purpose of identifying whether excess air infiltration into the landfill is occurring, the permittee shall monitor each well monthly for temperature and oxygen as provided in §60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the AQD for approval. **(40 CFR 60.755(a)(5), 40 CFR 60.756(a)(2), 40 CFR 60.756(a)(3), 40 CFR 63.1955(a))**
   a. If monitoring demonstrates that the temperature and oxygen levels are not being met, then corrective action shall be taken as noted above and specified in §60.755(a)(5). If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements. **(40 CFR 60.753(g), 40 CFR 63.1955(a))**
   b. Unless an alternative test method is established as allowed by §60.752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:
      i. The span shall be set so that the regulatory limit is between 20 and 50 percent of the span **(40 CFR 60.753(c)(i), 40 CFR 63.1955(a))**
      ii. A data recorder is not required **(40 CFR 60.753(c)(ii), 40 CFR 63.1955(a))**
      iii. Only two calibration gases are required, a zero and span, and ambient air may be used as the span **(40 CFR 60.753(c)(iii), 40 CFR 63.1955(a))**
      iv. A calibration error check is not required **(40 CFR 60.753(c)(iv), 40 CFR 63.1955(a))**
      v. The allowable sample bias, zero drift, and calibration drift are ±10 percent. **(40 CFR 60.753(c)(v), 40 CFR 63.1955(a))**

4. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in §60.758(b)(1) through (b)(4) (below in conditions **VI.4.a-b**) as measured during the compliance determination. Records of the control device vendor specifications shall be maintained until removal. **(40 CFR 60.758(b), 40 CFR 63.1955(a))**
   a. The maximum expected gas generation flow rate as calculated in §60.755(a)(1). The permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the appropriate AQD District Office. **(40 CFR 60.758(b)(1)(i), 40 CFR 63.1955(a))**
   b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.758(a)(1). **(40 CFR 60.758(b)(1)(ii), 40 CFR 63.1955(a))**

5. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector; and the installation date and location of all newly installed collectors as specified under §60.755(b) (above in condition **IV.1.b.**). **(40 CFR 60.758(d), 40 CFR 60.758(d)(1), 40 CFR 63.1955(a))**

6. The permittee shall keep readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. **(40 CFR 60.758(e), 40 CFR 63.1955(a))**

7. The permittee shall maintain the following information:
   a. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded

from collection and the proposed sites for the future collection system expansion. **(40 CFR 60.757(g)(1), 40 CFR 63.1955(a))**

b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based. **(40 CFR 60.757(g)(2), 40 CFR 63.1955(a))**
c. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material. **(40 CFR 60.757(g)(3), 40 CFR 63.1955(a))**
d. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area. **(40 CFR60.757(g)(4), 40 CFR 63.1955(a))**
e. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill. **(40 CFR 60.757(g)(5), 40 CFR 63.1955(a))**
f. The provisions for the control of off-site migration. **(40 CFR 60.757(g)(6), 40 CFR 63.1955(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.121(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit to the appropriate AQD district office semi-annual reports for the gas collection system. Reports shall be received by the appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c). The semi-annual reports for the gas collection system shall include the following information: **(40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a), 40 CFR 63.1965)**
   a. Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (above in conditions **VI.1. and VI.3.**). **(40 CFR 60.757(f)(1))**
   b. All periods when the collection system was not operating in excess of 5 days. **(40 CFR 60.757(f)(4))**
   c. The date of installation and the location of each well or collection system expansion added pursuant to §60.755(a)(3), §60.755(b), and §60.755(c)(4) conditions **IV.1.b., VI.1. and VI.3. (40 CFR 60.757(f)(6))**
   d. Any deviations as listed in 40 CFR 63.1965. **(40 CFR 63.1965)**
   e. The permittee shall record instances when a positive pressure occurs in efforts to avoid fire. **(40 CFR 60.753(b)(1))**

5. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**

See Appendix 1-8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENTS

1. If monitoring demonstrates that the operational requirements in §60.753(b), (c), or (d) (above in conditions **III.3. and III.4.**) are not met, corrective action shall be taken as specified above in §60.755(a)(3) through (5) or §60.755(c) (conditions **VI.1. and VI.3.**). If corrective actions are taken as specified in §60.755 (above in conditions **VI.1. and VI.3.**), the monitored exceedance is not a violation of the operational requirements in §60.753 (conditions **III.3. and III.4.**). **(40 CFR 60.753(g), 40 CFR 63.1955(a))**

2. The above provisions in §60.755 (conditions **IV.1.b.,VI.1. and VI.3.**) apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**

3. If the permittee is seeking to install a collection system that does not meet the specifications in §60.759 (above in conditions **IV.5., IV.6., and IV.7.**) or is seeking to monitor alternative parameters to those required by §60.753 through §60.756, they shall provide information satisfactory to the appropriate AQD District Office as provided in §60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The AQD may specify additional appropriate monitoring procedures. **(40 CFR 60.756(e), 40 CFR 63.1955(a))**

4. The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR 63.6(e)(3) for EUACTIVECOLL. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE E-1.3 EUTREATMENTSYS
EMISSION UNIT CONDITIONS

DESCRIPTION – This emission unit treats landfill gas before it is used for subsequent use or sale. The treatment system removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion of the subsequent use, therefore guaranteeing that the intent of the destruction of the NMOC will be maintained.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Any emissions from any atmospheric vents or stacks associated with the treatments system shall be subject to §60.752(b)(2)(iii)(A) or (B).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the treatment system at all times when the collected gas is routed to the treatment system. **(40 CFR 60.753(f))**

2. The permittee shall operate the treatment system so that any emissions from any atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B). **(40 CFR 60.752(b)(2)(iii)(C), 40 CFR 63.1955(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The treatment system shall be designed as approved by AQD. **(40 CFR 60.752(b)(2)(iii)(C), 40 CFR 60.752(b)(2)(i)(D), 40 CFR 63.1955(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep up-to-date, readily accessible records of all control or treatment system exceedances of the operational standards in §60.753. **(40 CFR 60.758(e), 40 CFR 63.1955(a))**

2. The permittee shall keep records of all preventative maintenance performed in accordance with the preventative maintenance plan (PMP) prepared pursuant to condition **IX.3.** of this permit. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit to the appropriate AQD District Office semi-annual reports for the landfill gas treatment system. The report shall be received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   a. Value and length of time for exceedance of applicable parameters monitored under §60.756(b). **(40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   b. Description and duration of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow as specified under §60.756. **(40 CFR 60.757(f)(2), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   c. Description and duration of all periods when the treatment system was not operating for a period exceeding 1 hour and length of time the control device was not operating. **(40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

5. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15, for the reporting period July 1 through December 31, and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**

See Appendix 1-8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The provisions of §60.755 apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour for the treatment system. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**

2. The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR 63.6(e)(3) for EUTREATMENTSYS. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960, (40 CFR 63.1965(c))**

3. The permittee shall have implemented a written preventative maintenance plan (PMP) for EUTREATMENTSYS. At a minimum, the plan shall include a schedule of maintenance activities consistent with manufactures recommendations, and the operating variables that will be monitored to detect a malfunction or failure. A copy of the PMP shall be maintained on site and made available upon request. **(R 336.1213(3), R 336.1911)**

See Appendix 1-9

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE E-1.4 EUOPENFLARE
EMISSION UNIT CONDITIONS

DESCRIPTION - Open flare is an open combustor without enclosure or shroud. The initial performance testing for the open flare has already been performed and therefore is not required by this table.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the flare in accordance with §60.18. **(40 CFR 60.752(b)(2)(iii)(A), 40 CFR 63.1955(a))**

2. The permittee shall operate the flare at all times when the collected gas is routed to it. **(40 CFR 60.753(f), 40 CFR 63.1955(a)))**

3. The flare shall be operated with no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1))**

4. The flare shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f). **(40 CFR 60.18(c)(2))**

5. The flare shall be used only with the net heating value of the gas being combusted of 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted of 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f). **(40 CFR 60.18(c)(3))**

6. Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii). **(40 CFR 60.18(c)(4)(i))**
   a. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf). **(40 CFR 60.18(c)(4)(ii))**

b. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in §60.18(f)(4) less than the velocity, Vmax, as determined by the method specified in §60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed. **(40 CFR 60.18(c)(4)(iii))**

7. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(6). **(40 CFR 60.18(c)(5))**

8. Flares used to comply with provisions of 40 CFR Part 60 Subpart A shall be operated at all times when emissions may be vented to them. **(40 CFR 60.18(e))**

9. The permittee shall operate control system such that all collected gases are vented to a control system designed and operated in accordance with §60.752(b)(2)(iii). In event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour. **(40 CFR 60.753(e), 40 CFR 63.1955(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

   a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. **(40 CFR 60.756(c)(1), 40 CFR 63.1955(a))**

2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep up-to-date, readily accessible records for the life of the open flare of the data listed below in condition **VI.3.** as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the open flare vendor specifications shall be maintained until removal. **(40 CFR 60.758(b), 40 CFR 63.1955(a))**

3. The permittee shall maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the open flare pilot flame or open flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. **(40 CFR 60.758(b)(4), 40 CFR 63.1955(a))**

4. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep readily accessible continuous records of the equipment operating parameters specified to be monitored above in condition **VI.1.**, as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. **(40 CFR 60.758(c))**
   a. The permittee shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under condition **VI.1.a.**, and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. **(40 CFR 60.758(c)(4), 40 CFR 63.1955(a))**

5. The following records for the flare shall be maintained onsite:
   a. Records indicating presence of flare pilot flame **(40 CFR 60.18(f)(2))**

b. The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 60.18(f)(3))**
c. The actual exit velocity of the flare shall be calculated and recorded by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Federal Reference Test Methods 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip. **(40 CFR 60.18(f)(4))**
d. The maximum permitted velocity, Vmax, for flares complying with 40 CFR 60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 60.18(f)(5))**
e. The maximum permitted velocity, Vmax, for air-assisted flares shall be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 60.18(f)(6))**

See Appendices 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Condition 24 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit to the appropriate AQD District Office semi-annual reports for the gas collection system. Reports shall be received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c). **(40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))** The semi-annual report shall contain:
   a. Value and length of time for exceedance of applicable parameters monitored under §60.756(b). **(40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   b. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756. **(40 CFR 60.757(f)(2), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**
   c. Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating. **(40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

5. If the landfill is controlled, the permittee shall submit a closure report to the appropriate AQD District Supervisor within 30 days of waste acceptance cessation. The AQD may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the appropriate AQD District Supervisor, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4). **(40 CFR 60.757(d), 40 CFR 63.1955(a))**

6. The permittee shall submit an equipment removal report to the AQD 30 days prior to removal or cessation of operation of the open flare. **(40 CFR 60.757(e))**
   a. The equipment removal report shall contain all of the following items:
      i. A copy of the closure report submitted in accordance with §60.757 **(40 CFR 60.757(e)(1)(i), 40 CFR 63.1955(a))**
      ii. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired **(40 CFR 60.757(e)(1)(ii), 40 CFR 63.1955(a))**

iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. **(40 CFR 60.757(e)(1)(iii), 40 CFR 63.1955(a))**

b. Additional information may be requested as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met. **(40 CFR 60.757(e)(2), 40 CFR 63.1955(a))**

7. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The provisions of §60.755 apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour for the treatment system. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**

