

**Prevention of Significant Air Quality Deterioration Review
Of the Duke Energy Murray, L.L.C.
Murray Energy Facility
To be located in Murray County, Georgia**

**FINAL DETERMINATION
SIP Permit Application No. 13365
October 2002**

**State of Georgia
Department of Natural Resources
Environmental Protection Division
Air Protection Branch**

Ron Methier – Chief, Air Protection Branch

Stationary Source Permitting Program

James Johnston, P.E.

James Capp

Susan Jenkins

Planning & Support Program

Dale Kemmerick

Jim Stogner

Background

On May 16, 2000, Duke Energy Murray, L.L.C. (Duke) submitted an application for an air quality permit to construct and operate two combustion turbine combined-cycle blocks at a site to be called the Murray Energy Facility in Murray County, Georgia, near Dalton, Georgia. Duke submitted an updated permit application which was received by the EPD on August 17, 2000. The Murray Energy Facility was issued PSD Permit No. 4911-213-0034-P-01-0 on February 13, 2001.

Since the time of the original application, Duke has determined that the originally planned auxiliary boiler capacity is inadequate. Duke submitted an updated permit application for this site on October 16, 2001 and this application is assigned Application No. 13365. The EPD received additional information supporting the permit application on February 5, 2002, June 6, 2002, and June 14, 2002. Application No. 13365 is a request for the following revision to the original plant configuration: (1) Revise Condition 2.13 by raising the allowable annual hours of operation from 2,500 to 6,000 for auxiliary boiler AUXB; and (2) authorize the construction and operation of a second auxiliary boiler rated at approximately 31.4 MMBtu/hr fired on natural gas and operated no more than 6,000 hours per year.

Upon issuance of PSD Permit No. 4911-213-0034-P-01-0 on February 13, 2001, the Georgia Center for Law in the Public Interest (GCLPI) submitted an appeal to said permit on March 15, 2001. To more quickly resolve the appeal, Duke entered into a settlement agreement with GCLPI, which took effect on September 14, 2001. This agreement includes the following: (1) Revise Condition 2.10 by lowering the NO_x BACT limit from 3.5 ppmvd at 15% oxygen to 3.0 ppmvd at 15% oxygen; (2) Revise Condition 2.11.a by lowering the CO BACT limit from 0.0467 pounds per million Btu heat input, lower heating value (LHV) basis to 12 ppmvd at 15% oxygen; (3) Revise Condition 2.11.c by lowering the VOC BACT limit from 0.010 pounds per million Btu heat input, as methane, LHV basis to 4.5 ppmvd at 15% oxygen; and (4) Revise Condition 2.11.b by lowering the PM BACT limit from 0.017 pounds per million Btu heat input, LHV basis to 25 pounds per hour. These revisions are being made on a voluntary basis by Duke Energy Murray.

EPD issued a PSD Preliminary Determination on July 22, 2002 which incorporated the revised facility configuration and revised emission limits. The Division requested that Duke place a public notice in a newspaper of general circulation in the area of the proposed facility notifying the public of the proposed construction and providing the opportunity for written public comment and public hearing. Such public notice was placed in *The Chatsworth Times* (legal organ for Murray County) on August 7, 2002 and in *The Daily Citizen News* (legal organ for Whitfield County) on August 9, 2002. The public comment period expired September 8, 2002 (Sunday).

Duke Energy submitted comments on the proposed permit and these comments were received September 9, 2002 (Monday). The US EPA Region 4 submitted a letter dated August 13, 2002 stating that they had no comments on the proposed permit. EPD's review of the comments is provided in the next section of this Final Determination. This discussion will not elaborate on typographical or grammatical revisions made to the final permit. A copy of the final permit is provided in Appendix A. A copy of the comments received on this draft permit are provided in Appendix B.

Review of Duke Energy Murray, L.L.C.'s Comments

1. **Draft Condition Nos. 2.10, 2.11.a, 2.11.b, and 2.11.c**

Comment: EPD states in the Preliminary Determination (PD at page i, page 1, and section 7.0) that the settlement agreement lowers the best available control technology (BACT) limit for NO_x, CO, VOC, and PM, which is incorrect. Rather, Duke Energy voluntarily is taking limits that are lower than the BACT levels determined in the permit, which EPD does note in paragraph 3 of the PD

Summary (Page i). While EPD acknowledges that the limits are voluntary and do not change the BACT determination contained in the original PSD permit, EPD errs in stating that the new limits are BACT limits and in providing the citations for the new limits.

