Trail Ridge Landfill, Inc.

FACILITY ID NO.: 0310358

DUVAL COUNTY

AIR CONSTRUCTION PERMIT

REVISED DRAFT PERMIT PROJECT No.: 0310358-005-AC

PERMITTING AND COMPLIANCE AUTHORITY
ENVIRONMENTAL RESOURCE MANAGEMENT DEPARTMENT
ENVIRONMENTAL QUALITY DIVISION
117 WEST DUVAL STREET
SUITE 225
JACKSONVILLE, FL 32202
TELEPHONE: (904) 630-4900
FAX: (904) 630-3638

Air Construction Permit
Revised Draft Permit No.: 0310358-005-AC

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EU ID No.	Brief Description
001	Municipal Solid Waste Landfill

Permittee:
Trail Ridge Landfill, Inc.
5110 US Highway 301 South
Baldwin, FL 32234

Revised DRAFT Permit No.: 0310358-005-AC
Facility ID No.: 0310358
SIC No.: 49
Project: Air Construction Permit
New Flare, Revision 1

This permit is for the construction of a new flare to control the emissions of landfill gas generated at the Trail Ridge Landfill, Inc. located at 5110 US Highway 301 South, Baldwin, Duval County, FL 32234. UTM Coordinates: Zone 17, 438.9 km East and 3361.2 km North; Latitude: 30^0 22' 52" North and Longitude: 81^0 38' 07" West.

This permit is issued under the provisions of Chapter 403, Florida Statutes (FS) and Florida Administrative Code (FAC) Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Environmental Resource Management Department, Environmental Quality Division (Department) in accordance with the terms and conditions of this permit.

Title V Operation Permit Revision Application Due Date: April 1, 2007
Expiration Date: September 30, 2007

Environmental Resource Management Department
Environmental Quality Division

Robert Steven Pace, P.E.
Air Quality Branch Manager

RSP/JW/rdo

Section I. Facility Information

Subsection A. Facility Project Description

The facility is a major source of air pollution because the potential emissions of regulated air pollutants are greater than 100 tons per year pursuant to Chapter 62-210, FAC, and Rule 2.301, Jacksonville Environmental Protection Board (JEPB), and is a major source because the facility has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters in accordance with 40 CFR 60.752(c).

This permit is for the construction of a new flare to control the emissions of landfill gas (NMOC) generated at the Trail Ridge Landfill, Inc., Baldwin, FL. The Trail Ridge Landfill gas management facility consists of the active landfill, landfill gas collection system, utility flare, and ancillary equipment that support this operation.

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.
[40 CFR 60, Subpart(s) A, and WWW, 40 CFR 63, Subpart(s) A, and AAAA, Rule 62-204.800, FAC, and Rule 2.201, JEPB]

The facility is concurrently under going a Prevention of Significant Deterioration (PSD) review [processed by the Department of Environmental Protection (DEP) Tallahasse, FL permitting office] for the installation of six (6) internal combustion engines at the landfill site to combust generated landfill gas (NMOC).

Subsection B. Summary of EU ID Nos. and Brief Descriptions

EU ID Nos.	Brief Description
001	Municipal Solid Waste Landfill

Subsection C. Relevant Documents

Air construction permit application received March 21, 2006
Additional information requested April 20, 2006
Additional information received on May 30, 2006
Comments received from Trail Ridge Landfill, Inc, on August 3, 2006

Section II. Facility Wide Conditions

Subsection A. General Conditions

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.141, 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.

2. This permit is valid only for the specific process 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.

3. As provided in subsections 403.087(6) and 403.722(5), Florida Statutes, 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 this permit.

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.

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.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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.

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 reasonable times, 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 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.

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 noncompliance; and
   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. 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 revocation of this permit.

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 403.111 and 403.73, 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.

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.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, FAC, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:
    ( ) Determination of Best Available Control Technology (BACT)
    ( ) Determination of Prevention of Significant Deterioration (PSD)
    ( ) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
    (X) Compliance with New Source Performance Standards

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

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.
    [Rule 62-4.160, FAC, and Rule 2.1301, JEPB]

Subsection B. Specific Conditions

1. Permittee shall notify the Department thirty (30) days prior to EU testing.
   [40 CFR 60.7(a)(6), 40 CFR 60.8(d), Rule 62-204.800, FAC, and Rule 2.201, JEPB]

2. Copies of the test report(s) shall be submitted to the Department within forty-five (45) days of completion of testing.
   [Rule 62-297.310(8)(b), FAC, and Rule 2.1101, JEPB]

3. Stack sampling facilities shall comply with the requirements of 40 CFR 60.8(e), Rule 62-204.800, FAC, Rule 62-297.310(6), FAC, Rule 2.201, JEPB, and Rule 2.1101, JEPB.

4. Testing of emissions shall be conducted with the EU 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 EU may be tested at less than capacity; in this case subsequent EU operation is limited to 110 percent of the test load until a new test is conducted. Once the EU 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(2), FAC, and Rule 2.1101, JEPB]

5. Any revision(s) to a permit (and application) shall be submitted to and approved by the Department prior to implementing.
[Rule 62-4.080(2), FAC, and Rule 2.1301, JEPB]

6. Permittee shall submit an annual operation report to the Department for this (these) emission unit(s) on the form(s) supplied for each calendar year on or before March 1.
[Rule 62-210.370(3), FAC, and Rule 2.301, JEPB]

7. 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]

8. To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for a Title V Air Operating Permit with compliance records and test results, to the Department, at least one hundred eighty (180) days prior to the expiration date of the construction permit but no later than 180 days after completion of construction, whichever occurs first. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid operating permit to operate.
[Rule 62-210.300(2), FAC, Rule 62-213.420(1)(a)2., FAC, Rule 2.301, JEPB, and Rule 2.501, JEPB]

9. The permittee shall submit all compliance related notifications and reports required of this permit to:

Environmental Resource Management Department
Environmental Quality Division
117 West Duval Street, Suite 225
Jacksonville, FL 32202
Telephone: (904) 630-4900
Fax: (904) 630-3638

10. <u>General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited</u>.

