Florida Department of Environmental Protection

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Sent by Electronic Mail – Received Receipt Requested

PERMITTEE:

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

Air Permit Number: 0310358-007-AC
Date of Issue: March 2, 2010
Permit Expires: March 2, 2011

Authorized Representative:
Ms. Kerri Stewart, Chief Administrative Officer

Project: Air Construction Permit for the De-rating and Re-installation of an Open Flare

PROJECT AND LOCATION

This is the final air construction permit, which authorizes the re-installation and initial operation of an open flare to control the emissions of landfill gas generated at the Trail Ridge Landfill. The flare will be de-rated to a maximum capacity of 1,600 scfm. The facility is located in Duval County at 5110 US Highway 301 South, Baldwin, FL 32234. The UTM coordinates are Zone 17; 438.9 km East; and, 3361.1 km North. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections.

Section 1. General Information
Section 2. Administrative Requirements
Section 3. Emissions Unit Specific Conditions
Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) 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 must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

Christopher L. Kirts, P.E.
Air Program Administrator

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on 3/2/2010 to the persons listed below.

Kerri Stewart, City of Jacksonville Chief Administrative Officer [Email: kstewart@coj.net]
Fred Forbes, Solid Waste Division, City of Jacksonville [Email: FForbes@coj.net]
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Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

3/2/2010

(Clerk) (Date)

FACILITY DESCRIPTION

This facility is an active, municipal solid waste (MSW) landfill consisting of 176 acres. MSW received by the facility is placed in active cells where it is compacted and covered. The MSW undergoes anaerobic decomposition releasing landfill gas that consists of carbon dioxide, methane (approximately 40-60%), water vapor, and greater than 50 MG/year of non-methane organic compounds (NMOC).

The landfill gas is produced from both active and capped cells. This gas is collected by an active, landfill gas collection system (a series of vertical and/or horizontal collection piping, blower system) and routed to a treatment system that treats the landfill gas for subsequent use as fuel to power the reciprocating internal combustion engines (RICE)-generator sets at the Trail Ridge Energy, LLC electricity generation plant. Any excess landfill gas that exceeds the volume the Trail Ridge Energy LLC Plant is able to accept will be diverted to open flares for control.

Through the issuance of this construction permit, the landfill will be able to also use a de-rated 1,600 scfm open flare (project described below) for the control of landfill gas in addition to the existing 5,000 scfm open flare.

The existing facility consists of the following emissions units.

Facility ID No. 0310358

ID No.	Emission Unit Description
001	Municipal Solid Waste Landfill
002	Fugitive Dust Emissions
004	Reciprocating internal combustion engine
005	Reciprocating internal combustion engine
006	Reciprocating internal combustion engine
007	Reciprocating internal combustion engine
008	Reciprocating internal combustion engine
009	Reciprocating internal combustion engine
010	5,000 scfm open, non-assisted Flare

This project will add the following emissions units.

011	1,600 scfm open, non-assisted Flare (previously permitted 3,200 scfm flare, de-rated & re-installed)

PROPOSED PROJECT

This project authorizes de-rating and the re-installation of an open flare to control the landfill gas generated at the Trail Ridge Landfill, Inc. The flare, manufactured by LFG Specialties, was initially permitted under Construction Permit No. 0310358-001-AC, Emissions Unit No. 001 with a maximum capacity of 2,800 scfm. Initial operation began on May 5, 1992. The maximum capacity was then increased to 3,200 scfm on February 2, 2004. The flare was shutdown in 2006 prior to the startup of the 5,000 scfm capacity, non-assisted, open flare (Emissions Unit 005) on December 15, 2006.

Under this construction permit, the flare will be de-rated to a maximum capacity of 1,600 scfm of landfill gas with >45% methane by restricting the flare tip from 12 inches to no more than 9 inches in diameter through the installation of permanently attached orifice plate in the flare tip outlet. In addition, the existing blower will be replaced with a new, centrifugal exhaust landfill gas blower with a maximum design of 1,600 cfm, a minimum of -60 "w.c. inlet suction and 10" w.c. discharge pressure. At the maximum flow rate of 1,600 scfm, the flare has a maximum hourly design rate of 42.58 MMBtu/hr using a landfill gas heating value of 443.5 BTU/scf. The flare has an estimated destruction and removal efficiency of 98 percent.

