FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
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TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

(Sent by Electronic Mail – Return Receipt Requested)

Patrick Johnson, Responsible Official
Escambia County Board of County Commissioners
Department of Solid Waste Management
13009 Beulah Road
Cantonment, FL 32533-8831

Re: Title V Air Operation Permit Renewal
Proposed Permit No. 0330246-008-AV
Perdido Landfill

Dear Mr. Johnson:

One copy of the proposed permit determination for the renewal of the Title V air operation permit for the Perdido Landfill located at, 13009 Beulah Road in Cantonment, Escambia County, is enclosed. This letter is only a courtesy to inform you that the draft permit has become a proposed permit.

An electronic version of this determination has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is: Perdido Landfill Permit Number 0330246-008

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the proposed Title V air operation permit is made by the USEPA within 45 days, the proposed permit will become a final permit no later than 55 days after the date on which the proposed permit was mailed (posted) to USEPA. If USEPA has an objection to the proposed permit, the final permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Leigh-Ann Pell, at 850.717.9033.

Sincerely,

Syed Arif
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-04'00'

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

Enclosures
JFK/sa/lp

Mr. Patrick Johnson, Responsible Official: ptjohnson@co.escambia.fl.us
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Permit No. 0330246-008-AV

I. Public Notice.

An Intent To Issue Air Permit issued to Escambia County Board of County Commissioners for the Perdido Landfill located at 13009 Beulah Road in Cantonment, Escambia County, was clerked on August 1, 2013. The Public Notice Of Intent To Issue Air Permit was published in Pensacola News Journal on August 21,2013. The draft Title V air operation permit was available for public inspection at the permitting authority's office in Tallahassee. Proof of publication of the Public Notice Of Intent To Issue Air Permit was received on August 26, 2013.

II. Public Comment(s).

No Comments were received from the public during the 30-day public comment period; however, comments were received from the Permittee. The comments were not considered significant enough to reissue the draft Title V air operation permit and require another Public Notice; therefore, the draft Title V air operation permit was changed. Those comments are addressed below. Additions to the permit are indicated by an underline in red. Deletions from the permit are indicated by a ~~strike through~~ in red.

Email from Brent Schneider dated August 29, 2013.

Comment 1. General Comment – several conditions are missing the required regulatory citations typically listed in brackets following each condition (e.g., in Section III., Subsection A, items A.6-A.8 and A.15-A.17, A.19).

Response 1. The Department feels the change is not nessasery due to regulatory citations are noted in Specific Condiditons.

Comment 2. Section I, Subsection A. (page 2 of 17) – The third paragraph states "The new BFS is capable of handling up to 4400 scfm of gas flow." It may be good to clarify this statement by adding the following text: "Current flaring capacity is 2200 scfm."

Response 2. The Department agrees with the comment. Section I, Subsection A. parapragh 3 has been changed as follows:

Permit 0330246-005-AC included the installation of: 38 vertical gas extraction wells, lateral gas piping, header gas piping, a new blower/flare station (BFS) using a non-assisted open utility flare, gas transmission piping from the BFS to Gulf Power Perdido LGTE facility, and a condensate management system. As part of the expansion, the horizontal extraction wells and the existing flare station were decommissioned. The existing flare station was taken offline following the successful startup of the new BFS (October 4, 2010). The new BFS is capable of handling up to 4400 scfm of gas flow. The current flaring capacity is 2200 scfm.

Comment 3. Section I, Subsection C. (page 3 of 17) – According to Section III, Subsection C. (page 14 of 17), Regulation 40 CFR 60, Subpart A applies to EU 005. As such, EU 005 should be listed on this table for Regulation 40 CFR 60, Subpart A, NSPS General Provisions.

Response 3. The Department agrees with the comment and has made requested change.

Comment 4. Section I, Subsection C. (page 3 of 17) – According to Section III, Subsection B, Condition B.9. (page 13 of 17), Regulation 40 CFR 63, Subpart A applies to EU 003 and EU 004. As such, EU 003 and EU 004 should be listed on this table for Regulation 40 CFR 63, Subpart A, NESHAP General Provisions.

Response 4. The Department agrees with the comment and has made requested change.

Comment 5. Section I, Subsection C. (page 3 of 17) – Should EU 003, EU 004, and EU 005 be included in this table under "Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)"?

Response 5. The Department agrees with the comment and has made requested change.

Comment 6. Section III, Subsection A. (page 6 of 17) – The text in the first paragraph is potentially confusing as it refers to "90 vertical gas extraction wells" and also "38 vertical gas extraction wells" and contains some redundant text. Suggest revising this paragraph to read as follows: "The landfill gas collection and control system consists of approximately 90 vertical gas extraction wells (which includes 38 new vertical gas extraction wells), lateral gas piping, header gas piping, a condensate collection and management system, a new blower/flare station (BFS), and gas transmission piping from the BFS to Gulf Power Perdido landfill gas to energy (LFGTE) facility. The horizontal extraction wells and previous flare station were decommissioned upon successful startup of the new BFS (October 4, 2010). The new BFS is capable of handling up to 4400 scfm of gas flow, however the current flare is rated for 2200 scfm (EU 003). The other 2200 scfm flare (EU 004) has been permitted, but not yet installed."

Response 6. The Department agrees with the comment and has made requested change.