The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants, which cause or contribute to an objectionable odor in accordance with Rule 62-296.320(2), FAC, and Rule 2.1001, JEPB.

11. 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]

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

13. Excess emissions resulting from startup, shutdown, or malfunction of any emission unit 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. 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. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Permitting Authority in accordance with Rule 62-4.130, FAC and Rule 2.1301, JEPB. A full written report on the malfunctions shall be submitted to the Permitting Authority in a quarterly report, if requested by the Permitting Authority.
[Rule 62-210.700, FAC, and Rule 2.201, JEPB]

14. Unconfined particulate matter emissions from yard operations, open stock piling of materials and/or materials handling operations shall be controlled by using reasonable precautions. Reasonable precautions shall include but not be limited to the following:
    a. Reduced speed for vehicular traffic.
    b. Use of liquid resinous adhesives or other liquid dust suppressants or wetting agents.
    c. Use of paving or other asphaltic materials.
    d. Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping.
    e. Covering of trucks, trailers, front end loaders, and other vehicles or containers to prevent spillage of particulate matter during transport.
    f. Use of mulch, hydro seeding, grassing, and/or other vegetative ground cover on barren areas to prevent or reduce particulate matter from being windblown.
    g. Use of hoods, fans, filters, and similar equipment to contain, capture, and vent particulate matter.
    h. Enclosures or covering of conveyor systems.

    [Rule 62-296.320(4)(c)2., FAC, and Rule 2.1001, JEPB]

15. The owner or operator shall submit separate notifications of the actual startup date and commencement of construction date as required by 40 CFR 60.7(a) to the Environmental Resource Management Department, Environmental Quality Division, 117 West Duval St., Suite 225, Jacksonville, FL 32202.

Section III. Emission Units and Conditions

EU No. 001--Municipal Solid Waste Landfill with Flare

EU Description: A Municipal Solid Waste Landfill consisting of approximately 176 acres allocated for Class I MSW and portions of the landfill allocated for Class III MSW.

NMOC control device: Landfill gas (approximately 50% methane gas by volume) is collected and routed to a non-assisted, open air flare for combustion.

Essential PTE Parameters

1. The estimated maximum capacity of the flare is 5000 cubic feet per minute of landfill gas.
[Rule 62-210.200, FAC, and Rule 2.301, JEPB]

2. This EU shall be allowed to operate continuously, i.e., 8760 hours per year.
[Rule 62-210.200, FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

3. **Section 60.18 Flare control device requirements**

(a) The following requirements shall apply to the flare control device as referenced in Section 60.752(b)(2)(iii)(A):

(b) Paragraphs (c) through (f) apply to flares

(c) 1. Flares shall be designed for and 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), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

2. Flares 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), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

3. Open, non-assisted flares 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 40 CFR 60.18(f).
[40 CFR 60.18(c)(3), Rule 62-204.800, FAC, and Rule 2.201, JEPB]

4. (i) Open, 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 40 CFR 60.18(c)(4)(iii).

(ii) Open, non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), 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).

(iii) Open, non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed.
[40 CFR 60.18(c)(4), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

5. Flares used to comply with this section shall be non-assisted.
[40 CFR 60.18(c)(6), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
[40 CFR 60.18(d), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

(e) Open, non-assisted flares used to comply with provisions of subpart www shall be operated at all times when emissions may be vented to them.
[40 CFR 60.18(e), Rule 62-204.800, FAC, and Rule 2.201, JEPB].

(f) 1. Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

2. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

3. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$HT = K \sum_{i=1}^{n} CiHi$$

where:
HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas 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;

K = Constant, 1.740×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal)
where the standard temperature for (g mole/scm) is 20°C;

Ci=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 (Incorporated by reference as specified in 40 CFR 60.17); and

Hi=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 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

4. The actual exit velocity of a 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.

5. The maximum permitted velocity, Vmax, for flares complying with 40 CFR 60.18(c)(4)(iii) shall be determined by the following equation.

$$\text{Log10 (Vmax)}=(HT+28.8)/31.7$$

Vmax=Maximum permitted velocity, M/sec
28.8=Constant
31.7=Constant
HT=The net heating value as determined in 40 CFR 60.18(f)(3).

(g) The net heating value of the gas being combusted, the actual exit velocity of the flare, and the calculated maximum allowable exit velocity of the flare (Vmax) shall be determined through testing and calculations initially, as required by 40 CFR 60.18. Visible emissions testing of the flare shall be conducted in accordance with EPA RM 22 initially, as required by 40 CFR 60.18.
[40 CFR 60.18, Rule 62-204.800, FAC, and Rule 2.201, JEPB]

(h) Initial VE compliance testing of the new flare shall be conducted within 60 days after achieving the maximum production rate at which the emission unit (flare) will be operated but no later than 180 days after

initial start-up of the emission unit (flare). The maximum production rate shall be ascertained by determination that all monitored parameters of the collection system are in the normal (compliance) range. Testing as

described in this paragraph fulfills the requirements of Section II, B., 4. requirement to test at the permitted capacity.
[40 CFR 60.11(e)(1), Rule 62-204.800, FAC, and Rule 2.201, JEPB]

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to S.120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

_____ _____
Clerk Date