

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Midwest Generation EME, LLC - Waukegan Generating Station  
Attn: Andrea Crapisi  
440 South LaSalle Street, Suite 3500  
Chicago, Illinois 60605

Application No.: 07050007

I.D. No.: 097190AAC

Applicant's Designation:

Date Received: May 3, 2007

Subject: Sorbent Injection Systems for Units 7 and 8

Date Issued: July 19, 2007

Location: Waukegan Generating Station, 401 East Greenwood Avenue, Waukegan,  
60087

Permit is hereby granted to the above-designated Permittee to CONSTRUCT equipment consisting of a sorbent injection system to control mercury emissions for each of the Unit 7 and 8 boilers, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This Permit authorizes construction of sorbent injection systems for each of the existing coal-fired boilers for Units 7 and 8 (affected boilers). The new sorbent injection systems would control mercury emissions by injecting sorbent, i.e., halogenated activated carbon, into the flue gas from these existing coal-fired boilers prior to the electrostatic precipitators (ESPs) for each affected boiler.
- b.
  - i. This permit is issued based on this project being an emissions control project, whose purpose and effect will be to reduce emissions of mercury from the existing coal-fired boilers and which will not significantly increase emissions of other PSD pollutants. As such, the terms and conditions of the existing permits will continue to govern emissions and operation of the boilers except as specifically indicated.
  - ii. This permit is issued based on negligible particulate matter (PM) emissions from the storage and handling of sorbent for the sorbent injection systems. For this purpose emissions shall not exceed 0.44 tons/year. However Permittee shall comply with all applicable requirements of 35 Ill. Adm. Code Part 212 that apply to the storage and handling of sorbent.
- c. This permit does not authorize any modifications to the affected boilers or generating units, which would increase capacity or potential emissions.
- 2a. The Permittee shall comply with applicable emission standards and requirements related to mercury emissions for the affected boilers pursuant to 35 IAC Part 225, Subpart B and/or Subpart F, by the applicable dates specified by these rules.

Note: The Permittee expects that it will comply with certain provisions of 35 IAC Part 225, Subpart F, which is still proposed, as an alternative to compliance with 35 IAC Part 225, Subpart B. If the Permittee elects to comply with 35 IAC Part 225, Subpart F, certain provisions of subpart B would not be applicable, and the provisions of Subpart F would set the dates when certain other requirements do become applicable.

- b. This permit does not affect the authorizations in existing operating permits for the affected boilers, pursuant to 35 IAC 201.149, 201.161 and 201.262, that allow the Permittee:
  - i. To operate an affected boiler in violation of certain state emission standards during startup of the boiler or the terms and conditions that accompanied such authorization.
  - ii. To continue to operate an affected boiler in violation of certain state emission standards during malfunction or breakdown of the boiler, including control devices and ancillary systems, or the terms and conditions that accompanied such authorization.
- 3. At all times, the Permittee shall, to the extent practicable, maintain and operate the sorbent injection systems including storage and handling of sorbent, in a manner consistent with good air pollution control practice for minimizing emissions from the existing coal-fired boilers and the source.
- 4a. The Permittee shall comply with all applicable requirements of 35 IAC Part 225, by the dates specified in the rules, related to monitoring of mercury emissions from the affected boilers.
- b. If the sorbent injection systems can be adjusted remotely by personnel in the control room, the Permittee shall install, operate, and maintain instrumentation for measuring rate of sorbent injection for each affected boiler with the status of the system.
- 5a. The Permittee shall maintain following records for the coal supply for the affected boilers:
  - i. Applicable records required by 35 IAC Part 225, by the dates specified in the rules, related to sampling and analysis of the coal supply to the affected boilers for its mercury content.
  - ii. Records of mercury and heat content of the current coal supply to the affected boilers, with supporting data for the associated sampling and analysis methodology, so as to have representative data for the mercury content of the coal supply.
- b. The Permittee shall maintain the following records for the sorbent injection system on each affected boiler:

- i. An operating log or other records for the system that, at a minimum, identify the sorbent that is being used, the setting(s) for sorbent injection rate and each period of time when an affected boiler was in operation without the system being operated with explanation, e.g., the boiler was being fired on natural gas.
    - ii. Maintenance and repair log or other records for the system that, at a minimum, list the activities performed, with date and description.
  - c. The Permittee shall maintain following records related to mercury emissions from the affected boilers:
    - i. All applicable records required by 35 IAC Part 225, by the dates specified in the rules, related of monitoring mercury emissions.
    - ii. During the period before the Permittee is required to conduct monitoring for the mercury emissions of the affected boilers pursuant to 35 IAC Part 225, the Permittee shall maintain records of any mercury emission data collected for the affected boilers, including emissions or control efficiency with identification and description of the mode of operation.
  - d. The Permittee shall retain all records required by this permit at the source for at least 5 years from the date of entry and these records shall be readily accessible to the Illinois EPA for inspection and copying upon request.
6. If there is any deviation from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the deviation or such other time period specified in the current CAAPP permit issued for the source. The report shall include a description of the deviation, a copy of relevant records, and measures to reduce emissions and future occurrences.
7. The Permittee shall notify the Illinois EPA when sorbent injection systems on affected boilers start operating.
8. The Illinois EPA has determined that this project, as described in the application, will not constitute a modification of the boiler under the federal New Source Performance Standards, 40 CFR 60, as the project has the primary function of reducing emissions and therefore is not considered a modification pursuant to 40 CFR 60.14(e)(5).
9. Two copies of required reports and notifications shall be sent to the Illinois EPA's Compliance Section at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency/Regional Office  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

10. The affected boilers may be operated with sorbent injection systems pursuant to this construction permit until an operating permit becomes effective that addresses operation of these boilers with these systems.

If you have any questions on this permit, please call Kunj Patel at 217/782-2113.

Edwin C. Bakowski, P.E.  
Acting Manager, Permit Section  
Division of Air Pollution Control

Date Issued: \_\_\_\_\_

ECB:CPR:KMP:psj

cc: Region 1