2. Compliance of 40 CFR Part 63, Part AAAA is determined in the same way it is determined for 40 CFR Part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected above in condition **VI.1.** are used to demonstrate compliance with the operating conditions for the open flare. The permittee shall have developed and implemented a written SSM for EUOPENFLARE. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE E-1.5 EUASBESTOS EMISSION UNIT CONDITIONS

DESCRIPTION: This landfill is actively or has accepted asbestos waste in the past.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT - NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the landfill accepts asbestos-containing waste materials from a source covered under 40 CFR 61.149, 40 CFR 61.150, or 40 CFR 61.155, the permittee shall meet the following operational requirements: **(40 CFR 61.154)**
   a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of 40 CFR 61.154(c) or (d) must be met. **(40 CFR 61.154(a))**
   b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of 40 CFR 61.154(c)(1) must be met. **(40 CFR 61.154(b))**
      i. Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. **(40 CFR 61.154(b)(1))** The warning signs must:
         A. Be posted in such a manner and location that a person can easily read the legend (**40 CFR 61.154(b)(1)(i)**)
         B. Conform to the requirements of 51 cm by 36cm (20 inches by 14 inches) upright format signs specified in 29 CFR 1910.145(d)(4) and 40 CFR 61.154(b)(1) **(40 CFR 61.154(b)(1)(ii))**
         C. The permittee shall display the legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in 40 CFR 61.154(b)(1). Spacing between any two lines must be at least equal to the height of the upper of the two lines. **(40 CFR 61.154(b)(1)(iii))**
      i The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public. **(40 CFR 61.154(b)(2))**
      ii Upon request and supply of appropriate information, the appropriate AQD District Supervisor will determine whether a fence or a natural barrier adequately deters access by the general public. **(40 CFR 61.154(b)(3))**

c. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall: **(40 CFR 61.154(c))**
   i. Be covered with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material. **(40 CFR 61.154(c)(1))** or
   ii. Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the appropriate AQD District Supervisor. For purposes of 40 CFR 61.154(c)(2), any used, spent, or other waste oil is not considered a dust suppression agent. **(40 CFR 61.154(c)(2))**

d. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), use an alternative emissions control method that has received prior written approval by the appropriate AQD District Supervisor according to the procedures described in 40 CFR 61.149(c)(2). **(40 CFR 61.154(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The placement of gas collection devices determined in paragraph §60.759(a)(1) shall control all gas producing areas, except as provided by §60.759 (a)(3)(i) and (a)(3)(ii). **(40 CFR 60.759(a)(3))**
   a. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the AQD upon request. **(40 CFR 60.759(a)(3)(i))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. For all asbestos-containing waste material received, the permittee of the active waste disposal site shall:
   a. Maintain waste shipment records that include the following information: **(40 CFR 61.154(e)(1))**
      i. The name, address, and telephone number of the waste generator. **(40 CFR 61.154(e)(1)(i))**
      ii. The name, address, and telephone number of the transporter(s). **(40 CFR 61.154(e)(1)(ii)**
      iii. The quantity of the asbestos-containing waste material in cubic meters (cubic yards). **(40 CFR 61.154(e)(1)(iii))**
      iv. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report. **(40 CFR 61.154(e)(1)(iv))**
      v. The date of the receipt. **(40 CFR 61.154(e)(1)(v))**
   b. As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator. **(40 CFR 61.154(e)(2))**
   c. Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record) **(40 CFR 61.154(e)(3))**

2. The permittee shall maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area storage. **(40 CFR 61.154(f))**

3. The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii). **(40 CFR 60.758(d)(2))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 24 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. (R **336.1213(4)(c))**

4. The permittee shall submit to the appropriate AQD District Supervisor, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities. **(40 CFR 61.154(h))**

5. The permittee shall furnish upon request, and make available during normal business hours for inspection by the AQD, all records required by 40 CFR Part 61. **(40 CFR 61.154(i))**

6. Notify the appropriate AQD District Office in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the appropriate AQD District Office at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. **(40 CFR 61.154(j))** Include the following information in the notice:
   a. Scheduled starting and completion dates. **(40 CFR 61.154(j)(1))**
   b. Reason for disturbing the waste. **(40 CFR 61.154(j)(2))**
   c. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the AQD or may require changes in the emission control procedures to be used. **(40 CFR 61.154(j)(3))**
   d. Location of any temporary storage site and the final disposal site. **(40 CFR 61.154(j)(4))**

See Appendix 1-8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D- 1. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCOLDCLEANERS	This emission unit consists of one or more small coldcleaners/degreasers, which are exempt from the requirements of R336.1201 and which were installed after July 1, 1979.	EUCOLDCLEANER

D- 1. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCOLDCLEANERS	This emission unit consists of one or more small coldcleaners/degreasers, which are exempt from the requirements of R336.1201 and which were installed after July 1, 1979.	EUCOLDCLEANER

TABLE F-1.1 FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANER

POLLUTION CONTROL EQUIPMENT - NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than 5 percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. Alternatively, the cold-cleaned parts may be wiped dry using rags or towels such that the solvent dripping does not occur and the solvent associated with the potential drips from the cold-cleaned parts does not evaporate to ambient air. The rags or towels shall be stored at all times in a leak-proof and air-tight closed container and disposed of in accordance with waste management laws. **(R 336.1611(2)(b), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:

   a. The air/vapor interface of the cold cleaner is no more than 10 square feet. **(R 336.1281(h))**

   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**

2. The cold cleaner shall be equipped with a device for draining cleaned parts. Alternatively, the cold-cleaned parts may be wiped dry using rags or towels such that the solvent dripping does not occur and the solvent associated with the potential drips from the cold-cleaned parts does not evaporate to ambient air. The rags or towels shall be stored at all times in a leak-proof and air-tight closed container and disposed of in accordance with waste management laws. **(R 336.1611(2)(b), R 336.1707(3)(b))**

3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

   a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

   b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**

   c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**

2. The permittee shall maintain the following information, in a tabular form, on file for each cold cleaner: **(R 336.1213(3))**

   a. A serial number, model number, or other unique identifier for each cold cleaner.

   b. The date the unit was installed, manufactured or that it commenced operation.

   c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).

   d. The applicable Rule 201 exemption.

   e. The Reid vapor pressure of each solvent used.

   f. If applicable, the option chosen to comply with Rule 707(2).

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**

4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20%, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 24 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

G-1. Non-Applicable Requirements

At the time of RO Permit issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in Part A (Conditions 30 through 33) of this RO Permit pursuant to R 336.1213(6)(a)(ii).

Appendices

Appendix 1-1. Abbreviations Used in This Permit

The following is an alphabetical listing of all abbreviations/acronyms used in this RO Permit.

A. abbreviations/acronyms

AP-42	Compilation of Air Pollutant Emission Factors
AQD	Air Quality Division
BDT	Best demonstrated technology
BID	Background information document
CAA	Federal Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DE	District Engineer
DEQ	Michigan Department of Environmental Quality
EPA	United States Environmental Protection Agency
EG	Emission Guidelines or Emission Unit/Process Group
GAR	Generally Applicable Requirement
HAP	Hazardous air pollutant
ID	Identification number
LFG	Landfill gas
MDEQ	Michigan Department of Environmental Quality
MSW	Municipal solid waste
MVAC	Motor vehicle air conditioner
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Nonmethane organic compounds
NSPS	New Source Performance Standards
NSR	New source review
OMB	Office of Management and Budget
PM	Particulate matter
PM10	Particulate matter less than 10 microns in size
PSD	Prevention of significant deterioration
PTE	Potential to emit
PTI	Permit to install
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
RO	Renewable Operating
SRN	State Registration Number
VE	Visible emissions
VOC	Volatile organic compounds

B. Measurement Abbreviations

BTU	British thermal units
°C	degrees Celsius
dscf	dry standard cubic feet
°F	degrees Fahrenheit
J/scm	joules per standard cubic meter
m	meters
Mg	megagrams
mm	millimeters
MW	megawatts
pph	pounds per hour

ppm	parts per million
ppmv	parts per million by volume
scf	standard cubic feet
sec	seconds
tpy	tons per year
yr	years

C. Conversion Factors

1 meter = 3.2808 feet
1 megagram = 1.1023 tons = 2204.6 pounds
1 cubic meter = 35.288 cubic feet = 1.3069 cubic yards
1 cubic meter = 0.0008101 acre-feet
degrees Celsius = (degrees Fahrenheit - 32)/1.8

Appendix 1-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this RO Permit and the permittee shall continue to comply with all applicable requirements listed in this RO Permit. A detailed Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

The permittee has certified that with respect to the future applicable requirement(s) identified in Table(s) E1.1 through E1.3 and F1.1 through F1.3, where the effective compliance date(s) are after the date of issuance and before the date of expiration of this RO Permit, the source will meet the requirement(s) on a timely basis unless the underlying applicable requirement requires a more detailed schedule. (R 336.1119(a)(iii), R 336.1213(4)(a))

Appendix 1-3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

The applicablility date for NSPS monitoring requirements is March 18, 2002 (18 months following submittal of the Landfill Collection and Control System Design Plan)

Appendix 1-4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

The applicablility date for NSPS recordkeeping requirements is March 18, 2002 (18 months following submittal of the Landfill Collection and Control System Design Plan)

Appendix 1-5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 1-6. Permits to Install/Operate

The following table lists the Permits to Install and/or Operate which relate to the identified Emission Units or Flexible Groupings:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit or Flexible Grouping ID
NA	NA	**NA**

Appendix 1-7. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 1-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the DEQ Report Certification form (EQP 5736) and DEQ Deviation Report form (EQP 5737) for the annual and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R 336.1213(4)(c) and R 336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.

C. NSPS Compliance Milestones

June 18, 1999: The Pine Tree Acres Landfill became subject to the NSPS 40 CFR Part 60, Subpart WWW after being issued a Solid Waste Disposal Area Construction Permit to increase the landfill's design capacity.

September 16, 1999: The company submitted an Initial Design Capacity and Tier 1 NMOC emission rate report indicating greater than 50 megagrams (Mg) per year of uncontrolled NMOC emissions.

September 18, 2000: The company submitted a Landfill Gas Collection and Control System Design Plan (LGCCS).

March 16, 2002: The LGCCS is required to be installed and operational within 30 months following the NMOC emission rate report indicating equal to or greater than 50 megagrams (Mg) per year (55 tons per year) of uncontrolled NMOC emissions.

September 18, 2002: The NSPS performance testing of the LGCCS is to be completed and the results report and initial ANNUAL compliance report are to be submitted within 6 months following the installation of the collection and control system (within 36 months following the NMOC emission rate report indicating greater than 50 tons per year of uncontrolled NMOC emissions).

Appendix 1-9. Preventative Maintenance Plan/Corrective Action Plan

Permittee shall implement and maintain a written preventative maintenance plan (PMP) for EUTREATMENTSYS.

The plan must be submitted to the AQD Southeast Michigan District Supervisor for approval. A copy of the PMP shall be maintained on site and made available upon request. Any modifications to the plan shall be submitted to the AQD District Supervisor for approval, and are subject to review by the AQD.

STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT

SECTION 2

PINE TREE ACRES INC. (LANDFILL)
AND
SUMPTER ENERGY ASSOCIATES (LANDFILL GAS CONTROL SYSTEM)

SRN: N5984

LOCATED AT

36600 29 MILE ROAD
LENOX TOWNSHIP, MI 48062

Permit Number: 199600384

Effective Date: December 12, 2002

Revision Date: March 2, 2006

Expiration Date: December 12, 2007

A-2. General Requirements

For the purpose of this Renewable Operating (RO) Permit, the **permittee** is defined as any person who owns or operates an emission unit/process group at a stationary source for which a RO Permit has been issued. This permit is issued to **Pine Tree Acres Inc. (Landfill) and Sumpter Energy Associates (Landfill gas control)**, hereinafter the permittee for this RO Permit. The department is defined in R 336.1104(d) as the Director of the Department of Environmental Quality or his or her designee.

Enforceability

All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. Those requirements which are enforceable by the state only are designated by an asterisk. (R 336.1213(5))

General Conditions

1. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this RO Permit shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this RO Permit. (R 336.1213(1)(f))

2. Except as provided in Subrules 2, 3, and 4 of R 336.1301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of R 336.1301(1)(a) or (b) unless otherwise specified in this RO Permit. The grading of visible emissions shall be determined in accordance with R 336.1303. (R 336.1301(1) in pertinent part):
   a) A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
   b) A limit specified by an applicable federal new source performance standard.

3. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). (R 336.1370)

4. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. (R 336.1910)

5. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001(1). (R 336.2001)

6. A change in ownership or operational control of a stationary source covered by a RO Permit shall be made pursuant to R 336.1216(1). (R 336.1219(3))

7. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
   a) Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. (R 336.1901(a)) *
   b) Unreasonable interference with the comfortable enjoyment of life and property. (R 336.1901 (b)) *

8. The permittee shall comply with all conditions of this RO Permit. Any permit noncompliance constitutes a violation of Act 451 of 1994, as amended, Part 55, (Air Pollution Control) and is grounds for enforcement action, for permit revocation or revision, or for denial of the renewal of the RO Permit. All terms and conditions of this RO Permit that are designated as federally enforceable are enforceable by the Administrator of the EPA and by citizens under the provisions of the CAA. Any terms and conditions based on applicable requirements,

which are designated as "state only", are not enforceable by the EPA or citizens pursuant to the CAA. (R 336.1213(1)(a))

9. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this RO Permit. (R 336.1213(1)(b))

10. This RO Permit may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Pursuant to R 336.1215 and R 336.1216, the permittee may make changes at a stationary source at his/her own risk. (R 336.1213(1)(c))

11. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the RO Permit or to determine compliance with this RO Permit. Upon request, a person shall also furnish to the department copies of any records that are required to be kept as a term or condition of this RO Permit. (R 336.1213(1)(e))

12. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities (R 336.1213(1)(d)):
    a) Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the permit.
    b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
    c) Inspect, at reasonable times, any of the following:
        i) Any stationary source.
        ii) Any process.
        iii) Any process equipment, including monitoring and air pollution control equipment.
        iv) Any work practices or operations regulated or required under the Renewable Operating Permit.
    d) As authorized by Section 5526 of the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

13. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Part 5522 of Act 451, P.A. 1994. (R 336.1213(1)(g))

14. This RO Permit does not convey any property rights or any exclusive privilege. (R 336.1213(1)(h))

15. For renewal of this RO Permit, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the RO Permit. (R 336.1210(7))

16. For modifications to this RO Permit, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in R 336.1216. (R 336.1210(9))

17. For changes to any process or process equipment covered by this RO Permit that do not require a revision of the RO Permit pursuant to R 336.1216, the permittee must comply with R 336.1215. (R 336.1215 and R 336.1216)

18. A RO Permit shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a) If additional requirements become applicable to this stationary source with three or more years remaining in the term of the permit, but not if the effective date of the new applicable requirement is later than the RO Permit expiration date. (R 336.1217(2)(a)(i))
    b) If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. (R 336.1217(2)(a)(ii))

c) If the department determines the permit contains a material mistake, that information required by any applicable requirement was omitted, or that inaccurate statements were made in establishing emission limits or the terms or conditions of the permit. (R 336.1217(2)(a)(iii))
d) If the department determines the permit must be revised to ensure compliance with the applicable requirements. (R 336.1217(2)(a)(iv))

19. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. (R 336.2001(2), R 336.2001(3) and R 336.2003(1))

20. Any required test results shall be submitted to the AQD in the format prescribed by the applicable reference test method within 60 days following the last date of the test. (R 336.2001(4))

Recordkeeping and Reporting

21. Records of any periodic emission or parametric monitoring required by Parts B, E and F and Appendices of this RO Permit, shall include the following information specified in R 336.1213(3)(b)(i), where appropriate (R 336.1213(3)(b)):
    a) The date, location, time, and method of sampling or measurements.
    b) The dates analyses of the samples were performed.
    c) The company or entity that performed the analyses of the samples.
    d) The analytical techniques or methods used.
    e) The results of the analyses.
    f) The related process operating conditions or parameters that existed at the time of sampling or measurement.

22. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the RO Permit. (R 336.1213(1)(e) and R 336.1213(3)(b)(ii))

23. Semiannually for the term of the permit as detailed in the requirement tables, or more frequently if specified in an applicable requirement in this RO Permit, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from permit requirements during the reporting period shall be clearly identified in the reports. (R 336.1213(3)(c)(i))

24. The permittee shall promptly report any deviations from permit requirements and certify the reports. The prompt reporting of deviations from permit requirements is defined in R 336.1213(3)(c)(ii) as follows, unless otherwise described in this RO Permit (R 336.1213(3)(c)):

    a) For deviations that exceed the emissions allowed under the RO Permit, prompt reporting means reporting consistent with the requirements of R 336.1912 as detailed in Condition 26. All reports submitted pursuant to this paragraph shall be promptly certified as specified in R 336.1213(3)(c)(iii).

    b) For deviations which exceed the emissions allowed under the RO Permit and which are not reported pursuant to R 336.1912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by R 336.1213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.

    c) For deviations that do not exceed the emissions allowed under the RO Permit, prompt reporting means the reporting of all deviations in the semiannual reports required by R 336.1213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

For reports required pursuant to R 336.1213(3)(c)(ii), prompt certification of the reports is described in R 336.1213(3)(c)(iii) as either of the following (R 336.1213(3)(c)):

d) Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

e) Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the permit were submitted to the department pursuant to R 336.1213(3)(c)(ii), a certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to R 336.1213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

25. Except for the alternate certification schedule provided in R 336.1213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this RO Permit shall contain a certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R 336.1213(3)(c))

26. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in R 336.1912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under R 336.1912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in R 336.1912(5) and shall be certified by a Responsible Official in a manner consistent with the Clean Air Act. (R 336.1912)

27. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in R 336.1212(7) for each emission unit/process group utilizing the emissions inventory forms provided by the department. (R 336.1212(7))

Compliance Reporting and Certification

28. A Responsible Official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the RO Permit except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Condition 24. This certification shall include all the information specified in R 336.1213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. (R 336.1213(4)(c))

29. The certification of compliance shall be submitted annually for the term of this RO Permit as detailed in the requirement tables, or more frequently if specified in an applicable requirement or in this RO Permit. (R 336.1213(4)(c))

Permit Shield

30. Compliance with the conditions of the RO Permit shall be considered compliance with any applicable requirements as of the date of RO issuance, if either of the following provisions is satisfied (R 336.1213(6)(a)(i) and (ii)):
    a) The applicable requirements are included and are specifically identified in the permit.
    b) The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part G of this RO Permit have been identified as non-applicable to this RO Permit and are included in the permit shield.

31. Nothing in this RO Permit shall alter or affect any of the following:
    a) The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the Act. (R 336.1213(6)(b)(i))
    b) The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this permit issuance. (R 336.1213(6)(b)(ii))
    c) The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. (R 336.1213(6)(b)(iii))
    d) The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. (R 336.1213(6)(b)(iv))

32. The permit shield shall not apply to provisions incorporated into this permit through procedures for any of the following:
    a) Changes for operational flexibility made pursuant to R 336.1215. (R 336.1215(5))
    b) Administrative amendments made pursuant to R 336.1216(1)(a)(i-iv) until the changes have been approved by the department. (R 336.1216(1)(b)(iii))
    c) Administrative amendments made pursuant to R 336.1216(1)(a)(v) until the amendment has been approved by the department. (R 336.1216(1)(c)(iii))
    d) Minor permit modifications made pursuant to R 336.1216(2). (R 336.1216(2)(f))
    e) State-only modifications made pursuant to R 336.1216(4) until the changes have been approved by the department. (R 336.1216(4)(e))

33. Expiration of this RO Permit results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the RO Permit, but the department fails to take final action before the end of the permit term, the existing RO Permit does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original permit term until the department takes final action. (R 336.1217(1)(c), R 336.1217(1)(a))

Stratospheric Ozone Protection

34. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

35. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Sub-part B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using HCFC-22 refrigerant.

Risk Management Plan

36. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).

37. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
    a) June 21, 1999,
    b) Three years after the date on which a regulated substance is first listed under 68.130, or
    c) The date on which a regulated substance is first present above a threshold quantity in a process.

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r), as detailed in Conditions 28 and 29 of this RO Permit. (40 CFR Part 68)

B-2. SOURCE-WIDE REQUIREMENTS

At the time of RO permit issuance, the AQD has determined that there are no additional specific source-wide applicable requirements which apply to all emission unit/process groups at this stationary source. Therefore, the Permittee is subject to the General Requirements in Part A and any other terms and conditions contained in this RO permit.

C- 2. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUICENGINE1	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	07/24/2001	FGENGINES
EUICENGINE2	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	07/24/2001	FGENGINES
EUICENGINE3	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	07/24/2001	FGENGINES
EUICENGINE4	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	07/24/2001	FGENGINES
EUICENGINE5	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	07/24/2001	FGENGINES
EUICENGINE6	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	12/31/2003	FGENGINES
EUICENGINE7	Reciprocating internal combustion engine. Landfill gas fired internal combustion engines (ICE) manufactured by Catepiller Inc. (Model No. 3516) and rated at 1138 HP and 8.6 MMBtu/hr.	12/31/2003	FGENGINES

D- 2. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGENGINES	Reciprocating internal combustion engines (RICEs) that use landfill gas as fuel for the generation of electricity for the power grid.	EUICENGINE1 THROUGH EUICENGINE7

TABLE F-2.1 FGENGINES (with treatment system) FLEXIBLE GROUP CONDITIONS

DESCRIPTION – **Internal Combustion Engines** - an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. Seven (7) Landfill gas fired internal combustion engines (ICE) manufactured by Caterpiller Inc. (Model No. 3516). Each ICE has a maximum power generation rating of 1,138 brake horsepower and a maximum operating fuel requirement of approximately 8.6 million Btu. This emission unit is for the ICEs and only includes requirements that were the result of a NSR permit. Since there is a treatment system before the engine plant that is being operated to ensure good combustion of the landfill gas in the engine plant, no NSPS WWW requirements need to be applied to these engines.