FACILITY REGULATORY CLASSIFICATION

- The facility is an area source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a major source of air pollutants, other than HAPs.
- This facility has one or more emissions units subject to NSPS (40 CFR 60).
- This facility has one or more emissions units subject to NESHAP (40 CFR 61 or Part 63)

REGULATORY CLASSIFICATION OF EMISSIONS UNITS

The Trail Ridge Landfill is a Major/Title V source of air pollution pursuant to Chapter 62-210, FAC, and Rule 2.301, Jacksonville Environmental Protection Board (JEPB), because the potential 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. The landfill is also an EPA designated Title V source in accordance with the standards of 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60.752(c)), because the design capacity of the landfill is greater than 2.5 million cubic meters and megagrams.

The landfill is located in an area unclassifiable for the air pollutant particulate matter (PM) less than or equal to ten (10) micrometers, in the area of influence of an air quality maintenance area for PM, and in an air quality maintenance area for ozone pursuant to Chapter 62-204, Florida Administrative Code (FAC), and Jacksonville Environmental Protection Board (JEPB), Rule 2.201.

The landfill commenced construction after May 30, 1991, and therefore is subject to the provisions of 40 CFR 60, Subpart A, General Provisions, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills in accordance with 40 CFR 60.750(a). The landfill is subject to the provisions of 40 CFR 63, Subpart A, General Provisions, and 40 CFR 63 Subpart AAAA, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills in accordance with 40 CFR 63.1935. The landfill is also subject to the provisions of 40 CFR 61, Subpart A, General Provisions, and 40CFR Part 61 Subpart M (Asbestos).

The Department has presumed that the Trail Ridge Landfill facility has a control relationship over the Trail Ridge Energy LLC electricity generation operations since the Trail Ridge Energy LLC electricity generation operations are under contract with the landfill and the operations will be fueled exclusively with methane-rich landfill gas provided by the landfill. The Trail Ridge Energy LLC engine plant

project is permitted under Permit No. 0310358-004-AC/PSD-FL-374. The facility is therefore a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

Prior to the landfill gas being sent to the Trail Ridge Energy LLC engine plant for re-use, the landfill gas is sent to a treatment system. The treatment system is subject to 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 Subpart AAAA- National Emission Standards for Hazardous Air Pollutants- Municipal Solid Waste Landfills.

Given that continued expansion of the gas collection system is expected in the future, and the landfill gas volume extracted will eventually exceed the current estimated maximum landfill gas volume, it may be necessary to operate both the 1,600 scfm flare and the existing 5,000 scfm flare, in addition to the six engines at the Engine Plant simultaneously in the future. Based on estimated potential emissions, PSD NSR requirements would not be triggered if operated in this scenario.

The provisions of 40 CFR 60 Subpart WWW requires that the de-rated 1,600 scfm non-assisted flare be designed in accordance with 40 CFR §60.18 - General Control Device Requirements. As a part of the Gas Collection and Control System, the flare must also meet the applicable provisions of 40 CFR 63 Subpart AAAA, and 40 CFR 63, Subpart A, General Provisions.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting & Compliance Authority: The permitting and compliance authority for this project is the Northeast District Office, Florida Department of Environmental Protection (Department). The mailing address is 7825 Baymeadows Way, Suite B-200, Jacksonville, Florida 32256-7590. The telephone number is (904) 807-3300. All documents related to applications for permits to operate an emissions unit shall be submitted to this District office. All documents related to compliance activities such as reports, tests, and notifications shall be submitted to this District Office.

2. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions; and
   d. Appendix D. Common Testing Requirements.
   e. Appendix E. 40 CFR 60 Subpart A – General Provisions
   f. Appendix F. 40 CFR 63 Subpart A – General Provisions
   g. Appendix LR-1 Local Rule Index

3. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units 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 Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

4. 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.]

5. Construction Permit Required. Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction pursuant to CFR 60.15 or 63.2, or modification of the facility or emissions unit or addition of the air pollution control equipment; or to establish a PAL; in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C.

   [Rule 62-210.300(1)(a), F.A.C.; Rule 2.1301, JEPB]

6. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, the Department must be notified in writing sixty (60) days prior to the expiration of the construction permit. A new schedule and request for an extension of the construction permit must be submitted.

   [Rule 62-4.080(3), FAC, and Rule 2.1301, JEPB]

7. Annual Operating Report: The owner or operator shall submit an Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) to the Department by April 1 of the following year. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.