Response: Duke is correct in their assertion that EPD believes the limits for CO, VOCs, PM10, and NOx in Permit No. 4911-213-0034-P-01-0 issued on February 13, 2001 constitute properly determined BACT for the Duke Energy Murray facility. Duke is incorrect in stating that "... EPD errs in stating that the new limits are BACT limits...." Duke should not be surprised that EPD classifies the lower emission limits defined in the Settlement Agreement as reduced BACT limits. EPD made such a statement in its response to Petitioners and Duke regarding the settlement on July 11, 2001. [See July 11, 2001 letter from Assistant Attorney General Diane DeShazo [Department of Law State of Georgia], on behalf of EPD, to Council for Duke Energy [Barbara Gallo (Long, Aldridge & Normal, LLP)] and Petitioners [Robert Ukeiley (Georgia Center for the Law in the Public Interest)]]

The Permit is not changed based on this comment.

2. Facility Emissions Summary

Comment: EPD provided a list of air pollutants emitted by the facility on an annual basis on page 2 of the PD, *Table 1. Emissions Summary of the Murray Energy Facility*. Two columns show facility emissions. One column shows the annual emissions before this proposed modification, and the second shows the annual emissions after this modification. The table shows a significant reduction in emissions due to (1) the settlement agreement, (2) increased operational time for the existing auxiliary boiler; and (3) the addition of a second auxiliary boiler. Duke notes that *Table 1* is in error because the potential annual emissions from the combined-cycle systems have not changed as a result of the settlement agreement. Duke reminds EPD that the settlement agreement did not address any reduction in annual emissions. Duke noted that while short term emissions will be lower from the combined-cycle systems, long-term emissions will remain unchanged because of emissions from startup and shutdown.

Duke requests that EPD clarify in this Final Determination that potential annual emissions from the combined-cycle systems have not changed as a result of this permit modification.

Response: Duke is correct that EPD's Preliminary Determination for Draft Permit No. 4911-213-0034-P-01-2 does illustrate that the revised facility potential to emit will be lower primarily due to the reduced short term emission rates for the combined-cycle systems. Condition Nos. 2.8.a and 2.8.b in Permit No. 4911-213-0034-P-01-0 specify the allowable NOx emissions in tons per year from each combined-cycle power block. Duke is reminded that Draft Permit No. 4911-213-0034-P-01-2 does not alter said conditions despite EPD's conclusion that the facility potential to emit will be lower.

3. Draft Condition 2.12.a

Comment: Draft Condition 2.12.a specifies the NOx BACT limit for each auxiliary boiler at 28.8 ppmvd at 3% oxygen. EPD computed this concentration based on the data provided by Duke Energy (1.11 lb/hr and 31.4 MMBtu/hr). Duke notes that while the computation in the PD is correct, the vendor of the boiler proposed 30 ppmvd at 3% oxygen rather than 28.8 ppmvd at 3% oxygen. Duke requests that Condition 2.12.a be revised to specify a NOx BACT limit of 30 ppmvd at 3% oxygen.

Response: EPD agrees to revising Draft Condition 2.12.a as requested because the outcome of the BACT analysis presented in PD at pages 4-6 would not change based on this revised BACT emission limit.

4. **Class I Increment Modeling Significance Level**

Comment: EPD states in the PD (Page 9, fourth bullet) that predicted impacts from the original PSD submittal exceeded the Class I Increment modeling significance level (MSL), which is incorrect. The error is understandable given that there are two sets of Class I Increment MSLs commonly discussed: (1) promulgated MSLs and (2) proposed MSLs.

The only promulgated Class I Increment MSL is 1.0 ug/m³ on a 24-hour basis, as listed in 40 CFR 52.21. In 1996, EPA proposed new Class I Increment MSLs that are based on 4% of the Class I Increment for all Class I Increments. However, these proposed MSLs have not yet been finalized, though EPA advocates the usage of the proposed MSLs as a policy item.

Duke notes that no modeling (original or revised) for the Murray facility has ever shown an exceedance of the promulgated Class I Increment MSL of 1.0 ug/m³. As can be seen from the table on Page 12 of the PD, all 24-hour average impacts are well below 1.0 ug/m³. Duke also reminds EPD that said table erroneously lists 1.0 ug/m³ as the MSL for all averaging periods, while it is only for the 24-hr average.

Response: The modeling (original and revised) for the Murray facility shows an exceedance of the proposed Class I Increment MSLs.

Miscellaneous

5. **Condition 8.16**

EPD has updated Condition 8.16.b.i to account for the revised BACT emission limit.

APPENDIX A - Final Permit 4911-213-0034-P-01-1

APPENDIX B - Copy of Comments Received During Public Comment Period.