

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

1/3/2007

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.s To:
<Scott.Salisbury@landfillenergy.com>, <ChrisP.SW1.CH4@coj.net>,
tate.fl.us> <worley.gregg@epa.gov>, "Kirts,
Christopher" <Christopher.Kirts@dep.state.fl.us>,
<robinson@coj.net>,
<jeff.pope@us.bureauveritas.com>, <dderenzo@derenzo.com>,
12/11/2006 01:32 <dthorley@wm.com>,
<heather_abrams@dnr.state.ga.us>, <Dee_Morse@nps.gov>
PM EST cc:
Subject: Trail Ridge Energy, LLC #
0310358-004-AC-FINAL

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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

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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 Trail Ridge Energy,
B) 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

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

was Jeff Pope/USA/VERITAS
received
by:

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

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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

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

RECEIVED

DEC 01 2006

VIA FEDEX

November 30, 2006

BUREAU OF AIR REGULATION

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)

From everyday collection to environmental protection, Think Green® Think Waste Management.

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, Solid 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: 3 rd 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: 1 st and 2 nd line. Add "that is owned by the City of Jacksonville," between "... (MSW) landfill.." and "near Baldwin.."
Permit Page 2 of 8	7	Facility Description: 6 th line "at the Trail Ridge Landfill facility". Insert at 5 th 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 4 th line from top of page BD-1 and the 2 nd left hand line of the footer on each page.
Appendix GC	11	2 nd 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	44	2 nd 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, 3 rd paragraph: Clarify roles/responsibilities in this paragraph. 3 rd 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	1 st 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

DRAFT

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 (PM₁₀) 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/PM₁₀), sulfur dioxide (SO₂), 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 PM₁₀ 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.]

DRAFT

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 O₂ 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

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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 (NO_x):** The emission rate of NO_x 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 (PM₁₀):** The emission rate of PM₁₀ 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 (SO₂):** The emission rate of SO₂ from each engine/generator set shall not exceed 27.5 lb/MMscf. [Rule 62-212.400(12), F.A.C.]

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{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 NO_x 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 PM₁₀ 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 SO₂ 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

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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-resettable 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 SO₂ 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.]**