   [Rule 62-210.370(3)(c), F.A.C.; and Rule 2.301, JEPB]

8. Relation to Other Permits. This permit supplements other previously issued air permits for the Trail Ridge Landfill. The conditions of this permit supersede corresponding similar conditions specified in previous air construction permits for the de-rated 1,600 scfm open flare (a/k/a the 2,800 scfm flare a/k/a the 3,200 scfm flare). However, if not specifically regulated by this permit, other standards and permit requirements from previous air construction permits remain valid.

   [Rules 62-4.210, 62-4.030, and 62-210.300(1)(b), F.A.C.]

9. The ID Number and Project Name for this source shall be used on all correspondences.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS
A. Emissions Unit 011

The following specific conditions apply to the Emissions Unit and Emission Points listed below:

Emissions Unit	Brief Description
011	A de-rated 1,600 scfm Open, Non-Assisted, Flare manufactured by Landfill Gas Specialties. A centrifugal exhaust landfill gas blower with a maximum design of 1,600 cfm, a minimum of -60 "w.c. inlet suction and 10" w.c. discharge pressure. The flare is currently equipped with a digital recorder manufactured by Yokagawa. Flare Stack Height.....…… 31' Exit Diameter……..... 9 inches Outlet Gas Temperature…….……...1400-2000°F (typically; in the combustion zone within the flame which cannot be monitored) Maximum LFG Flow Rate……..... 1,600 scfm Minimum LFG Flow Rate…… 160 scfm Starter Fuel Type……..... Propane Destruction efficiency…… 98% NMOCs @ CH_4 content of 40-60%

EQUIPMENT

A.1. This permit authorizes the construction/re-installation of the existing open, non-assisted flare manufactured by LFG Specialties (formerly permitted under Construction Permit No. 0310358-001-AC, Emissions Unit 001). The flare shall be de-rated to a maximum capacity of 1,600 scfm of landfill gas by:

a. The existing 12 inch orifice shall be replaced with a permanently attached orifice with a 9 inch diameter.

b. The existing blower shall be replaced with a new, centrifugal exhaust landfill gas blower with a maximum design of 1,600 scfm, a minimum of -60 "w.c. inlet suction and 10" w.c. discharge pressure.

[Rules 62-4.160(2), 62-210.200(PTE), and 62-4.070, F.A.C.; Application No. 0310358-007-AC]

PERFORMANCE RESTRICTIONS

A.2. Permitted Capacity- Flare: The maximum landfill gas flowrate shall not exceed 1,600 standard cubic feet per minute of landfill gas, averaged hourly.

[Rule 62-210.200(203 PTE), FAC, Rule 62-4.070, F.A.C.; and Rule 2.301, JEPB.; Application No. 0310358-007-AC]

A.3. Hours of Operation -Flare: The hours of operation are not restricted, i.e., 8760 hours per year.

[Rule 62-210.200(203 PTE), FAC, and Rule 2.301, JEPB.; Construction Permit No. 0310358-005-AC]

METHOD OF FLARE OPERATION

A.4. Method of Operation . All LFG collected by the gas collection system shall be directed to the landfill gas treatment system for subsequent use as fuel at the Trail Ridge Energy Plant. Any excess landfill gas that exceeds the volume the Trail Ridge Energy Plant is able to accept shall be diverted to the 5,000 scfm open flare for control. Collected LFG shall not be vented to the atmosphere.

Permitting Note: *The 1,600 scfm non-assisted, open flare shall not be operated as the sole control device as the current landfill gas flow exceeds the maximum capacity of this flare.*

[Rules 62-4.160(2), 62-4.070(3), 62-210.200(PTE), F.A.C.; Rule 2.301, JEPB; CFR 60.752(b)(2)(iii)(A); CFR 60.752(b)(2)(iii)(C); 40 CFR 60.753(e); Construction Permit No. 0310358-004-AC/PSD-FL-374]

A.5. Method of Operation – Flare Pilot Fuel. The flare shall fire propane gas as its pilot fuel. Propane shall be used only for the purpose of igniting the flare and not be utilized as a supplemental fuel.

[Rules 62-4.160(2), 62-4.070(3), 62-210.200(PTE), F.A.C.; Rule 2.301, JEPB]

A.6. Method of Operation. The control system shall be operated at all times when the collected gas is routed to the system.