Emission Units: EUICENGINE1 THROUGH EUICENGINE7

POLLUTION CONTROL EQUIPMENT – NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
Nitrogen Oxides (NOX)	1.) 35.2 2.) 154.2	pounds per hour tons per year based on a 12-month rolling time period	FGENGINES	Section V and Section VI	R 336.1201(3)
Carbon Monoxide (CO)	1.) 51.1 2.) 223.8	pounds per hour tons per year based on a 12-month rolling time period	FGENGINES	Section V and Section VI	R 336.1201(3)
Hydrogen Chloride (HCL)	1.) 0.7 2.) 3.0	pounds per hour tons per year based on a 12-month rolling time period	FGENGINES	Section V and Section VI	R 336.1224(1)[1] R 336.1225
Non Methane Organic Compound (NMOC)	1.) 8.8 2.) 38.5	pounds per hour tons per year based on a 12-month rolling time period	FGENGINES	Section V and Section VI	R 336.1702(a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1.NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Permittee shall operate EGICENGINE1 through EGICENGINE7 within the electrical output (kW) ranges, and air/fuel mixture temperature (for NOx compliance) determined during the most recent performance test. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall determine, by sampling on an annual basis, the Chlorine Compounds present in the landfill gas (LFG) stream influent to EGICENGINE1 through EGICENGINE7. Sampling shall be done by Method 18, or alternate method as approved by the AQD District Supervisor. **(R336.1213(3), R336.2001, R336.2003 and 336.2004)**

2. The permittee shall calculate an HCl emission factor based on the concentration of chlorinated compounds in the LFG and the measured HCl emission rate (during the most recent performance test) and demonstrate compliance with the HCl emission limit on an annual basis by sampling and analysis of LFG. **(R336.2001, 336.2003 and 336.2004)**

3. Each time the LFG is analyzed to determine the chlorinated compound content, the permittee shall recalculate the emission factor allowed under Appendix 2-7. **(R 336.1213(3))**

4. Not less than 30 days prior to sampling, a complete sampling plan must be submitted to the AQD including the method or methods that will be used to determine the chlorinated compound composition of the LFG. **(R 336.1213(3))**

5. Not less than 7 days before sampling is conducted, the permittee shall notify the AQD District Supervisor in writing of the time and place of the sampling event and who shall conduct them. **(R336.2001(3))**

See Appendix 2-5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall continuously monitor and record the following parameters:
   a. Electrical output (kW) of each generator driven by an ICE,
   b. Hours of operation of each generator driven by an ICE,
   (R336.1201 (3))

2. The permittee shall measure and record the heating value of the landfill gas used as fuel in the ICEs on a weekly basis (for HCl compliance). **(R336.1201(3))**

3. The permittee shall keep a written record of the chlorinated compound content of the LFG as determined in the most recent sampling and analysis. **(R 336.1213(3))**

4. The permittee will monitor and record the temperature of air/fuel mixture at the aftercooler outlet a minimum of once per day excluding holidays and weekends when an engine operator is not scheduled, or called in, to be on site. A list of excluded holidays shall be maintained on site and made available to the Air Quality Division upon request. **(R336.1213(3))**

5. The permittee shall record and report as a deviation any air/fuel mixture temperature reading greater than 5°F in excess of the maximum air/fuel mixture temperature observed during the performance test in which compliance with the NOx emission limit was established. **(R336.1213(3))**

6. The permittee shall use the equations and emission factors as specified in Appendix 2-7 to calculate the emissions of CO, NOx, HCL, NMOC, from each ICE. Records of the monitored parameters and calculations shall be kept on file. **(R336.1201(3))**

See Appendix 2-7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 24 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be ***postmarked or*** received by appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 2-8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVICE1	12	23	**R336.1201(3)**
2. SVICE2	12	23	**R336.1201(3)**
3. SVICE3	12	23	**R336.1201(3)**
4. SVICE4	12	23	**R336.1201(3)**
5. SVICE5	12	23	**R336.1201(3)**
6. SVICE6	12	23	**R336.1201(3)**
7. SVICE7	12	23	**R336.1201(3)**

IX. OTHER REQUIREMENT(S)

1. NA

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

G-2. Non-Applicable Requirements

At the time of ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to this stationary source. This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
EUICENGINE1, EUICENGINE2, EUICENGINE3, EUICENGINE4, EUICENGINE5, EUICENGINE6, EUICENGINE7	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ), also known as the RICE MACT	These RICE are not subject to the RICE MACT because the stationary source is not considered a major source of Hazardous Air Pollutants (HAPs).

Appendices

Appendix 2-1. Abbreviations Used in This Permit

The following is an alphabetical listing of all abbreviations/acronyms used in this RO Permit.

A. abbreviations/acronyms

AP-42	Compilation of Air Pollutant Emission Factors
AQD	Air Quality Division
BDT	Best demonstrated technology
BID	Background information document
CAA	Federal Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DE	District Engineer
DEQ	Michigan Department of Environmental Quality
EPA	United States Environmental Protection Agency
EG	Emission Guidelines or Emission Unit/Process Group
GAR	Generally Applicable Requirement
HAP	Hazardous air pollutant
ID	Identification number
LFG	Landfill gas
MDEQ	Michigan Department of Environmental Quality
MSW	Municipal solid waste
MVAC	Motor vehicle air conditioner
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Nonmethane organic compounds
NSPS	New Source Performance Standards
NSR	New source review
OMB	Office of Management and Budget
PM	Particulate matter
PM10	Particulate matter less than 10 microns in size
PSD	Prevention of significant deterioration
PTE	Potential to emit
PTI	Permit to install
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
RO	Renewable Operating
SRN	State Registration Number
VE	Visible emissions
VOC	Volatile organic compounds

B. Measurement Abbreviations

Btu	British thermal units
°C	degrees Celsius
dscf	dry standard cubic feet
°F	degrees Fahrenheit
J/scm	joules per standard cubic meter
m	meters
Mg	megagrams
mm	millimeters
MW	megawatts
pph	pounds per hour

ppm	parts per million
ppmv	parts per million by volume
scf	standard cubic feet
sec	seconds
tpy	tons per year
yr	years

C. Conversion Factors

1 meter = 3.2808 feet
1 megagram = 1.1023 tons = 2204.6 pounds
1 cubic meter = 35.288 cubic feet = 1.3069 cubic yards
1 cubic meter = 0.0008101 acre-feet
degrees Celsius = (degrees Fahrenheit - 32)/1.8

Appendix 2-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this RO Permit and the permittee shall continue to comply with all applicable requirements listed in this RO Permit. A detailed Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

The permittee has certified that with respect to the future applicable requirement(s) identified in Table(s) F2.1, the effective compliance date(s) are after the date of issuance and before the date of expiration of this RO Permit, the source will meet the requirement(s) on a timely basis unless the underlying applicable requirement requires a more detailed schedule. (R 336.1119(a)(iii), R 336.1213(4)(a))

Appendix 2-3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 2-4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 2-5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 2-6. Permits to Install/Operate

The following table lists the Permits to Install and/or Operate which relate to the identified Emission Units or Flexible Groupings:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit or Flexible Grouping ID
269-97A	Seven landfill gas fired internal combustion engines	FGICENGINES (EGICE1 through EGICE7)
160-05	**Seven landfill gas fired internal combustion engines (modification of 269-97A)**	**FGICENGINES (EGICE1 through EGICE7)**

Appendix 2-7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in Table F-2.1.

I. Nitrogen Oxide (NOx), Carbon Monoxide (CO), and Non Methane Organic Compound (NMOC):

The permittee shall calculate emissions using the emission factors and equations listed below or an alternative method approved by the District Supervisor. The emission factors shall be established and updated through stack testing and approved by the District Supervisor.

Internal Combustion Engine horsepower (EGICE HP) = generator output (kW) / (0.746kW/HP * 93.9/100)

Pounds per hour (lb/Hr) = EGICE HP * lb/454g * X g/HP*Hr, where X is a factor from table below.

Ton per month (ton/mo) = lb/Hr * Hours of operation/month * Ton/2000 lbs

Pollutant	X
CO	2.9g/HP*Hr
NOx	2.0g/HP*Hr
NMOC	0.2g/HP*Hr

II. Hydrogen chloride (HCl):

Present in the landfill gas are numerous chlorinated compounds. The permittee shall calculate the emissions using the emission factor and equation listed below or an alternative method approved by the District Supervisor. The emission factor shall be established and updated through stack testing and approved by the District Supervisor.

The following equations provide an example of how HCl emissions can be calculated using the measured landfill gas lower heating value to calculate the flow rate of gas entering the seven (7) ICEs:

Notes:
A heat input of 151,090 Btu/min (LHV) is required to operate the engines at 100% load = 9.0654 MMBtu/hr.
800 kilowatts (gross) of electricity are generated at 100% load; therefore, one kilowatt hour of power generation at 100% load requires a heat input of 11,331.75 Btu (LHV).

151,090 Btu/Min * 60 min/hr/ 800 = 11,331.75 Btu/kWhr

LFG = landfill gas
LHV = lower heating value
LFG LHV = landfill gas lower heating value, measured and recorded on a weekly basis
cf = cubic foot
kWhr = kilowatt hour

LFG consumed (cf) = total gross kWhr (units 1-7) * (11,331.75 LHV Btu/kWhr) / (LFG LHV)
Total LFG flow (cf) = cf of LFG consumed / (total engine hours * 7 engines)

Total HCl emitted per hour:

Pound(s) HCl /Hr = (5.1lbHCl/MMft3) * (Total LFG flow)

Appendix 2-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the DEQ Report Certification form (EQP 5736) and DEQ Deviation Report form (EQP 5737) for the annual and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R 336.1213(4)(c) and R 336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.

Appendix 2-9. Preventative Maintenance Plan/Corrective Action Plan

At the time of RO permit issuance, the AQD determined that a Preventative Maintenance Plan / Corrective Action Plan was not warranted. Therefore, this appendix is not currently applicable.

DEQ

State Registration Number

N5984

Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT STAFF REPORT

ROP Number

199600384

Pine Tree Acres Inc. (Landfill)
and
Sumpter Energy Associates (Landfill Gas Control)

SRN: N5984

located at

36600 29 Mile Road, Lenox Township, Michigan, 48062

Permit Number:	199600384
Staff Report Date:	December 12, 2002
Amended Date:	March 2, 2006
RO Permit Issuance Date:	December 12, 2002
RO Permit Expiration Date:	December 12, 2007

This Staff Report is published in accordance with Part 5506 and 5511 of Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Specifically, R 336.1214(1) requires that the Department of Environmental Quality, (Department), Air Quality Division (AQD), shall prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating (RO) Permit.

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DEQ

State Registration Number

N5984

Michigan Department Of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

RO Permit Number

199600384

August 24, 2001, STAFF REPORT

Purpose

Major stationary sources of air pollutants are required to obtain and operate in compliance with a RO Permit pursuant to Title V of the Federal Clean Air Act of 1990 and Michigan's Administrative Rules for air pollution control pursuant to Section 5506(1) of Article II, Chapter I, Part 55 of P.A. 451 of 1994. Major stationary sources are defined by criteria in administrative rule R 336.1211(1). In addition to major stationary sources, specific source categories listed by the US Environmental Protection Agency (USEPA) in accordance with 40 CFR 70.3 may be required to obtain a RO Permit. A Municipal Solid Waste (MSW) Landfill with design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters is a source category that is required to obtain a RO Permit, even though the landfill's potential to emit does not qualify pursuant to the thresholds of a major source as defined in R 336.1211(1). The RO Permit is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by R 336.1214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to R 336.1212(6), and any determination made pursuant to R 336.1213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Pine Tree Acres Inc. (Landfill) and Sumpter Energy Associates (Landfill Gas Control) 36600 29 Mile Road Lenox Township, Michigan 48062
Source Registration Number (SRN):	**N5984**
Standard Industrial Classification (SIC) Code:	4953
Number of Stationary Source Sections:	2
Application Number:	199600384
Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. James Schmieder, Landfill Manager Phone Number: 810-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	Diane Kavanaugh Vetort, Environmental Quality Analyst 735-432-1254
Date Permit Application Submitted:	November 27, 1996
Date Application Was Administratively Complete:	November 27, 1996
Is Application Shield In Effect?:	Yes

Date Public Comment Begins:	May 20, 2002
Deadline for Public Comment:	June 18, 2002

Source Description

Pine Tree Acres Inc. owns and operates a municipal solid waste landfill (Pine Tree Acres Landfill) located at 36600 29 Mile Road and Sumpter Energy Associates owns and operates an electric generating facility consisting of seven internal combustion engines (ICE), located on 36450 29 Mile Road, Lenox, Macomb County, Michigan. The stationary source is located in an area designated as attainment for all criteria pollutants.

