FINAL DETERMINATION

PERMITTEE

Landfill Energy Systems Florida, LLC
2999 Judge Road
Oakfield, New York 14125

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

Air Permit No. 1150089-008-AC
PSD-FL-422, Air Construction Permit
Sarasota Landfill Gas-to-Energy

This project authorizes the installation and operation of four lean-burn engine/generators sets that will fire landfill gas to produce up to a combined nominal 6.4 megawatts (MW) of power to the electrical grid.

NOTICE AND PUBLICATION

The Department distributed a draft minor air construction permit package on October 31, 2013. The applicant published the Public Notice in the Sarasota Herald-Tribune on November 7, 2013. The Department received the proof of publication on November 7, 2013. No requests for administrative hearings or requests for extensions of time to file a petition for administrative hearing were received.

COMMENTS

No comments on the Draft Permit were received from the public. However, the following comments were received by the EPA Region 4 Office and the applicant, Landfill Energy Systems Florida, LLC.

EPA Region 4 Office

On December 2, 2013, the Department received comments from the EPA Region 4 Office. The following summarizes the comments and the Department's response.

1. *Comment*: Sarasota application identifies voluntary emission caps taken for sulfur oxides (SO_X), volatile organic compounds (VOC), and non-methane organic compounds (NMOC). Compliance methods that describe what changes in operation may be necessary to comply with the emission caps taken to avoid PSD. It is recommended that this information is included.

   Response: The emission caps established for SO_X, VOC and NMOC are federal enforceable limits that will need to be met. The permit requires that each of these pollutants demonstrate compliance on a 12-month rolling basis and if necessary, the permittee shall adjust engine operation to comply with these emissions caps. As a result, compliance with these emission caps are required to be reviewed on a monthly basis. Therefore, the Department did not make any changes to the draft permit.

Modeling Comments:

2. *Comment*: Technical Evaluation and Preliminary Determination (TEPD) - pages 26-27, Section 6.6.2, Significant Impact Analysis, and Table M: Pursuant to a January 22, 2013, Federal Court Decision, the Significant Impact Levels (SILs) for both the 24-hour and annual particulate matter with a mean particle diameter of 2.5 microns or less ($PM_{2.5}$) standards has been remanded to EPA. Since the annual $PM_{2.5}$ SIL has been used to preclude the need to conduct a refined cumulative modeling analysis for the annual $PM_{2.5}$

standard of 12 micrograms per cubic meter (ug/m^3), additional justification should be provided to demonstrate that the annual SIL level of 0.3 ug/m^3 is appropriate.

EPA issued a Question and Answer (Q&A) document regarding the court decision on March 4, 2013 (available at: http://www.epa.gov/nsr/documents/20130304qa.pdf). Page 3 of this document provides EPA's recommendations for addressing the court's decision in the interim until such time that EPA revises the regulations pursuant to the court's remand. Section I.3 of the Q&A document provides recommendations for justifying use of the SIL for the National Ambient Air Quality Standards (NAAQS) analysis. The TEPD should be revised to include additional justification for use of the annual $PM_{2.5}$ SIL. Additionally, justification should be provided for use of the SIL to preclude the need to conduct an annual $PM_{2.5}$ increment modeling analysis.

Response: The Department added footnote 'b' to Table M of the Air Quality Analysis Section of the TEPD to address the use of the remanded SIL of 0.3 ug/m3 for Annual $PM_{2.5}$ impacts:

> *On January 22, 2013 the US Circuit Court of Appeals in the District of Columbia remanded to EPA the $PM_{2.5}$ SIL values. Per EPA guidance, with sufficient justification permitting authorities still have the authority to utilize these SIL values in order to forego a cumulative modeling analysis. Given that the difference between the $PM_{2.5}$ annual NAAQS (12 ug/m^3) and the monitored background concentration (7.0 ug/m^3) is significantly larger than the SIL (0.3 ug/m^3) and the modeled potential impact (0.08 ug/m^3) is an order of magnitude smaller than the SIL, DEP has reasonable assurance that the proposed Sarasota LFG-to-Energy will not cause or contribute to a violation of the $PM_{2.5}$ 24-hour NAAQS.*

3. *Comment:* TEPD – page 27, Section 6.6.2.2, Class I SIL: The TEPD discusses that CALPUFF modeling was performed to evaluate impacts on nearby Class I areas. The modeling documentation available on the Florida Department of Environmental Protection (FDEP) air permitting website does not provide any information about the CALPUFF modeling that was performed. Documentation should be provided to enable a review of the modeling procedures used for the CALPUFF analysis. One specific question regarding the CALPUFF modeling is whether the chemistry and deposition options were on or off for the Class I area increment modeling analysis? Unlike the visibility Air Quality Related Value (AQRV) analysis, chemistry and deposition should be turned off for the Class I area increment analysis.