[40 CFR 60.18(e); 40 CFR 60.753(f)]

A.7. Method of Operation –Flare Flame. The flare shall be operated with a flame present at all times, as determined by the methods specified in Conditions A.18., A.19., A.20., A.21., and A.22.

[Rule 62-296.800, F.A.C.; 40 CFR 60.18(c)(2)]

A.8. Method of Operation – LFG Heat Content & Exit Velocity. The permittee shall comply with the heat content specifications stated in paragraph (a) and the maximum tip velocity specifications in paragraph (b):

(a) The flare shall be used only with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater. The net heating value of the gas being combusted shall be determined by the methods specified in Condition A.20.

(b) The flare shall be designed for and operated as follows:

(i) An exit velocity, as determined by the methods specified in Condition A.21., less than 18.3 m/sec (60 ft/sec), except as provided in (ii) and (iii).

(ii) N/A - the net heating value of the gas being combusted is less than 37.3 MJ/scm (1,000 Btu/scf).

Specific Condition No. A.8. Continued:

(iii) An exit velocity, as determined by the methods specified in Condition A.21. less than the velocity, Vmax, as determined by the method specified in Condition A.22., and less than 122 m/sec (400 ft/sec) is allowed.

[Rule 62-296.800, F.A.C.; 40 CFR 60.18(c)(3)(ii); 40 CFR 60.18(c)(4) and Rule 2.201, JEPB]

A.9. Landfill Gas Collection System-Design: The LFG collection system at this facility is an active collection system. The system shall be designed as follows:

(1) 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;

(2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i) 5 years or more if active; or
(ii) 2 years or more if closed or at final grade;

(3) Collects gas at a sufficient extraction rate;

(4) Designed to minimize off-site migration of subsurface gas.

[40 CFR 60.752(b)(2)(ii)(A)]

A.10. Landfill Gas Collection or Control System- Inoperable: 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)]

EMISSION LIMITS AND STANDARDS

{Permitting Note: Unless otherwise specified, the averaging times for these conditions are based on the specified averaging time of the applicable test method.}

A.11. Visible Emissions. The flare shall be designed for and operated with no visible emissions as determined by the methods specified in Conditions A.18., A.19., A.20., A.21., and A.22., except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

[Rule 62-296.800, F.A.C.; 40 CFR 60.18(c)(1), Rule 2.201, JEPB].

A.12. The facility shall be subject to City of Jacksonville Ordinance Code, Title X, Chapter 360 [Environmental Regulation], Chapter 362 [Air and Water Pollution], Chapter 376 [Odor Control], and JEPB Rule 1. [Final Rules with Respect to Organization, Procedure, and Practice]

A.13. The facility shall be subject to JEPB Rule 2, Part Nos. I through VII, and Part Nos. IX through XIII.

A.14. This emissions unit is subject to the applicable General Provisions of 40 CFR 60 Subpart A (see Appendix E of this permit).

A.15. This emissions unit is subject to the applicable requirements in 40 CFR Part 63, Subpart A, as Specified in Table 1 - Applicability of NESHAP General Provisions to Subpart AAAA (see Appendix F of this permit).

[40 CFR 63.1955(b)]

A.16. This emissions unit is subject to requirements of 40 CFR 63.1960 through 63.1985 of 40 CFR 63 Subpart AAAA as applicable, including its incorporation into the written SSM plan as required by the provisions of 40 CFR 63.1960 and 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site.

[40 CFR 63.1955(b)]

COMPLIANCE PROVISIONS

A.17. The provisions 40 CFR 63 Subpart WWW 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 and shall not exceed 1 hour for treatment or control devices (i.e. the flare).

[40 CFR 60.755(e); 40 CFR 60.11(c)]

MONITORING OF OPERATIONS

A.18. Landfill Gas Control System – Flare: The flare shall be monitored to ensure that it is operated and maintained in conformance with its design. The following equipment shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications:

(1) 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.

(2)(i) A device that records flow to the control device. The owner or operator shall install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

Specific Condition No. A.18. Continued:

(ii) N/A – The flare is not equipped with a bypass system.

