



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 21 2012

REPLY TO THE ATTENTION OF:

Andrew Stewart
Chief
Permits and Stationary Source Modeling Section
Bureau of Air Management
Wisconsin Department of Natural Resources
PO Box 7921
Madison, Wisconsin 53707-7921

Dear Mr. Stewart:

The U.S. Environmental Protection Agency has the following comments on the Wisconsin Department of Natural Resources' (WDNR) draft of the Prevention of Significant Deterioration (PSD) and major source nonattainment new source review (NNSR) permit for the WE Energies Elm Road Generating Station. The draft permit is being proposed as a construction permit (#12-SDD-047). The facility operates two coal fired boilers with a combined output of 615 MW. The boilers were previously permitted to burn only bituminous coal. The draft permit would authorize the facility to burn subbituminous coal, either in combination with bituminous coal or as the sole type of coal combusted in the boilers. It also would authorize physical changes necessary to burn the two types of coal fuel. The WE Energies Elm Road Generating Station is an existing major source under the NNSR program for Particulate Matter of less than 2.5 micrometers and is a major source under the PSD program. The project is a major modification under PSD for several pollutants, including greenhouse gases (GHGs).

In order to ensure that the project meets Clean Air Act requirements, that the permit will provide necessary information so that the basis for 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) Page 23 of the Preliminary Determination document indicates that that facility was allowed to use a different time period than the 24-month period because... "the units are new (operating only since October 2009 for unit 1 and July 2010 for unit 2) and they did not operate at a representative rate during the first few months to the first year of operation. The applicant has proposed the period of October 2010-September 2011." WDNR granted this request since the units were "not operating normally due to the need for startup and shakedown work." However, the baseline period used to calculate the Best Available Control Technology (BACT) limit for Carbon Monoxide (CO) was from December 2009 until December 2011, which includes the time period that WDNR determined is not representative of normal operation for other pollutants in the netting

analysis. Please explain why this time period is representative for CO and not representative for other pollutants, or make the necessary changes to your analyses to correct this discrepancy..

- 2) Page 19 of the Preliminary Determination document states that an air quality analysis is not required because “[a]ll potential emissions for the emissions units covered in the draft permit are either the same or lower than the emissions rates which were modeled in previous construction permit for this facility.” It seems that the construction permit referenced is permit #03-RV-166-R5, which was issued in October 2009. Under NR 405.09 the source must show that its allowable emissions and all other applicable emissions increases and decreases will not cause or contribute to a violation of National Ambient Air Quality Standards or increment. “All other applicable emissions” include an up-to-date inventory of emissions in the area of concern that were not included in the original modeling analysis. Additionally, since certain modeling requirements have changed since 2009, WDNR should ensure that the permit for this major modification adequately reflects all of the new requirements. For example, since this modification will have a significant emissions increase in Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_x) it should conduct an ozone impacts analysis. Please complete an ozone impact analysis and update the previous modeling to include the latest meteorological data, emissions data, and any new models required since the 2009 modeling (such as 1-hr nitrogen dioxide and sulfur dioxide) or provide justification that no changes to the above have occurred since the previous modeling.
- 3) 173(a)(3) of the Clean Air Act states that the permit program required by 172(b)(6) shall provide that a permit may be issued if...“the owner or operator of the proposed new or modified source has demonstrated that all major stationary sources owned or operated by such person...in such state are subject to emission limitations and are in compliance, or on a schedule for compliance...”. At this time the Paris Generating Station in Kenosha, which is also operated by WE Energies, is not in compliance and a compliance schedule has not yet been finalized. The Paris Generating Station is not in compliance because of modifications done in 2000-2002 to replace turbine blades. The modifications were determined, after the fact, to be major modifications and may have triggered PSD review. A draft permit incorporating the compliance schedule for the Paris Generating Station (#230094810-P02) was public noticed on October 5, 2012 and has not yet been issued. Until the compliance schedule is finalized, the permit for WE Energies Elm Road Generating Station (#12-SDD-047) may not be issued.
- 4) Page 13 of the Preliminary Determination document states that the GHG BACT analysis will include CO₂, methane, and nitrous oxide, but there is only a proposed GHG BACT emission limit for CO₂ and not for methane or nitrous oxide. Since the regulated NSR pollutant is defined as GHG, the GHG emission limit(s) should account for not only CO₂, but for all of the GHGs that are emitted. Please also clarify how compliance will be demonstrated for the each of the GHGs.
- 5) Page 14 of the Preliminary Determination document states that building a CO₂ pipeline would cost millions of dollars to construct and concludes that carbon capture and

sequestration (CCS) is economically infeasible for controlling GHGs for this project. In order to support this conclusion, please include in the permit record your CCS cost analysis (e.g., an annualized cost per ton of CO₂ removed, or a capital cost comparison to the total cost of the project) along with the rationale for why the costs are economically infeasible.

- 6) The permit contains a Lowest Available Emission Rate (LAER) emission limit for VOC, however the preliminary determination does not address how the LAER limit was selected. Please include the analysis used in preparing the LAER determination in the permit record.
- 7) Please correct the typographical error in condition I.A.15.b.(3). Current language reads, "The permittee shall perform the compliance emission tests required under condition I.A.15.b.(1) every 60 within 60 days of the anniversary date of the initial test as long as the permit remains valid." It appears that a unit of time is missing. If appropriate, please change the language to, "... every 60 months within 60 days of the..."
- 8) It appears that permit condition I.A.2.c.(7) is repeated in I.A.2.c.(11). If appropriate, remove condition I.A.2.c.(11) to avoid repetition.
- 9) It appears that two permit conditions were both labeled I.A.2.b.(5). If appropriate, please change the label of the condition on page 7 to I.A.2.b.(6) to improve clarity.

We look forward to working with you to address all of our comments. If you have any further questions, please feel free to contact Andrea Morgan, of my staff, at (312) 353-6058.

Sincerely,



Genevieve Damico
Chief
Air Permits Section