**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**
BOB MARTINEZ CENTER
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

**PERMITTEE**

Nassau County Board of County Commissioners
96161 Nassau Place
Yulee, Florida 32097

Authorized Representative:
Mr. J. Scott Herring, Public Works Director

Air Permit No. 0890428-010-AC
Permit Expires: December 31, 2015
Minor Air Construction Permit

West Nassau Class I Landfill
Flare Blower Replacement Project

**PROJECT**

This is the final air construction permit, which authorizes the replacement of the blower used to transfer landfill gas to the open utility (candlestick type) flare to reduce the volumetric flow rate from 2,000 standard cubic feet per minute (scfm) to 1,000 scfm. The proposed work will be conducted at the existing West Nassau Class I Landfill, which is a municipal solid waste landfill categorized under Standard Industrial Classification No. 4953. The existing facility is located in Nassau County at 46026 Landfill Road, Callahan, Florida. The UTM coordinates are Zone 17, 421.15 kilometers (km) East and 3386.33 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and 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.

**STATEMENT OF BASIS**

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 Tallahassee, Florida

*for* Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Air Permit package 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 the date indicated below to the following persons.

Mr. J. Scott Herring, Director, Nassau County: sherring@nassaucountyfl.com
Ms. Sara Greivell, Grove Scientific: sara@grovesscientific.com
Mr. James Show, P.E., Grove Scientific: j_sshow@bellsouth.net
Mr. Richard Rachal, Administrator, NED: richard.rachal@dep.state.fl.us
Ms. Ana Oquendo, EPA Region 4: oquendo.ana@epamail.epa.gov
Ms. Natasha Hazziez, EPA Region 4: hazziez.natasha@epa.gov
Ms. Barbara Friday, DEP OPC: barbara.friday@dep.state.fl.us
Ms. Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

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.

## FACILITY DESCRIPTION

Nassau County Board of County Commissioners operates the existing West Nassau Class I Landfill, which is located in Nassau County at 46026 Landfill Road, Callahan, Florida. The existing is comprised of a closed unlined cells and a closed lined cells. The landfill stopped accepting waste for disposal on October 1, 2009 and entered long-term care on March 25, 2013. The final capacity of the lined portion of the landfill is approximately 3,920,000 cubic yards (2,997,100 cubic meters), and the unlined portion of the landfill is approximately 730,000 cubic yards (562,100 cubic meters). The total permitted landfill capacity (by solid waste program) is approximately 4.65 million cubic yards (3,555,000 cubic meters). The landfill does not contain a bioreactor.

The landfill consists of an active gas collection system that uses a mechanical blower to create a vacuum that draws Landfill Gas (LFG) through deposited refuse and into gas collection wells. The system currently consists of 50 LFG extraction wells and approximately 11,000 linear feet of header pipe (ranging from 14 inches in diameter to 8 inches in diameter). The facility also consists of 12 leachate collection system cleanout risers that can be used to extract LFG. The collected LFG is controlled by 2,000 standard cubic feet per minute (scfm) candlestick flare. The landfill also includes five diesel fired emergency generators (EU 003 – EU 007).

The existing facility consists of the following emissions units (EU).

| EU No. | Emission Unit Description |
|---|---|
| 001 | Municipal Solid Waste Landfill |
| 002 | Landfill Gas Flare (2,000 scfm) |
| 003 | East Side Emergency Diesel Generator (40.2 brake-horse power (bhp)) |
| 004 | Up Front Emergency Diesel Generator (67.1 bhp) |
| 005 | Flare Emergency Diesel Generator (167.6 bhp) |
| 006 | Leachate Tanks Emergency Diesel Generator (174.3 bhp) |
| 007 | West Side Emergency Diesel Generator (40.2 bhp) |

This landfill also includes miscellaneous insignificant emissions units and/or activities.

## PROPOSED PROJECT

Nassau County is requesting to replace the blower used to transfer landfill gas to the open utility (candlestick type) flare to reduce the volumetric flow rate from 2,000 standard cubic feet per minute (scfm) to 1,000 scfm. The current blower is oversized for the system and causing several operational issues.