[40 CFR 60.18(d); 40 CFR 60.756(c); 40 CFR 60.18(f)(2), EPA Office of Air Quality Planning and Standards' Municipal Solid Waste Landfill New Source Performance Standards (NSPS and Emission Guidelines (EG) Questions and Answers document revised in May 2002; Application No. 0310358-007-AC]

TEST METHODS AND FREQUENCY OF TESTING

A.19. Visible Emissions –Flare. The test method for visible emissions shall be in accordance with EPA Method 22 of 40 CFR 60 Appendix A, adopted and incorporated by reference in Rule 62-204.800, F.A.C. The required observation period shall be 2 hours and shall be used according to Method 22.

Pursuant to Method 22, the observer, at a minimum must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training is to be obtained from written materials found in References 1 and 2 or from the lecture portion of the Method 9 certification course.

Except in the case of a force majeure, as specified in 40 CFR 60.8(a)(1)-(4), the initial compliance tests shall be conducted 60 days after achieving the maximum production rate at which the flare will be operated, but not later than 180 days after initial startup of the flare.

Subsequent compliance tests shall be conducted on an annual basis, once each federal fiscal year (October 1 – September 30), thereafter.

[Rules 62-297.310(7)(a)4.a., 62-297.401(22),F.A.C.; 40 CFR 60.8(a); 40 CFR 60.11(e)(1); 40 CFR 60.18(f)(1)]

A.20. Net Heating Value – Flare. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

Specific Condition No. A.20. Continued:

K = Constant, 1.740 x 10-7 (1/ppm) (g mole/scm) (MJ/kcal)

where the standard temperature for (g mole/scm) is 20°C;

C_i= the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable; and

H_i= Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 (incorporated by reference as specified in §60.17) if published values are not available or cannot be calculated.

The net heating value shall be determined initially pursuant to Specific Conditions A.8. and A.20. Subsequent determinations shall be conducted no less than on a 5 year basis, prior to permit renewal.

[40 CFR 60.18(f)(3); 40 CFR 60.754(e); Rule 62-4.070 & Rule 62-297.310(7)(a)3., F.A.C.]

A.21. Exit Velocity- Flare. The actual exit velocity of the flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under this condition.

The exit velocity shall be determined initially pursuant to Specific Conditions A.8. and A.21. Subsequent determinations shall be conducted no less than on a 5 year basis, prior to permit renewal.

[40 CFR 60.18(f)(4) ; 40 CFR 60.754(e); Rule 62-4.070 & Rule 62-297.310(7)(a)3., F.A.C.]

A.22. Maximum Permitted Velocity – Flare. The maximum permitted velocity, Vmax, for flares complying with Specific Condition A.8.(b)(iii) shall be determined by the following equation.

$$\text{Log}_{10}(V_{max})=(H_T+28.8)/31.7$$

V_{max}=Maximum permitted velocity, M/sec
28.8=Constant
31.7=Constant
H_T=The net heating value as determined in Specific Condition A.20.

The maximum permitted velocity shall be determined initially pursuant to Specific Conditions A.8. and A.22. Subsequent determinations shall be conducted no less than on a 5 year basis, prior to permit renewal.

[40 CFR 60.18(f)(5); Rule 62-4.070 & Rule 62-297.310(7)(a)3., F.A.C]

A.23. Flare Operation and Maintenance Plan. The flare shall be maintained in accordance with recommendations provided by the vendor. At a minimum the following shall be performed:

- The flame arrestor (12 inch), leading to the flare shall be inspected on an annual basis, and cleaned if a high differential pressure across it exists.
- Replacement of thermocouples as needed.
- Pilot gas cylinders inspected to ensure sufficient gas is present to relight the flare.

All activities shall be performed as scheduled and recorded. This information shall be retained for at least 5 years from the date of measurement or recording, and be readily assessable for onsite review by the Department.

[Rule 62-4.070(3), F.A.C.; Rule 62-4.160(7), F.A.C., Rule 62-213.440(1)(b)2.b., F.A.C., Attachment 5 of Application received January 28, 2008]

A.24. Sulfur Dioxide- Sulfur Content of Landfill Gas. For emissions reporting purposes, sulfur dioxide emissions from the 1,600 scfm flare shall be determined using the results of the landfill gas analysis for sulfur content required by Construction Permit No. 0310358-004-AC for Trail Ridge Energy, LLC.

[Rule 62-4.070, F.A.C.]

A.25. Hydrogen Chloride Content of Landfill Gas. For emissions reporting purposes, hydrogen chloride emissions from the 1,600 scfm flare shall be determined using the results of the landfill gas analysis for sulfur content required by Construction Permit No. 0310358-004-AC for Trail Ridge Energy, LLC.