The landfill gas collection and control system consists of approximately 90 vertical gas extraction wells (which includes 38 new vertical gas extraction wells), a condensate collection and management system, ~~a new blower/flare station and all associated piping. The recent expansion included the construction of 38 vertical gas extraction wells,~~ lateral gas piping, header gas piping, a new blower/flare station (BFS) using a non-assisted open utility flare, gas transmission piping from the BFS to Gulf Power Perdido landfill gas to energy (LFGTE) facility, and a condensate management system. The horizontal extraction wells and previous flare station were decommissioned upon successful startup of the new BFS (October 4, 2010). The blower for the new BFS is capable of handling up to 4400 scfm of gas flow however, the current flare is rated for 2200 scfm (EU 003). The other 2200 scfm flare (EU 004) has been permitted, but not yet installed.

Comment 7. Section III, Subsection A., Condition A.3. (page 6 of 17) – Revise "either warning signs or fencing must be installed and maintained…" to "…either warning signs and/or fencing must be installed and maintained…"

Response 7. The Department agrees with the comment and has made requested change.

Unless a natural barrier adequately deters access by the general public, either warning signs and/or fencing must be installed and maintained, or the requirements of (b)(1) above must be met.

Comment 8. Section III, Subsection A., Condition A.4. (page 6 of 17) – As written this condition requires all collected LFG to go to a treatment system. Flaring the landfill gas does not meet the regulatory definition of "treatment", therefore sending LFG to the flare would be a violation of this condition. Propose revising this condition to:
Route all the collected gas to a control system that complies with the requirements in either a, b, or c:
a) An open flare designed and operated in accordance with § 60.18 except as noted in § 60.754(e).
b) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen.
c) A treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of 40 CFR 60.752."

Response 8. The Department agrees with the comment and has made requested change.

Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of 40 CFR 60.752, as shown below. ~~Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of 40 CFR 60.752.~~

(A) An open flare designed and operated in accordance with § 60.18 except as noted in § 60.754(e);
(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent

oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in § 60.754(d).

(1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in § 60.756;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of 40 CFR 60.752,

Comment 9. Section III, Subsection A., Condition A.7.a) (page 7 of 17) – This condition is missing text from Subpart WWW (three items should be listed, but the draft includes only two). Item 1 is correct, but revise the remainder of the condition to read as follows:

2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan.

3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows.

Response 9. Department agrees with the comment and has made requested change.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 60.752(b)(2)(ii) of this Subpart shall:

a) Operate the collection system with negative pressure at each wellhead except under the following conditions:

1. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1);

2. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

3. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator.

Comment 10. Section III, Subsection A., Condition A.19. (page 9 of 17) – The requirement to report downtime of the entire collection system is 5 days, and not one hour. As such, the last sentence of this condition should be revised to "Escambia County shall report all occurrences when the flare is shut down for more than one hour or when the entire gas collection and control system is down for more than one hour system was not operating in excess of 5 days in accordance with 40 CFR 60.757 (Subpart WWW)."

Response 10. Department agrees with the comment and has made requested change.

The Escambia County Board of County Commissioners Perdido Landfill (Facility I.D. 0330246), and Gulf Power Company's Perdido Landfill Gas-to-Energy Facility (Facility I.D. 0330286), will cooperate and share responsibility in regards to compliance with the NSPS, Subpart WWW. Specifically, they will share the requirement to route all collected landfill gas to a control system according to 40 CFR 60.752(b)(2)(iii). Escambia County shall report all occurrences when the flare is shut down for more than one hour or all periods when the collection system was not operating in excess of 5 days ~~when the entire gas collection and control system is down for more than one hour~~ in accordance with 40 CFR 60.757 (Subpart WWW).

Comment 11. Section III, Subsection B. (page 10 of 17) – The description should be revised to read: "The blower flare station contains one of two, 2,200 scfm, non-assisted open utility flares."

Response 11. Department agrees with the comment and has made requested change.

The blower flare station currently contains one of two, 2,200 scfm, non-assisted open utility flares.

Comment 12. Section III, Subsection B., Condition B.3. (page 10 of 17) – The condition should be revised to read: "…40 CFR 60.754(e) Paragraphs…".

Response 12. Department agrees with the comment and has made requested change.

Comment 13. Section III, Subsection B., Condition B.3. (page 10-12 of 17) – The condition references flare types that aren't applicable such as "air-assisted" and "steam-assisted". Suggest removing references and requirements related to these types of flares that are not applicable.

Response 13. Department agrees with the comment and has made requested change.

~~(4)~~

~~(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.~~

~~(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (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) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.~~

~~(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(6).~~

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(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.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f)

(1) Method 22 of Appendix A to this part 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:

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

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;

$$K = \text{Constant}, 1.740 \times 10^{-7} \left(\frac{1}{ppm}\right) \left(\frac{g\ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

C_i = 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 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 60.17); 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 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, V_{max}, for flares complying with paragraph (c)(4)(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 paragraph (f)(3).~~

~~(6) The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation.~~

~~$V_{max} = 8.706 + 0.7084 (H_T)$~~

~~V_{max} = Maximum permitted velocity, m/sec~~
~~8.706 = Constant~~
~~0.7084 = Constant~~
~~H_T = The net heating value as determined in paragraph (f)(3).~~

[Rule 62-204.800(8)(d), F.A.C., 40 CFR 60.18 (c) - (f)]

Comment 14. Section III, Subsection C., Condition C.11 (page 16 of 17) – Note that a non-resettable hour meter is currently installed on the emergency generator.

Response 14. The Department will note the specification in the permit.

Monitoring Requirements

Hour Meter. ~~The owner or operator must install a~~ A non-resettable hour meter is currently installed. [40 CFR 60.4209(a)]

III. Conclusion.

The enclosed proposed Title V air operation permit includes the aforementioned changes to the draft Title V air operation permit.

The permitting authority will issue the proposed permit No. 0330246-008-AV, with the changes noted above.