These two facilities are considered a single stationary source based on the definition in Michigan's Rule 119(q). Pine Tree Acres Landfill is a Type II Sanitary Landfill, which accepts and landfills municipal solid waste (MSW) and inert wastes such as construction and demolition debris, foundry sand, ash and low level contaminated soils. The facility historically has not accepted asbestos wastes but plans to have the ability to do so in the future. The solid waste is transported to the facility to an area (cell) where it is deposited on the working surface. Solid waste arrives in a variety of vehicles that potentially generate fugitive dust emissions. The deposited waste is covered with soil on a daily basis. When a cell reaches its design capacity, a liner is installed, covering the waste. Over time, the waste decomposes producing landfill gas (LFG). The LFG is comprised of methane, carbon dioxide, carbon monoxide, and volatile organic compounds (VOC). MSW initially undergoes aerobic microbial activity, which produces predominately nitrogen gas and carbon dioxide. As oxygen levels decline, gas composition changes to a mixture of methane and carbon dioxide. LFG typically contains a small percentage of non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAP), greenhouse gases, and Volatile Organic Compounds (VOC).

LFG is collected through a piping system, transferred by gas moving equipment (a blower), and is rotated and processed through the Sumpter Energy Associates seven (7) internal combustion engines. This is considered to be an active landfill gas system. The gas is exhausted after undergoing combustion via the engines. Combustion of the LFG fuel has the potential to emit nitrogen oxides (NOx), carbon monoxide (CO), VOC, sulfur dioxide (SO2), particulate and Hydrogen Chloride (HCl). The engines are considered the air pollution control system for the LFG emissions.

New Source Performance Standards (NSPS), Standards of Performance for Municipal Solid Waste Landfills, codified at 40 CFR 60 Subpart WWW, are applicable to MSW landfills, which have a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, and a construction, reconstruction or modification date after May 30, 1991. Furthermore, subject facilities are required to submit a design plan and install a collection and control system (if NMOC emissions are greater than or equal to 50 megagrams/year) that meet the provisions of 60.752 through 60.759 (Subpart WWW). Pursuant to 60.752(b)(2)(ii), a LFG collection and control system shall be installed and operational within 30 months after the first report in which the NMOC emission rate equals or exceeds 50 megagrams per year.

Pine Tree Acres has a design capacity of 33 million megagrams and was last modified June 18,1999, when it was issued a Solid Waste Disposal Area Construction Permit to increase the landfill's design capacity. Consequently, Pine Tree Acres is subject to the standards of 40 CFR 60 Subpart WWW and the provisions of R336.1210. On November 26, 1996, Pine Tree Acres submitted a ROP application in accordance with Title V provisions.

The following table lists stationary source-wide emission information as reported in Michigan Air Emissions Reporting System (MAERS) for **1999** submittal.

TOTAL STATIONARY SOURCE EMISSIONS - Criteria Pollutants

Pollutant	Tons per Year
Carbon Monoxide (CO)	108
Lead (Pb)	0
Nitrogen Oxides (NO_x)	58
Particulate Matter (PM)	11
Sulfur Dioxide (SO_2)	3
Volatile Organic Compounds (VOCs)	24
Individual Hazardous Air Pollutants (HAPS) **	
Hydrogen Chloride (HCl)	**4**
Total Hazardous Air Pollutants (HAPs)	**4**

**As listed pursuant to Section 112(b) of the Clean Air Act.

See Sections C and D in the enclosed draft RO Permit for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards in any applicable requirement.

Regulatory Analysis

The facility is located in Macomb County, which is currently designated as attainment/unclassified for all criteria pollutants. The source is not subject to R 336.1220 for Major Offset Sources. The facility is considered a major Title V 40 CFR Part 70 source due to the potential to emit of NO_x and CO exceeding 100 tons. Also, the facility is considered a 'synthetic minor' source in regards to Prevention of Significant Deterioration (PSD) (40 CFR 52.21) regulations.

The facility is not considered a major source of hazardous air pollutant (HAP) emissions because the potential emissions of any single HAP regulated by the Clean Air Act, Section 112 is less than 10 tons per year and the potential emissions of all HAPs combined are less than 25 tons per year. MSW landfills are scheduled to be regulated with new Maximum Achievable Control Technology (MACT) standards for existing MSW landfills (40 CFR 63). The Landfill MACT, Part 63, Subpart AAAA, will have a promulgation date after May 15, 2002. Thereafter the MACT standards will become applicable to this facility.

Furthermore, the facility is subject to NSPS for Municipal Solid Waste Landfills, specifically the 40 CFR Part 60, Subpart WWW. The regulation requires the State to review and approve all design plans for gas collection and control systems for landfills where the NMOC emissions are equal to or greater than 50 megagrams per year. The NSPS, Subpart WWW requires that a Part 70, Renewable Operating Permit (ROP), be submitted for all new and existing landfills with a design capacity equal to or exceeding 2.5 million megagrams and 2.5 million cubic meters.

The Pine Tree Acres Landfill became subject to the NSPS 40 CFR Part 60, Subpart WWW after being issued a Solid Waste Disposal Area Construction Permit on June 18, 1999, to increase the landfill's design capacity. The company submitted an Initial Design Capacity and Tier 1 NMOC emission rate report on September 16, 1999. The company submitted a Landfill Gas Collection and Control System Design Plan (LGCCS) on September 18, 2000. The LGCCS is required to be installed and operational by March 18, 2002. The company is required to conduct performance stack testing of the LGCCS by September 18, 2002.

The facility has submitted information indicating that the NMOC emissions are greater than 50 megagrams per year. The facility utilized the EPA model to estimate the NMOC emissions and did not conduct further Tier 2 or Tier 3 testing.

On June 16, 1998, the USEPA amended 40 CFR Part 60 Subpart WWW. In the June 16, 1998, amendment, EPA accidentally omitted 40 CFR Part 60.752(b)(2)(ii)(A) and (B) and 40 CFR 60.752(b)(2)(iii)(1) and (2). These portions of the CFR were intended to remain in effect. Therefore, these citations remain in the ROP.

The company requested that the facility's Title V permit be divided into 2 sections. Section 1 is comprised of the five emission units and three flexible groupings all located at Pine Tree Acres Landfill. Section 2 is comprised of seven emission units and two flexible groupings all located at Sumpter Energy Associates.

SECTION 1

EGLANDFILL represents the MSW landfill, which began accepting solid waste in 1988.

EGALGCS represents the active landfill gas collection system (ALGCS). The landfill was exempt from the requirement to obtain an approved Air Use Permit by Rule 285 (aa):

> *Rule 336.285 Permit system exemptions; miscellaneous. The permit system does not apply to:*
> *(aa) Landfills and associated flares and leachate collection and handling equipment.*

EGENCLOSED FLARE represents an enclosed combustor. At this time Pine Tree Acres landfill has not installed a flare however, they plan to have the ability to do so in the future therefore this table has been included for future applicability. The flare is proposed to be additional control as well as backup control for the seven ICEs.

EGASBESTOS represents any active or inactive asbestos disposal site. The facility historically has not accepted asbestos wastes but plans to have the ability to do so in the future. The requirements in this table have been identified as future applicable. The facility is not subject to the Asbestos NESHAP 40 CFR Part 61 Subpart M until such time as they accept regulated asbestos containing material (RACM) or fail to cover Category I or II non-friable ACM before undergoing activities that may cause the material to become RACM.

EGNEWCOLDCLEANER represents one or more cold cleaners exempt from the requirement to obtain an Air Use Permit by Rule 281(h) or Rule 285 (r)(iv). Pine Tree Acres currently operates one mineral spirits cold cleaner installed January 1, 1999.

Flexible Grouping FGLGCS represents the active landfill gas collection system.

FGCONTROLS represents any control equipment present, which in the case of Pine Tree Acres, consists of the seven (7) ICEs and the future proposed flare. Per Company suggestion, in order to streamline the ROP, the requirements contained in the separate Landfill Template Table FGENCLOSEDCOMBUSTORS have been incorporated into the FGCONTROLS Table. Both Tables pertain to the 7 ICEs and the proposed flare.

FGNEWCOLDCLEANERS represents any current and future exempt cold cleaners placed into operation after July 1, 1979.

SECTION 2

EGICENGINE#1 through EGICENGINE#7 represents the seven ICEs, which control the LFG emissions. The engines, owned and operated by Sumpter Energy Associates, were installed in 1997 and are permitted. The original Air Use Permit to Install (PTI) was issued for six (6) ICEs however, only five (5) are installed and operating at the time of ROP issuance. Sumpter Energy applied for and obtained a revised PTI, issued July 24, 2001 to add two additional engines bringing the total to 7 ICEs. Each ICE is subject to emission limits for NOx, CO, HCl and NMOC. The ICEs are also subject to the control requirements of the NSPS, 40 CFR Part 60, Subpart WWW.

Flexible grouping FGICENGINES represents the seven ICEs, which control the LFG emissions.

FGCONTROLS represents the seven ICEs, which control the LFG emissions. Per Company suggestion, in order to streamline the ROP, the requirements contained in the separate Landfill Template Table FGENCLOSEDCOMBUSTORS have been incorporated into the FGCONTROLS Table.

Please refer to Section E and Section F in the enclosed draft permit for detailed regulatory citations for each Emission Unit at the stationary source. Section A contains regulatory citations for General Conditions.

Equivalent Requirements

This permit does not include any equivalent requirements or significant changes pursuant to R 336.1212(6). Equivalent requirements are enforceable applicable requirements that are equivalent to the applicable requirements contained in the original New Source Review permit (NSR), a Consent Order/Judgment, and/or the State Implementation Plan (SIP).

Non-applicable Requirements

Section G of the draft RO Permit lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (conditions 30 through 33) of the draft RO Permit pursuant to R336.1213(6)(a)(ii).

Processes in Application Not Identified in Draft RO Permit

The following table lists processes that were included in the RO Permit application as exempt devices under R 336.1212(3). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

Exempt Emission Unit ID	Description of Exempt Emission Unit	RO Permit Exemption	NSR Permit Exemption
DV-LEACHATE	40,000 gallon above ground storage tank for leachate.	212(3)	285(aa)

Draft RO Permit Terms/Conditions Not Agreed to by Applicant

This permit does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to R 336.1214(2). If the person and the AQD cannot agree upon terms and conditions of a draft RO Permit, the terms and conditions that the AQD believes are necessary to comply with the requirements of R 336.1213 shall be incorporated into the RO Permit.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the date of issuance of this RO Permit.