[Rule 62-4.070, F.A.C.]

EXCESS EMISSIONS

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision}

A.26. Minimization of Emissions. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d); Rule 2.201, JEPB]

NOTIFICATIONS, RECORDKEEPING AND REPORTING REQUIREMENTS

A.27. a. Commencement of Construction. The permittee shall submit a notification of the date construction of the flare is commenced postmarked no later than 30 days after such date.

b. Notification of Initial Startup. The permittee shall submit a notification of the actual date of initial startup of the flare postmarked within 15 days after such date.

[40 CFR 60.7(a)(1), an d(3)]

A.28. Initial Compliance Test Notification. At least 30 days prior to the date on which each formal compliance test is due to begin; the permittee shall provide written notification of the test to the Air Compliance Section of this Office.

If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the permittee shall notify this office as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with this office by mutual agreement.

The notification must include at least the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company and telephone number of the person conducting the test.

[40 CFR 60.7(a)(6); 40 CFR 60.8(d); Rule 62-204.800, FAC, Rule 2.201 JEPB, Rule 62-297.310(7)(a)9., F.A.C.]

A.29. Subsequent Compliance Test Notification. The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(7)(a)9., F.A.C.; Rule 2.201 JEPB]

A.30. Compliance Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(8), F.A.C.; Rule 2.1101, JEPB]

A.31. Recordkeeping Information. The permittee shall maintain the following records on a monthly basis. This information shall be retained at least five years from the date of the sample, measurement, or record:

a. The date and time when landfill gas is directed to the open flare. This record shall also include the date and time when landfill gas is directed back to the 5,000 scfm open flare or the Engine Plant;

b. The hours of operation, including any start-up, shutdown or malfunction in the operation of the open flare;

c. The landfill gas flow rate to the open flare;

[Rule 62-4.070, F.A.C.; Rule 62-213.440(1)(b)2.b., F.A.C.; Rule 62-213.410, F.A.C.]

A.32. Control Equipment Records. The Permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed below 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 control device vendor specifications shall be maintained until removal.

(1) The flare type (i.e., nonassisted);

(2) All visible emission readings;

(3) Heat content determination;

(4) Flow rate measurements;

(5) Exit velocity determinations made during the performance test as specified in 40 CFR 60.18;

(6) Continuous records of the flare pilot flame or 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); EPA Office of Air Quality Planning and Standards' Municipal Solid Waste Landfill New Source Performance Standards (NSPS and Emission Guidelines (EG) Questions and Answers document revised in May 2002]

A.33. Equipment Continuous Operating Parameter Records. The Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Specific Condition A.18., 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.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device specified under Condition A.18.;

Condition A.33. Continued:

(2) The Permittee, for use of the open flare, shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under Specific Condition A.18., 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)(2) and (4); EPA Office of Air Quality Planning and Standards' Municipal Solid Waste Landfill New Source Performance Standards (NSPS and Emission Guidelines (EG) Questions and Answers document revised in May 2002]

A.34. Collection & Control System Operational Standard Exceedance Records. Except as provided in 40 CFR 60.752(b)(2)(i)(B), the owner or operator shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in Specific Conditions A.4, A.6., and A.10., the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

Permitting Note: *40 CFR 60.752(b)(2)(i)(B) states the collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator. 40 CFR 60.752(b)(2)(i)(D) states that the Administrator shall review the information submitted under paragraphs (A), (B), and (C) of this section and either approve it, disapprove it, or request that additional information be submitted.*

[40 CFR 60.758(e)]

A.35. Control System Monitoring Report. The owner or operator shall include the following information for the de-rated 1,600 scfm flare in the semi-annual report required by 40 CFR 60.757(f) to the Compliance Authority of this Office. The first report this information shall be submitted is the first semi-annual report following 180 days of installation and start-up of the de-rated 1,600 scfm flare.

(1) Value and length of time for exceedance of applicable parameters monitored under Specific Condition A.18.

(2) N/A- The flare is not equipped with a bypass system.

(3) 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)(1)(2),(3); EPA Office of Air Quality Planning and Standards' Municipal Solid Waste Landfill New Source Performance Standards (NSPS and Emission Guidelines (EG) Questions and Answers document revised in May 2002; 40 CFR 63.1980(a)]