   Response: CALPUFF modeling information is available in Appendix J of the Sarasota Energy PSD Application on the FDEP website. The specific question regarding Class I area increment modeling does not apply as no Class I area increment modeling was necessary or performed.

4. *Comment:* TEPD - page 29: The TEPD does not discuss the potential for secondary $PM_{2.5}$ impacts. The application should be revised to address potential secondary $PM_{2.5}$ impacts since emissions of the secondary $PM_{2.5}$ precursor nitrogen oxides (NO_X) exceed the significant emission rate (SER) of 40 tons/year. EPA's draft $PM_{2.5}$ Modeling guidance (available at http://www.epa.gov/ttn/scram/guidance_permit.htm) provides options for addressing secondary $PM_{2.5}$.

   Response: The Department added Section 6.6.6. to the Air Quality Analysis Section of the TEPD to address secondary $PM_{2.5}$ formation:

   > *Secondary $PM_{2.5}$ is formed through chemical reactions between gaseous precursors such as sulfur dioxide (SO_2) and NO_x. Projects that involve a potential increase in these precursor pollutants above their SER require an analysis of the potential impact of secondary $PM_{2.5}$ formation; however, current regulatory air dispersion and transport models, such as the EPA recommended AERMOD modeling system used in this analysis, do not account for this process. Per EPA guidance, for projects "where precursor emissions levels are marginally higher than the level of the SERs, monitored background levels are very low, and the primary $PM_{2.5}$ impacts are also very low or not correlated in space and time with secondary formation such that the combination of the background and primary impacts are*

still well below the level of the NAAQS" a qualitative only assessment of secondary $PM_{2.5}$ formation is sufficient.

5. *Comment:* TEPD – page 30, Section 6.7.4, Class I area Impacts – Air Quality Related Values (AQRV): The TEPD does not give any indication that the Federal Land Manager (FLM) for Chassahowitzka Class I area was given the opportunity to review the AQRV analysis. The AQRV analysis should be provided to the FLM for review prior to making a final permit decision.

   Response: The Department submitted the AQRV to the Federal Land Manager. The Federal Land Manager reviewed the AQRV analysis and does not have any comments.

Applicant

On November 11, 2013 and on November 26, 2013, respectively, the Department received comments from the applicant. The following summarizes the comments and the Department's response.

1. *Comment*: TEPD - Page 5, Section 1.3.4, paragraph following Table A – A number of items from Subpart ZZZZ do apply in addition to those in Subpart JJJJ. These Subpart ZZZZ items are included in the draft permit, so it is correct. We wanted to note this given that the paragraph in the TEPD, as written, implies that nothing from Subpart ZZZZ applies.

   Response: The Department made the correction in the TEPD.

2. *Comment*: Draft Permit - Page 6, Item 1.b, last sentence – This sentence states a requirement that does not currently apply to the collected landfill gas at the Central County Solid Waste Disposal Complex since the system is voluntary and not required by NSPS Subpart WWW of 40 CFR 60 at this time since the landfill generates less than 50 megagrams/year of non-methane organic compounds (NMOC). The site will be applicable to NSPS Subpart WWW in the future. Would it be possible to remove this sentence or revise to indicate that the facility is not currently applicable to NSPS Subpart WWW. We understand that our operations will not be impacted by the construction permit, but we just wanted to make sure that for future permitting there was not any confusion.

   Response: The Department revised the condition to read that the excess landfill gas not fired in the engines shall be flared or free vented until the facility is required to meet the applicable collection and control system requirements in accordance with NSPS Subpart WWW in 40 CFR 60.

CONCLUSION

The final action of the Department is to issue the permit with the minor changes, corrections and clarifications as described above.