



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

OCT 02 2012

REPLY TO THE ATTENTION OF:

Matthew Stuckey
Chief
Permits Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Dear Mr. Stuckey:

The U.S. Environmental Protection Agency has reviewed the draft prevention of significant deterioration and Part 70 permit for St. Joseph Energy Center, LLC (Permit Number 141-31003-00579), in New Carlisle, Indiana. To ensure that the source meets Federal Clean Air Act requirements, that the permit will provide necessary information so that the basis of the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision, EPA has the following comments:

1. The Combined Cycle Combustion Turbine (CCCT) startup/shutdown Best Available Control Technology (BACT) limits in permit condition D.1.11 are as follows: 22 tons of Volatile Organic Compounds (VOC) per 12-month period, 407.5 tons of Carbon Monoxide (CO) per 12-month period, and 81.6 tons of Nitrogen Oxides (NOx) per 12-month period. In addition, this permit condition limits CO emissions to 2,125 pounds per event and NOx emissions to 443 pounds per event (where an "event" is defined as a single startup or shutdown).
 - a. The BACT analysis in Appendix B of the Technical Support Document (TSD) does not include an analysis of the startup/shutdown limits selected as BACT for VOC, CO, and NOx emissions from the CCCTs. The permit should include an analysis for the selection of these BACT limits for startup and shutdown events.
 - b. The potential to emit table on page 7 of the TSD lists total CO emissions from the four CCCTs as 130 tons per year (tpy) per turbine, which is a total 520 tpy for the CCCTs. Does this amount account for the 407.5 tons of CO per 12-month period allowed in permit condition D.1.11(i) during startup/shutdown events?
 - c. The potential to emit table on page 7 of the TSD lists total VOC emissions from the four CCCTs as 24.97 tpy per turbine, which is a total 99.88 tpy for the CCCTs. Does this amount account for the 22.0 tons of VOC per 12-month period allowed in permit

condition D.1.11(j) during startup/shutdown events?

- d. The potential to emit table on page 7 of the TSD lists total NO_x emissions from the four CCCTs as 71.8 tpy per turbine, which is a total 287.2 for the CCCTs. Does this amount account for the 81.6 tons of NO_x per 12-month period allowed in permit condition D.1.11(h) during startup/shutdown events?
2. The Greenhouse Gas (GHG) BACT emission calculations in permit condition D.1.15 are based on emission factors from 40 C.F.R. Part 98, Subpart C. Permit condition D.1.17 requires GHG stack testing once every 5 years. While EPA agrees with the use of the 40 C.F.R. Part 98 emission factors in calculating GHG emissions, Indiana Department of Environmental Management (IDEM) should clarify in the permit that the results of future stack tests can be used to determine a source-specific emission factor to calculate GHG emissions from this facility.
3. The permit does not include monitoring for the sulfuric acid mist and sulfur dioxide BACT emission limits for the CCCTs. The permit should include a method of demonstrating compliance with the fuel sulfur limit of 0.75 grains of sulfur/100 standard cubic feet fuel listed in permit conditions D.1.5 and D.1.7.
4. Permit condition D.1.17(a) requires a Particulate Matter (PM) stack test every five years to demonstrate compliance with the BACT limits in permit condition D.1.4. However, the permit does not require periodic monitoring to demonstrate compliance with the PM limits in between the stack tests. IDEM should either demonstrate how compliance with the PM limits is sufficiently assured with the stack test or require additional periodic monitoring in the intervening period between stack tests.

We appreciate the opportunity to provide comments on this permit. If you have any questions, please feel free to contact me or have your staff contact Sam Portanova, of my staff, at (312) 886-3189.

Sincerely,



Genevieve Damico
Chief
Air Permits Section