



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7

11201 Renner Boulevard
Lenexa, Kansas 66219

MAY 23 2013

Ms. Marian Massoth
Air Permitting Chief
Kansas Department of Health and Environment
1000 S.W. Jackson Street, Suite 310
Topeka, KS 66612-1366

Dear Ms. Massoth:

We have reviewed the prevention of significant deterioration (PSD) permit for the Empire District Electric Company's conversion of the Riverton Unit 12 to a combined cycle turbine. After reviewing the draft permit, application and Permit Summary we have the following comments. We provide the comments to help ensure the project meets the federal Clean Air Act (CAA) requirements, that the permit will provide necessary information so that the basis for the decision is transparent and readily accessible to the public, and that the record provides adequate support for the permit decision.

- 1) The permit sets a ton per year (tpy) Best Available Control Technology (BACT) limits for carbon dioxide (CO₂) in condition V.G. These seem to be based on the potential to emit of the emission units. We recommend that BACT limits not be tpy limits since the stringency of the BACT limit then depends on the amount the source is actually operated. Instead, we would recommend limits on an output basis. For example, for the turbine and duct burners we would recommend a limit based on pounds of emissions per MW-hr generated. Output based BACT limits fully consider the efficiency of the unit and better reflect the good combustion practices and selected energy efficiency measures that were selected as BACT for these units. In some cases it may not be practical to set output based limit. In those cases we would suggest input based limits such as pounds per BTU of fuel fired. Of course, where technological or economic limitations on the application of a measurement methodology make it is infeasible to impose an emissions standard then a design, equipment, operational standard, or combination may be prescribed for the BACT limit. 40 C.F.R. 51.166(b)(12).
- 2) The permit needs to clarify how compliance with the CO₂e BACT limits are determined. For example, the draft permit states that compliance with the CO₂e BACT limit for the auxiliary boiler shall be demonstrated by recording the fuel usage and using the Global Warming Potential Factors from Table A-1 of 40 CFR Part 98, Subpart A to determine resulting emissions on a monthly basis. The factors in Table A-1 convert the emissions from a mass basis to a CO₂e basis. The permit also needs to specify how the mass emitted is determined. Procedures in 40 CFR Part 98 could be used for these calculations.
- 3) The U.S. Environmental Protection Agency has proposed to revise Table A-1 of 40 CFR Part 98, Subpart A. We suggest that where this table is referenced in the permit that the permit also specifies the date of the version of this table Empire is to use. This will clarify that the CO₂e calculations are to be done with current global warming potential factors and not future factors that could increase or decrease the stringency of the BACT limits if used.



4) Compliance with the PM/PM₁₀/PM_{2.5} BACT limit for the combined cycle turbine is demonstrated with a performance test. Kansas should consider requiring some type of ongoing monitoring to assure compliance with the BACT limit. If this permit does not specify monitoring sufficient to assure compliance, the Title V permit will require periodic monitoring sufficient to assure compliance with this BACT limit.

5) There is a typographical error in condition V.F.4. where draft should be drift.

Sincerely,



Mark Smith, Chief
Air Permitting and Compliance Branch