FINAL DETERMINATION

Air Construction Permit
INEOS New Planet BioEnergy
Increase in Vent Gas Boiler Heat Input Rate
DEP File No. 0610096-003-AC

PERMITTEE

INEOS New Planet BioEnergy
925 74th Avenue
Vero Beach, FL 32968-9702

PERMITTING AUTHORITY

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

PROJECT

DEP File No. 0610096-003-AC
Increase in Vent Gas Boiler Heat Input Rate
Indian River County

This permit (0610096-003-AC) supersedes and replaces the previous construction permit modification issued for this project (0610096-002-AC). Major changes from the construction permit modification consist of the following:

- An increase in the capacity of the burner in the vent gas boiler from 84.5 to 97.2 million British thermal units per hour (MMBtu/hr). There will be no other physical changes to the boiler, stack or associated equipment.
- Replacement of the 1989 model year 500 Kilowatt (kW) Caterpillar Model No. 3412 emergency diesel-fired generator with a smaller 2009 model year 400 kW Kohler Model No. 400REZX emergency natural-gas-fired engine generator. As a result of permitting action, the emergency generator will be assigned an EU number (EU 011) and the fire pump engine currently at the facility will be included in this EU.
- Update Appendix BMP of the permit to reflect changes made in Permit No. 0610096-002-AC with regard to municipal solid waste usage and monitoring.
- Added language to the permit to provide flexibility during the startup, shakedown, of the facility with regard to the vent gas boiler and syngas flare;
- Refine the hydrogen sulfide (H_2S) concentration estimated in the syngas and fermenter off gas generated at the facility based on new data from a pilot facility that utilize the same waste feedstock as the INEOS facility. Previously, the estimated H_2S concentrations had been 700 parts per million (ppm) in the syngas and 1,000 ppm in the off gas. The new estimate is 500 ppm in both gas streams. Based on this new H_2S estimate, the mass of H_2S entering the vent gas boiler has been reduced resulting in the estimated mass emission rates (pounds per hour and tons per year) of all pollutants from the vent gas boiler being reduced;
- Increase the allowable operational hours of the syngas flare during the normal operation of the facility to provide additional flexibility during the start up of the gasification, fermentation and distillation systems and the vent gas boiler. The reduction in the H_2S concentration allows the operational hours of the flare

to be increased from 300 hours to 640 hours without exceeding the 100 tons per year (TPY) PSD threshold for sulfur dioxide (SO_2) emissions; and,

- Incorporate a H_2S sampling protocol into the permit to provide reasonable assurance that the H_2S concentration in the syngas and off gas streams does not exceed the permitted 500 ppm level.

This project is not subject to PSD preconstruction review in accordance with Rule 62-212.400, F.A.C. A determination of Best Available Control Technology (BACT) was not required.

NOTICES AND PUBLICATION

INEOS New Planet BioEnergy submitted an air construction permit application on April 9, 2012. On July 19, 2012, the Permitting Authority gave notice of its intent to issue an air permit to the applicant for the described project. The applicant published the Public Notice of Intent to Issue Air Permit for this project on July 23, 2012 in the Indian River Press Journal. The complete draft permit package is available at the following web link by entering the permit number given above:

www.dep.state.fl.us/Air/emission/bioenergy/indian_river.htm

COMMENTS ON THE DRAFT PERMIT

No comments were received from the public, the EPA or the applicant on the draft permit during the 14-day comment period that ended on August 6, 2012.

CONCLUSION

The final action of the Department is to issue the draft permit as the final permit with no changes.