This project will modify the following emissions units.

| EU No. | Emission Unit Description |
|---|---|
| 002 | Landfill Gas Flare (2,000 scfm) |

## FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northeast District Air Program at 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256-7590.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. 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.

5. 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.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

(a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

## B. Landfill Gas Flare (EU 002)

This section of the permit addresses the following emissions unit.

| EU No. | Emission Unit Description |
|---|---|
| 002 | Landfill Gas Flare |

The landfill gas flare is an open candlestick utility flare, manufactured by Landfill Gas Specialties, Inc. (Model PCF1025110), currently with a maximum volumetric flow rate of 2,000 scfm of landfill gas to the flare. The open flare stack is 0.83 feet in diameter with a height of 27 feet above ground. The flare is designed for an overall 98% destruction efficiency of total hydrocarbons at a design flow with a landfill gas methane content of 40% to 60%. The existing flare is equipped with the following: a set of associated flex couplings and manual valves; 10 inches (″) all aluminum flame arrestor; automatic propane pilot system; 10″ pneumatic fail safe automatic header value; 36″ condensate knockout pot with 20 micron demister; thermal dispersion flow meter and circular chart recorder; Raco Guard-it Autodialer; data logger; and a control rack.

*{Permitting Note: These emissions units are regulated under NSPS Subpart A (General Provisions) and NSPS Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) of 40 CFR 60, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.}*

**EQUIPMENT**

1. Open Utility Flare: The permittee is authorized to replace the 2,000 scfm blower that transfers landfill gas to the open utility (candlestick type) flare with a 1,000 scfm blower. [Design and Application No. 0890428-010-AC]

The following revisions replace the conditions in **Permit No. 0890428-006-AC**.

**Section Specific Condition Nos. 1 through 6 and 13**

1. Hours of Operation: ~~The hours of operation are not restricted, i.e. 24H/D; 7D/W; 52 W/Y, and 8760 Hours per year.~~ This emissions units may operate continuously (8,760 hours/year). [Rules 62-4.160(2), 62-210.200(PTE), F.A.C.]

2. Method of Operation: Only landfill gas and propane gas shall be fired in the flare. ~~Emissions Unit No. 001 shall fire~~ propane gas as its fuel. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C.]

~~3. Maximum Operation Rate: The maximum operation rate is listed below and shall not be exceeded without prior department approval:~~

4. Permitted Capacity. ~~The Maximum Process Throughput Rate (Flare Capacity) shall not exceed 2,000 SCFM flow volume.~~ The open "candlestick-type" flare shall have a maximum landfill gas flow rate of 1,000 scfm. [Rules 62-4.160(2)~~,~~ and 62-210.200(PTE), F.A.C.]

~~5. Method of Operation. The landfill gas (LFG) collection system includes gas extraction wells and horizontal collectors of the landfill. Collected LFG is transported by a series of headers and lateral pipes to a blower/flare station where the gas is combusted by a candlestick flare.~~

6. Visible Emissions: Visible emissions from the utility flare shall ~~be less than~~ not exceed 20% opacity. [Rule-62-296.320(4)(b), F.A.C.]

~~13. Unconfined Emissions of Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions include:~~

~~a) Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.~~

~~b) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.~~

~~c) Landscaping or planting of vegetation.~~

~~d) Other techniques, as necessary.~~

~~[Rule 62-296.320(4)(c) F.A.C.]~~

**TESTING REQUIREMENTS**

2. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the emissions unit shall be tested to demonstrate compliance with the emissions standards for opacity in accordance with EPA Method 22. [Rule 62-297.310(7)(a)4, F.A.C.]

3. Test Requirements: 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.]

4. Test Methods: Required tests shall be performed in accordance with the following reference methods.

| Method | Description of Method and Comments |
|---|---|
| 22 | Visual Determination of the Opacity of Emissions from Stationary Sources |

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]