PERMITTEE

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PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Title V Air Operation Permit Revision
Permit No. 0950113-008-AV
Orange County Solid Waste Management Facility

The revision incorporates the provisions of Air Construction Permit No. 0950113-007-AC, Landfill Gas Collection System (Cell 2) with Candlestick Flare, as **Section III, Subsection D.** The revision also incorporates recent rule changes governing Title V Annual Emissions Fees and the Annual Operating Report which are now effective. This rule change affects conditions **FW6.** and **FW7.** of Section II – Facility-wide Conditions of the permit. This rule change also affects part of "Appendix RR, Facility-wide Reporting Requirements". An update to this appendix was made on January 10, 2014 and the updated version has been included in the "Appendices".

NOTICE AND PUBLICATION

The Department distributed an Intent to Issue Air Permit package February 25, 2014. The applicant published the Public Notice of Intent to Issue Air Permit in the Orlando Sentinel on March 1, 2014. The Department received the proof of publication on March 7, 2014. A proposed permit was issued for EPA review on March 1, 2014.

COMMENTS

No comments on the proposed permit were received from the EPA Region 4 Office.

Minor comments were received from the applicant. Any changes to the permit are shown below highlighted in yellow with ~~strike through~~ format for deletions and in double underline format for additions. The applicant's comments are as follows:

Comment 1. Section III., Subsection D. Emission Unit 004, Condition D.8.

> *Specific Condition D.8. – We do not understand what the last line – "Monthly means once per month" – is in reference to. The word "monthly" appears in Specific Condition B.12., where it is referring to a monthly log, but is absent from 60.18(f).*

Response: The sentence is a scrivener error and does not belong with the rule language. The following change is made to Specific Condition **D.8.**:

D.8. General Control Device and Work Practice Requirements.
(1) Method 22 of appendix A to 40 CFR 60 shall be used to determine the compliance of flares with the visible emission provisions of 40 CFR 60. 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 40 CFR 60.18 (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 40 CFR 60.18 (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 40 CFR 60.18 (f)(3).

~~Monthly means once per month.~~ [40 CFR 60.18(f)]

Comment 2. Section III., Subsection D. Emission Unit 004, Conditions D.13. and D.19.

Specific Conditions D.13. and D.19. – Several performance tests normally performed at facility startup are described, and it is unclear if these specific conditions are meant to expand testing frequency for parameters such as exit velocity and heat content determination.

Response: The Department has the authority to require special compliance tests. These conditions were retained in the permit should a special compliance test be required, not to expand testing frequency (see Appendix TR – Facility Wide Testing Requirements, Condition TR7.). The special compliance test rule language is cited below:

Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

CONCLUSION

The final action of the Department is to issue the permit with the minor change listed above.