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

JUN 18 2013

REPLY TO THE ATTENTION OF:

Mary Ann Dolehanty
Permit Section Supervisor
Michigan Department of Air Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760

Dear Ms. Dolehanty:

Thank you for the opportunity to provide the Michigan Department of Environmental Quality (MDEQ) our comments on the draft construction permit for Consumers Energy Company (permit number 191-12). The Prevention of Significant Deterioration (PSD) permit is for the construction of a new natural gas fired electric generating station. Below are the U.S. Environmental Protection Agency's comments:

1) The GreenHouse Gas (GHG) Best Available Control Technology (BACT) analysis for the combined cycle turbine generators in the permits' Fact Sheet proposes GHG BACT as a heat rate limit of 7,460 British thermal units per kilowatt hour (BTU/KW-hr) (net) corresponding to 873 pounds (lbs) Carbon Dioxide Equivalents (CO_2e)/MegaWatt Hour (MWh) net output, and 1,334,965 tons of CO_2e per year for Technology A. The draft permit only proposes the 1,334,965 tons of CO_2e per year limit for Technology A. Please consider adding the proposed BTU/KW-hr GHG BACT limits as permit conditions for the combined cycle turbine generators as well as the corresponding lbs of CO_2e/MWh limits because that will help reflect the efficiency of the turbines.
2) The GHG BACT analyses for the Auxiliary Boilers, Peaking/Black Start Simple-Cycle Combustion Turbines, Fuel Heaters and Emergency Fire Pump are not included in the draft permit's Fact Sheet. Page 26 of the Fact Sheet states that those BACT analyses are in the permit application file and are available for public review, but to ensure consistency with all the GHG emission sources, and to make the draft permit's Fact Sheet more complete, please include those GHG BACT analyses in the Fact Sheet.
3) The permit application lists "energy efficiency" as GHG BACT for the two Peaking/Black Start simple-cycle combustion turbines and the Auxiliary Boilers. Please add to the BACT analysis what specifically those "energy efficiency" measures are, and add the BACT analysis to the draft permit's Fact Sheet.
4) The permit application's GHG BACT analysis for the two Peaking/Black Start simple-cycle combustion turbines shows a ton per year of CO_2e as the chosen BACT limit. To better reflect the efficiency of the turbines, please consider also including a lbs of CO_2e/MWh GHG BACT limit for those turbines.
5) If the gas turbines will have circuit breakers insulated with Sulfur Hexafluoride (SF_6), please include a top-down BACT analysis in the draft permit's Fact Sheet for those GHG emissions.
6) Please account for any methane and carbon dioxide fugitive GHG emissions from the natural gas

piping components, and include a top-down BACT analysis in the draft permit's Fact Sheet for those GHG emissions.

7) The Fact Sheet does not specify what the particular technologies (A or B) Consumers Energy Company intends on potentially utilizing for its project. The draft permit and Fact Sheet only provide a general description of the equipment to be installed. Please include a general description of each of the potential technologies in the Fact Sheet.
8) The draft permit proposes a Nitrogen Oxide (NOx) limit for the combined cycle combustion turbines for both technologies A or B at 3.0 ppmdv at 15% oxygen. A review of EPA's RACT/BACT/LAER Clearinghouse for PSD permits with combined cycle generation units have NOx BACT limits at 2.0 ppmdv. While we support the determination for the application of dry low NOx burners and selective catalytic reduction as BACT, the Fact Sheet does not provide MDEQ's basis for its determination of why a 2.0 ppmdv BACT limit is infeasible. The applicant may have reached such a conclusion in its application for this project, however, the permit record does not demonstrate that MDEQ agrees that the BACT limit should be 3.0 ppmdv versus 2.0 ppmdv.
9) The NOx emission limits for the control technique guidelines include a limit of 760 lbs/hr applied as a 1-hour average on a per block basis. It is unclear what the basis of this limit is because it doesn't appear to be linked to any modeled scenario. If the limit is related to EPA's intermittent source policy (EPA NO_2 Clarification Memo dated March 1, 2011), applying the intermittent policy to the startup/shutdown operations in this case is questionable given that startup/shutdown scenarios are estimated to occur over 900 hours during the year. Additionally, the startup modeling scenarios appear to apply the worst case startup/shutdown event emissions throughout the five modeled years so it's unclear the origin and purpose of the 760 lbs/hr NOx limits. MDEQ should explain what the basis of this emission limit is in its Fact Sheet for the permit record.
10) The modeling applied the intermittent policy to the fire pumps for 24-hour Particulate Matter less than 2.5 microns in size ($PM_{2.5}$). The EPA's 2011 policy memo recommends limiting emission scenarios to "those emissions that are continuous enough or frequent enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations." This recommendation is generally applicable for 1-hr NO_2 and SO_2 attainment demonstrations. However, it isn't generally applicable to longer averaged time periods such as the 24-hour $PM_{2.5}$. MDEQ should provide the justification for the use of the intermittent policy for a 24-hour standard as part of the permit record.

We would like to thank you again for working with us in making sure that these issues are resolved in a timely manner and the opportunity to provide public comments. If you have any further questions, please feel free to contact Constantine Blathras, of my staff, at (312) 886-0671.

Sincerely,

Genevieve Damico

Genevieve Damico
Chief
Air Permits Section