Action Taken by the Department

The AQD proposes to approve RO Permit No. 199600384. A final decision on the RO Permit will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the United States Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Teresa Seidel, District Supervisor. The final determination for RO Permit approval/disapproval will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by the USEPA.

DEQ

State Registration Number

N5984

Michigan Department Of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

RO Permit Number

199600384

JULY 18, 2002 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated August 24, 2001, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating (RO) Permit terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft RO Permit during the 30-day public comment period as described in R 336.1214(3) and the comment period as described in R 336.1214(5). In addition, this addendum describes any changes to the draft RO Permit resulting from these pertinent comments.

General Information

Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. Mike Stallard, District Manager Phone Number: 810-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	**Diane Kavanaugh Vetort, Environmental Quality Analyst** **735-432-1254**

Summary of Pertinent Comments

No comments were received from the general public, however, Pine Tree Acres Inc. and Sumpter Energy Associates made several comments. A summary of the significant comments and responses to them follow below:

Section 1

General

Comment: Pine Tree Acres Inc. (PTA) commented that the current responsible official for Pine Tree Acres, Inc. is Mike Stallard, District Manager.

Response: This change was made.

Table E-1.3 EGENCLOSED FLARE

Comment 1: PTA stated that two open flame flare units have now been installed to manage excess landfill gas and serve as back up to the engine plant. The Draft ROP contains several references to the Company's proposed installation of an Enclosed Flare and also Table E-1.3 EGENCLOSED FLARE containing future applicable requirements. The references and Table should be replaced by the recently installed Open Flare.

Response 1: The EGENCLOSED FLARE Table and references were removed and replaced by Table and references for EGOPEN FLARE.

Comment 2: The Draft ROP requires that PTA submit a complete test protocol for the performance test of their landfill gas control equipment to AQD for approval at least 60 days prior to the anticipated test. PTA requests that AQD allow them to submit the protocol at least 30 days prior to the test date.

Response 2: The requested change was made.

Table E-1.1 EGLANDFILL (40 CFR PART 60 SUBPART WWW LANDFILLS)

Comment: PTA commented that the requirement to submit an annual NMOC emission rate report by March 15 for the previous calendar year is not required by NSPS once the facility has demonstrated greater than 50 Mg/yr NMOC emissions, which starts the timeline for the installation of a gas collection and control system. They also questioned March 15, as the due date.

Response: The annual NMOC emission rate report is due until such time as the Company has installed an approved landfill gas collection and control system. The control system is not approved until it has undergone performance testing to determine compliance with the NMOC emission standard. Table E-1.1 EGLANDFILL Condition I.C.3 of the Draft ROP contains the exemption from the requirement to submit annual NMOC emission rate reports under 40 CFR 60.757(b)(1) and (2). In regard to the March 15 submittal deadline for these reports, the intent of using this date was to simplify report submittal due dates since March 15, is the current deadline for submittal of Semiannual Deviation reporting, Annual Compliance Certification, and Michigan Air Emissions Reporting.

Appendix 1-10. Fugitive Dust Plan

Comment: The Draft ROP requires the permittee to implement an AQD approved fugitive dust plan in Appendix 1-10. The Company stated that if a fugitive dust plan is not specifically required by regulation then they would choose to have the Appendix removed.

Response: At the time of initial draft the Company was asked whether they were willing to accept the AQD minimal plan and it was incorporated into the Appendix 1-10. Based on the Company's comment and because they are not required to implement a Fugitive dust plan under Act 451 or the administrative rules at this time, the Appendix 1-10 and associated references have been removed.

Section 2

Table F-2.1 FGICENGINES

Comment1: Sumpter Energy Associates (Sumpter) commented that, "The requirement to monitor combustion air and or/fuel temperature is an additional requirement as compared to the monitoring specified in Permit to Install No. 269-97A" and is an "unnecessary monitoring provision". They stated, "The addition of this monitoring requirement does not simplify and clarify applicable requirements and compliance with them.....as stated in the RO Permit public comment period notice." They also indicated and described that they do monitor "air/fuel mixture temperature" as opposed to air manifold temperature.

They requested that Condition III.A.2.d be modified to specify that the air/fuel mixture at the aftercooler outlet will be monitored and recorded at least once per business day (excludes weekends and holidays when engine operators are not scheduled to be on-site). They also requested that Condition III.B.6.1 be modified to specify that a deviation will be defined as any reading of greater than 5°F in excess of the

maximum air/fuel mixture temperature observed during the performance test in which compliance with the NOx emission limit was established.

Response1: The AQD notes Sumpter's reference was incorrect and should be III.A.2.**1**.d. The AQD agrees to modify all applicable conditions in the Draft ROP specifying air manifold temperature, replacing this reference with "air/fuel mixture temperature". It is AQD position that this monitoring is necessary as periodic compliance monitoring pursuant to Rule 213 (3) to demonstrate the NOx emission limit and proper operation of the ICEs. Due to the fact that Sumpter indicated there is no continuous recording device, and because this requirement pertains only to NOx compliance, the Condition III.A.2.1.d was removed as opposed to being modified, and instead, two new conditions have been added. Condition III.A.2.2. details the monitoring, recordkeeping and reporting requirements associated with the air/fuel mixture temperature. Condition III.A.2.3 refers to air/fuel mixture temperature deviation reporting and therefore was added here as opposed to under the performance stack testing Condition III.B.6.1.

Comment2: Sumpter requested a modification of the requirement in the Draft ROP to conduct performance testing for CO, NOx and HCl and submit the test results report by September 18, 2002. They requested they be allowed to conduct these performance tests within 180 days of issuance of the ROP.
Response2: The requested changes were made. AQD's performance stack testing procedures also allow up to 60 days following the last date of the test to submit the test results report. This change was also made to the performance test conditions in Table F-2.1 FGICENGINES for CO, NOx, and HCl.

Comment 3: Sumpter proposed the following, "Sumpter Energy will install a thermocouple for each engine in the combined IC engine exhaust gas downstream of the combustion cylinders to monitor and record the average combustion exhaust temperature at least once every fifteen minutes. The recorded temperature will be compared to the exhaust temperature measured at the same location during the most recent performance test at which compliance with the NMOC emission standard was determined."

Response 3: The AQD does not agree that the measurement of exhaust temperature in the combined IC engine exhaust gas downstream is an acceptable or adequate alternative to measuring the temperature of the combustion gases exhausted from each cylinder on each engine.

In lieu of direct combustion temperature measurement the AQD has accepted and incorporated into the Draft ROP the alternative monitoring proposal submitted by PTA/Sumpter in their Landfill Collection and Control System Design Plan pursuant to 40 CFR 60.752(b)(2)(i)(B). The AQD has also included an additional condition that allows the company the flexibility to propose other alternative monitoring scenarios in accordance with 40 CFR 60.756(e). On June 7, 2002, the AQD District supervisor sent a letter to the Company that included an EPA determination detail that addresses approval of alternative monitoring of direct combustion temperature measurement required by 40 CFR 60.756(b)(1).

Changes to the May 20, 2002 Draft RO Permit

The following modifications were made to the May 20, 2002 Draft Renewable Operating Permit:

SECTION 1

C-1. Emission Unit/Process Group Summary Table:

The emission unit EGENCLOSED FLARE was removed and replaced by EGOPEN FLARE with installation date of April 18, 2002.

D-1. Flexible Groupings Summary Table

FGCONTROLS, the emission unit EGENCLOSED FLARE was removed and replaced with EGOPEN FLARE.

Table E-1.1 EGLANDFILL:

Condition I.A. Control equipment description for EGENCLOSED FLARE was removed and replaced by EGOPEN FLARE.

Condition V.6. was removed.

Table E-1.2 EGALGCS:

Condition I.A. control equipment description of EGENCLOSED FLARE was replaced by EGOPEN FLARE.

Table E-1.3 EGENCLOSED FLARE:

The entire Table was removed and replaced by Table E-1.3 EGOPEN FLARE.

Table E-1.3 EGOPEN FLARE:

Condition III.B.3.1 – The condition now reads, "Conduct performance test of EGOPENFLARE and submit results report by September 18, 2002. Verification of Opacity includes the submittal of a complete report of the test results. **(40 CFR 60.8(a) R336.2001(4))"**

Condition III.B.3.2 – The condition now reads, "No less than 30 days prior to testing, a complete stack testing plan must be submitted to the AQD. The final plan must be approved by the AQD prior to testing. **(R336.2003 and 336.2004)"**

Table F-1.1 FGLGCS:

Condition I.A. control equipment description of EGENCLOSED FLARE was replaced by EGOPEN FLARE.

Table F-1.2 FGCONTROLS

Condition I.A. control equipment description of EGENCLOSED FLARE was replaced by EGOPEN FLARE.

Appendix 1-10

The entire Appendix was removed.

SECTION 2

Table F-2.1 FGICENGINES:

Condition III.A.2.1.d. was deleted and was replaced by Conditions III.A.2.2 and 3.

Condition III.A.2.2. was added to require the monitoring and recording of the air/fuel mixture temperature.

Condition III.A.2.3 was added to identify what constitutes a reportable deviation of the air/fuel mixture temperature.

Condition III.A.3.3 was added as an applicable requirement identifying the approved alternate combustion temperature monitoring proposed by the Company in their Landfill Gas Collection and Control System Design Plan.

Condition III.A.3.4 was added as an applicable requirement identifying the Company's ability to propose future alternatives to the combustion temperature monitoring required under Condition III.A.3.3.

Condition III.B.3.1 – (CO performance test) The condition now reads, "Within 180 days following issuance of this RO permit,..." and, "Verification of emission rates includes the submittal of a complete report of the test results within 60 days following the last date of the test, ...". The reference to air manifold temperature was removed.

Condition III.B.6.1 – (NOx performance test) The condition now reads, "Within 180 days following issuance of this RO permit,..." and, "Verification of emission rates includes the submittal of a complete report of the test results within 60 days following the last date of the test, including... the temperature of air/fuel mixture in which the engines can operate in compliance with their emission limits." The reference to air manifold temperature was removed and replaced by temperature of air/fuel mixture.

Condition III.B.9.1 – (HCl performance test) The condition now reads, "Within 180 days following issuance of this RO permit,..." and, "Verification of emission rates includes the submittal of a complete report of the test results within 60 days following the last date of the test, ..."

Condition III.B.12.1– (NMOC performance test) the reference to "air manifold temperature" was removed.

Condition V. – reference to "air manifold temperature" was removed and replaced by "air/fuel mixture temperature".

Summary of Pertinent Comments

Pine Tree Acres Inc. and Sumpter Energy Associates made several comments on the Proposed RO permit following a 7 day review period. A summary of the significant comments and responses to them follow below:

SECTION 1

Table E-1.1 EGLANDFILL

Comment: PTA requested that a cross reference be added to show the relationship between this Condition I.C.3 and Condition IV.5(a) and (b).

AQD response: This change has been made.

Comment: PTA commented that Condition IV.1 should be revised to state, "Prompt reporting of deviations pursuant to Condition 24 of Part A, *except as defined in Table F.1.1, Section V.6.*" (The same change was requested for Table E-1.3 EGOPENFLARE, Table F-1.1 FGLGCS, and Table F-1.2 FGCONTROLS)

AQD response: This change was not made. This condition is a standard template condition referring to General Condition No. 24. The AQD believes the change is not necessary as both Condition IV.1 and Table F-1.1 Condition V.6. clearly state the reporting requirements.

Table E-1.3 EGOPENFLARE

Comment: PTA commented that Condition III.A.2.1 imposes a specific requirement to monitor the pilot flame whereas condition I.C.2 (a) specifies a broader monitoring obligation. They commented that Condition III.A.2.1 should be revised to stipulate that the pilot flame be monitored only when the pilot is operated and that such intermittent operation should not be construed as noncompliance if the Condition I.C.2(a) is fulfilled.

AQD response: This change was not made. The conditions referenced are part of the Landfill ROP Template. The conditions have separate applicable requirements, III.A.2.1 is taken directly from the NSPS and I.C.2 (a) is taken directly from the General Provisions 60.18. As such the Conditions are both applicable to the emission unit.

Comment: PTA commented that they submitted to US EPA, an alternative method of determining the net heating value combusted in open flares from Landfills, on a site specific basis. EPA approved this method in a letter dated June 17, 2002. They requested a change to Condition V.3. indicating the approval of alternative methods by EPA.

AQD response: This change has been made.

Table E-1.4 EGASBESTOS

Comment: PTA commented requesting a clarification be added to Condition V.1.(b), by inserting a reference to Condition V.1 (c) within this condition.

AQD response: This change has been made.

Table F-1.2 FGCONTROLS

Comment: PTA commented that Condition I.C.1. is taken out of context from the cited regulation and could establish a performance obligation to test to demonstrate compliance for open flares since it is part of the control system.

AQD response: This change was not made. This condition is part of the Landfill ROP Template. AQD believes the condition as written clearly states "except as provided for in 60.18" which is the General Provision that specifically addresses the testing requirements for Open Flares.

Comment: PTA commented that Condition V.2 (a) be revised to include provisions for an approved alternative monitoring plan.

AQD response: This change was not made. The provision for approval of alternative monitoring is included in the RO permit under Table F-1.1 FGLGCS, Condition I.C.4.

SECTION 2

Table F-2.1 FGICENGINES

Comment: Sumpter Energy Associates proposed to implement an alternative monitoring procedure for combustion temperature monitoring as required by 60.756(b)(1). The company will demonstrate certain operating parameters during the performance tests required by 40 CFR 60.752(b)(2)(iii)(B).

AQD response: EPA issued a Determination Detail (Control Number: 9900021) dated May 19, 1999, allowing the approval of alternatives to monitoring combustion temperature. AQD included in the Proposed RO permit a condition that states,

"In lieu of direct combustion temperature measurement of each EGICENGINE#1 through #7, the Permittee may use data collected during the most recent performance test to propose an alternative monitoring method. The alternative monitoring method must be approved by the AQD District Supervisor."

Based on the results of the performance test and the company's proposal to implement the alternatives as indicated in EPA's Determination Detail, several changes have been made to Table F-2.1 incorporating the proposed alternative monitoring.

Changes to the May 20, 2002 Draft RO Permit

Table E-1.1 EGLANDFILL

Condition I.C.3 was revised to insert a cross reference to the requirements of 40 CFR 60.757(b)(1) and (2). The following was inserted: (Condition No.IV.5(a) and (b) of this RO permit).

Table E-1.3 EGOPENFLARE

Condition V.3. – The last sentence of this condition now reads, "The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f), or by alternative methods approved by EPA."

Table E-1.4 EGASBESTOS

Condition V.1.b. was revised by inserting a reference to, Condition No. V.1.c. of this RO permit, within this condition.

Table F-2.1 FGICENGINES

Condition I.C.1.(i)(ii) and (iii) was added as an applicable requirement identifying the Company's alternative combustion temperature monitoring based on EPA Determination Detail (Control Number: 9900021).

Condition III.A.2.4 was added as an applicable requirement identifying the Company's alternative combustion temperature monitoring specific to measuring and recording the oxygen concentration in the exhaust gas and what constitutes a reportable exceedance.

Condition III.A.3.3 was deleted due to the proposal and approval of the alternative combustion temperature monitoring procedure based on EPA Determination Detail.

Condition V. now reads, "Permittee shall operate EGICENGINE#1 through EGICENGINE#7 within the electrical output (kw) ranges, *the acceptable oxygen exhaust content range,* and air/fuel mixture temperature determined during the most recent performance test."

Prepared by Diane Kavanaugh Vetort, Environmental Quality Analyst, Air Quality Division.

DEQ

State Registration Number

N5984

Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

ROP Number

199600384

October 31, 2005 STAFF REPORT FOR RULE 214(2) REOPENING

Purpose

On August 24, 2001,, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. 199600384 to Pine Tree Acres, Inc and Sumpter Energy Associates pursuant to R 336.1214. Once issued, the AQD is required to reopen the ROP as described in R 336.1217. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1217.

General Information

Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. James Logsdon, District Manager Phone Number: 586-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	**Diane Kavanaugh Vetort, Environmental Quality Analyst** 586-753-3740

Changes to the 2/28/05 Draft ROP Reopening

The Department of Environmental Quality (DEQ), Air Quality Division (AQD), reopened the ROP pursuant to Rule 217(2) (a) (i) in order to incorporate applicable requirements associated with the National Emission Standard for Hazardous Air Pollutants: Municipal Solid Waste, 40 CFR Part 63 Subpart AAAA (Landfill MACT) and the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63 Subpart ZZZZ (RICE MACT). Furthermore, the ROP Tables in Sections 1 and 2 were modified to incorporate the new ROP Landfill Template. The RO Permit cover sheet and General Conditions are unchanged from the Initial ROP. Applicable requirements of the Landfill MACT were added to existing ROP conditions with underlying applicable requirement(s) of the federal New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills.

During technical review of the ROP Reopening it was determined that 40 CFR Part 63 Subpart ZZZZ (RICE MACT) is not applicable to the seven internal combustion engines (ICEs) operating at the Stationary Source. The Company submitted a Stationary Source-wide potential to emit (PTE) demonstrating that the stationary source is not a major source of Hazardous Air Pollutants (HAPs) and therefore the ICEs are not subject to the RICE MACT.

DEQ

State Registration Number

N5984

Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

ROP Number

199600384

October 31, 2005 STAFF REPORT FOR RULE 216(3) SIGNIFICANT MODIFICATION

Purpose

On December 12, 2002, the Department of Environmental Quality (Department), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. 199600384 to **Pine Tree Acres Inc. (Landfill)**
and
Sumpter Energy Associates (Landfill Gas Control) pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(3).

General Information

Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. James Logsdon, District Manager Phone Number: 586-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	**Diane Kavanaugh Vetort, Environmental Quality Analyst** 586-753-3740
Date Application For Significant Modification Was Submitted:	June 7, 2004
Date Public Comment Begins:	October 31, 2005
Deadline for Public Comment:	November 30, 2005

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a significant modification pursuant to R 336.1216(3).

Description of Changes to the ROP

The Company applied for and received a determination from the MDEQ AQD that the landfill gas engine generators (internal combustion engines) operated by Sumpter Energy Associates, which control landfill gas emissions from the Pine Tree Acres Landfill are exempt from federal Standards of Performance for New Stationary Sources (NSPS) for Municipal Solid Waste Landfills, due to the gas treatment processes operated by Pine Tree Acres Landfill. The Company submitted an application for an ROP Significant Modification, which was received on June 8, 2004.

The Company submitted a letter dated September 13, 2004, requesting an ROP modification for EGOPENFLARE to remove an NSPS requirement not applicable to the source. The Company demonstrated that the EGOPENFLARE control equipment is not equipped with a bypass of the flare. Therefore, AQD reviewed the request and determined that based on US EPA guidance documents the

NSPS requirement to install a device that records flow to or bypass of the flare was intended for flares with control bypass stacks. The AQD agreed to remove the requirement.

On June 13, 2005, Sumpter Energy Associates submitted a New Source Review Air Use Permit to Install modification application. The Company requested the removal of a FGICENGINES monitoring condition with applicable requirement of R 336.1201(3). The monitoring requirement involves the use of the landfill gas flow meter owned and operated by the Pine Tree Acres Landfill Section of the ROP. The ROP incorporated the original PTI condition that requires Sumpter to continuously monitor and record the total flow rate of landfill gas to the ICEs (for HCl compliance). Sumpter's modification application proposed an alternative method of calculating the Hydrogen Chloride emission rate.

At the same time as the Significant Modification request, the ROP underwent a Reopening pursuant to R 336.1217 (2). The format of the ROP was also modified at this time in order to incorporate the new ROP Landfill Template. Therefore all references to Tables in this Staff Report Addendum (below) are from the existing ROP format and have since been modified (see February 28, 2005 Staff Report Addendum above).

Modifications to Section 1: EGOPENFLARE
Table E-1.3 was revised to remove a portion of Condition 2, specifically Condition 2. (b) (i-ii), with underlying applicable requirement of 40 CFR 60.756(c) (2), was removed. The AQD determined this requirement is no longer applicable since the EGOPENFLARE control does not have a bypass stack. The applicable requirement of 40 CFR 60.756(c) and (c) (1) remain in the ROP.

Modifications to Section 1: FGCONTROLS
Table F-1.2 was revised to remove NSPS requirements for internal combustion engines (ICE) compressors and to add the Treatment System requirements. Removed requirements pursuant to 60.752(b) (2) (iii) (A) (B) and added requirements pursuant to 60.752(b) (2) (iii) (C).

Modifications to Section 2: FGICENGINES
Table F-2.1 was revised to remove the NSPS requirements for ICE compressors as they are no longer applicable.

Table F-2.1 Condition III.A.2.1 (c) was removed due to the Company's requested modification resulting in approval of Permit to Install No. 160-05. Additional monitoring requirements were added due to proposed alternative monitoring, in the final ROP these are Condition VI. 2. and 3. as follows:

2. Permittee shall measure and record the heating value of the landfill gas used as fuel in the ICEs on a weekly basis (for HCl compliance). **(R336.1201(3))**

3. The permittee shall keep a written record of the chlorinated compound composition of the LFG as determined in the most recent sampling and analysis. **(R 336.1213(3))**

Modifications to Section 2: Appendix 2-7
Appendix 2-7 (II) was revised accordingly to address changes in the Hydrogen Chloride emission calculation based on the alternative monitoring.

II. Hydrogen Chloride

Total HCl emitted per hour:

(Removed) lb HCl /Hr = (5.1lb HCl/MMft3) * (ft3 landfill gas burned/Hr)

(Replaced with) lb HCl /Hr = (5.1lb HCl/MMft3) * (Total LFG flow)

Modifications to Section 2: FGCONTROLS
The entire Table F-2.2 was removed as the NSPS requirements are no longer applicable to these emission units.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the significant modification to the ROP.

Action Taken by the Department

The AQD proposes to approve a significant modification to ROP No. 199600384, as requested by the stationary source. A final decision on the significant modification to the ROP will not be made until the public and any affected states have had an opportunity to comment on the proposed changes to the ROP and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the Southeast Michigan District Supervisor. The final determination for approval of the significant modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by the public, any affected states or the USEPA.

DEQ

State Registration Number

N5984

Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

ROP Number

199600384

December 13, 2005, STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING AND RULE 216 (3) SIGNIFICANT MODIFICATION

Purpose

A Staff Report dated August 24, 2001, was developed in order to set forth the applicable requirements and factual basis for the draft reopening to Renewable Operating Permit's (ROP) terms and conditions as required by R 336.1214(3). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP reopening and significant modification during the 30-day public and affected state(s) comment period as described in R 336.1214(3) and (4). In addition, this addendum describes any changes to the proposed ROP reopening resulting from these pertinent comments.

General Information

Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. James Logsdon, District Manager Phone Number: 586-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	Diane Kavanaugh Vetort, Senior Environmental Quality Analyst 586-753-3740

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the October 31, 2005, Draft ROP Reopening / Significant Modification

No changes were made to the draft ROP reopening.

DEQ

State Registration Number

N5984

Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT

ROP Number

199600384

December 13, 2005 STAFF REPORT FOR RULE 216(2) MINOR MODIFICATION

Purpose

On December 12, 2002, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. 199600384 to Pine Tree Acres Inc. (Landfill) and Sumpter Energy Associates (Landfill Gas Control) pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(2).

General Information

Responsible Official:	1. Section No. 1 - Pine Tree Acres, Inc. Mr. James Logsdon, District Manager Phone Number: 586-749-9698 2. Section No. 2 - Sumpter Energy Associates Mr. Scott Salisbury, President Phone Number: 248-380-3920
AQD Contact:	Diane Kavanaugh Vetort, Senior Environmental Quality Analyst 586-753-3740
Application Number:	199600384
Date Application For Minor Modification Was Submitted:	January 26, 2006

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to R 336.1216(2).

Pine Tree Acres Inc. (PTA) submitted the requested modifications of the Draft RO permit in a letter dated January 26, 2006, during the EPA 45-day review period.

Description of Changes to the ROP

PTA submitted a letter dated September 13, 2004, requesting an ROP modification for EGOPENFLARE to remove an NSPS requirement not applicable to the source. The Company demonstrated that the EGOPENFLARE control equipment is not equipped with a bypass of the flare. Therefore, AQD reviewed the request and determined that based on US EPA guidance documents the NSPS requirement to install a device that records flow to or bypass of the flare was intended for flares with control bypass stacks. The AQD agreed to remove the requirement.

During technical review, PTA apparently submitted a letter dated April 18, 2005 with comments. It appears that the April letter was never received (letter was not located in AQD files) or the requested changes were inadvertently not made and the letter misplaced. In it they commented that an additional

NSPS requirement related to the NSPS determination above should be removed from the EGOPENFLARE Table. The AQD did not remove the requirement at that time.

The Company submitted a letter dated January 26, 2006, again requesting the modifications in the April 18, 2005 letter, and the additional modifications addressed in this addendum. The AQD agrees with the requested changes in the January 26, 2006 letter.

Modifications to Section 1: C-1 Emission Unit Summary Table
PTA installed a small skid mounted utility flare in 2005 to provide additional gas control capabilities at the landfill. The Table was changed to include a total of three utility flares instead of two.

Modifications to Section 1: Table E-1.1 Pollution Control Equipment description
Table E-1.1 was revised to remove the reference to the seven (7) internal combustion engines. The engines were determined to be exempt from Subpart WWW of the NSPS and from Subpart AAAA of the NESHAP. The description for the Skid-mounted two utility flare was revised to add the third utility flare.

Modifications to Section 1: Table E-1.2, VII.5
Table E-1.2 was revised to remove an obsolete submittal deadline.

Modifications to Section 1: Table E-1.3, VII.5
Table E-1.3 was revised to remove an obsolete submittal deadline.

Modifications to Section 1: Table E-1.4, VI.4.a
Table E-1.4 was revised to remove the Condition VI.4.a., with underlying applicable requirement of 40 CFR 60.758(c) (2). The AQD determined this requirement is no longer applicable since the EGOPENFLARE control does not have a bypass stack.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

Action Taken by the DEQ

The AQD proposes to approve a Minor Modification to ROP No. 199600384, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the U.S. Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the Permit Section Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.

ATTACHMENT E

Sumpter Energy Associates - Pine Tree Landfill
LFG Chlorinated Compound Measurements
and
Fuel Combustion HCl Emission Factor Development

Derenzo and Associates, Inc.
Environmental Consultants

January 20, 2005

Mr. Michael Laframboise
Manager of Operations
LANDFILL ENERGY SYSTEMS
29261 Wall Street
Wixom, MI 48393

Subject: Sumpter Energy Associates at Pine Tree Acres
Proposal to perform 2005 HCl LFG Tests
DAI Proposal No. P-05027

Dear Mr. Laframboise:

Derenzo and Associates, Inc. (Derenzo and Associates) is pleased to provide Sumpter Energy Associates with this proposal to perform sampling and analyses to measure the total chlorinated compound content of the gas use to fuel reciprocating internal combustion (IC) engine operations at the Pine Tree Acres landfill. The contents of this proposal are based on:

1. The experience of Derenzo and Associates with previous landfill gas (LFG) sampling and analyses provided Sumpter Energy Associates;

2. Results of hydrogen chloride (HCl) testing that was performed on the exhaust of IC engine nos. 6 and 7 in May 2004 and indicate the HCl emission rate of the engines is greater than 75% of the permitted emission limit; and

3. LFG testing requirements presented in Renewable Operating Permit No. 199600384 that was issued Sumpter Energy Associates that specifies:

   Permittee shall sample the LFG prior to the ICEs and analyze the sample for chlorine compounds concurrent with the initial HCl performance stack test required under Condition III.B.7-9. This data will be used to verify the HCl emission limit as determined during most recent stack test or by alternate method approved by the District Supervisor, Air Quality Division. If the measured HCl emission rate is less than 75% of the applicable limit, no additional sampling is required for the term of the RO permit. If the measured HCl emission rate is at or greater than 75% of the emission limit, the Permittee shall calculate a HCl emission factor based on the concentration of chlorinated compounds in the LFG and the measured HCl emission rate and demonstrate compliance with the HCl emission limit on an annual basis by sampling and analysis of LFG.

SCOPE OF SERVICES

Derenzo and Associates will perform the following activities to complete the annual LFG total chlorinated compound and HCl sampling/measurement-testing project:

- Travel to Lenox Township, Michigan to obtain LFG samples using approved U.S. Environmental Protection Agency (USEPA) and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) procedures.

- Collect LFG samples from the appropriate LFG fuel supply line of the Sumpter Energy Associates electricity generation facility. Stainless steel canisters will be used to collect duplicate LFG samples.

- Analyze the collected samples to determine concentrations of the LFG components listed in the attached document. The canister samples will be analyzed for volatile organics (EPA Method TO-15A).

- Present all LFG component concentrations and HCl emission factor calculations in a summary report. Field data sheet recordings, sampling and analytical procedures, certified laboratory results and quality assurance data will be provided in the report.

MATERIAL TO BE PROVIDED BY SUMPTER ENERGY ASSOCIATES

Derenzo and Associates requires that Sumpter Energy Associates provide:

- Appropriate operating conditions to obtain representative samples of the LFG fuel.

- Safe access to the LFG sampling site.

SCHEDULE

Derenzo and Associates will perform the LFG sampling portion of the project at a mutually acceptable time. A Sumpter Energy Associates representative will be contacted to schedule and confirm specific LFG sampling dates.

FEES

The estimated cost of the LFG total chlorinated compound sampling, analyses and HCl emission factor reporting project including travel, materials, and out-of-pocket expenses is $xxx.

Derenzo and Associates, Inc. looks forward to being of continued service to Sumpter Energy Associates.

Please contact me if you have any questions.

Sincerely,

DERENZO AND ASSOCIATES, INC.

David R. Derenzo
Services Director

Disk 4\SEA PTA May 2005 LFG HCl tests

AIR TOXICS LTD.

Method : Modified TO-15

Compound	Rpt. Limit (ppbv)
Freon 12	0.50
Freon 114	0.50
Chloromethane	2.0
Vinyl Chloride	0.50
1,3-Butadiene	0.50
Bromomethane	0.50
Chloroethane	0.50
Freon 11	0.50
Ethanol	2.0
Freon 113	0.50
1,1-Dichloroethene	0.50
Acetone	2.0
2-Propanol	2.0
Carbon Disulfide	0.50
3-Chloropropene	2.0
Methylene Chloride	0.50
Methyl tert-butyl ether	0.50
trans-1,2-Dichloroethene	0.50
Hexane	0.50
1,1-Dichloroethane	0.50
2-Butanone (Methyl Ethyl Ketone)	0.50
cis-1,2-Dichloroethene	0.50
Tetrahydrofuran	0.50
Chloroform	0.50
1,1,1-Trichloroethane	0.50
Cyclohexane	0.50
Carbon Tetrachloride	0.50
2,2,4-Trimethylpentane	0.50
Benzene	0.50
1,2-Dichloroethane	0.50
Heptane	0.50
Trichloroethene	0.50
1,2-Dichloropropane	0.50
1,4-Dioxane	2.0
Bromodichloromethane	0.50
cis-1,3-Dichloropropene	0.50
4-Methyl-2-pentanone	0.50
Toluene	0.50
trans-1,3-Dichloropropene	0.50
1,1,2-Trichloroethane	0.50
Tetrachloroethene	0.50
2-Hexanone	2.0
Dibromochloromethane	0.50

Reporting Limits cited do not take into account sample dilution due to canister pressurization.

AIR TOXICS LTD.

Method : Modified TO-15

Compound	Rpt. Limit (ppbv)
1,2-Dibromoethane (EDB)	0.50
Chlorobenzene	0.50
Ethyl Benzene	0.50
m,p-Xylene	0.50
o-Xylene	0.50
Styrene	0.50
Bromoform	0.50
Cumene	0.50
1,1,2,2-Tetrachloroethane	0.50
Propylbenzene	0.50
4-Ethyltoluene	0.50
1,3,5-Trimethylbenzene	0.50
1,2,4-Trimethylbenzene	0.50
1,3-Dichlorobenzene	0.50
1,4-Dichlorobenzene	0.50
alpha-Chlorotoluene	0.50
1,2-Dichlorobenzene	0.50
1,2,4-Trichlorobenzene	2.0
Hexachlorobutadiene	2.0

Surrogate	Method Limits
Toluene-d8	70-130
1,2-Dichloroethane-d4	70-130
4-Bromofluorobenzene	70-130

Reporting Limits cited do not take into account sample dilution due to canister pressurization.

ATTACHMENT F

CAT 3616 Gas IC Engine Oil Use Records

Average Daily Oil Usage for 2001

The following is the average amount of oil consumed per day for each month beginning January 2001 based on the recorded monthly consumption

Kiefer Landfill internal combustion engines

	UNIT 1	UNIT 2	UNIT 3
JAN - 01	4.4	3.8	4
FEB - 01	3.8	3.9	5.1
MAR - 01	5.3	3.8	5.2
APR - 01	4.1	3.5	4.7
MAY - 01	5	1.2	5.8
JUN - 01	1.2	2.1	3.2
JUL - 01	5.4	5.7	4.8
AUG - 01	5.7	4.4	6.1
SEPT - 01	8..9	9.3	9.7
OCT - 01	10.3	10.4	13.1
NOV - 01	8.6	11	13.8
DEC - 01	12.6	11.1	12.1
JAN - 02	11.9	12.2	14.5
FEB - 02	18.6	17.4	16.3
MAR - 02	16	18.6	16.3
APR - 02	16.2	19.8	16.4