

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B426136392

FACILITY: WISCONSIN ELECTRIC POWER COMPANY		SRN / ID: B4261
LOCATION: 2701 N LAKESHORE BOULEVARD, MARQUETTE		DISTRICT: Upper Peninsula
CITY: MARQUETTE		COUNTY: MARQUETTE
CONTACT: Rob Bregger , Principal Engineer - Environmental		ACTIVITY DATE: 09/08/2016
STAFF: Ed Lancaster	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Conducted scheduled compliance inspection		
RESOLVED COMPLAINTS:		

Directions: We Energies-Presque Isle Power Plant (PIPP) is located in the City of Marquette, at 2701 N. Lakeshore Boulevard.

Facility: PIPP was established in 1955 when the first power generation unit was operated. The plant currently operates five coal-fired boilers for power generation.

Units 5 and 6 are Riley pulverized coal wall fired dry bottom utility boilers using distillate oil start-up guns. The nameplate steam capacity ratings is 615,000 pounds per hour, with an approximate heat input capacity rating of 995 MMBTU/hour. Each boiler serves a GE steam turbine/generator set rated at 78,973 KW each. Units 5 and 6 are controlled with Low NOx burners and a fabric filter baghouse in series with an electrostatic precipitator (ESP).

Units 7, 8 and 9 are Riley pulverized coal wall fired dry bottom utility boilers using distillate oil start-up guns. The nameplate steam capacity ratings is 615,000 pounds per hour, with an approximate heat input capacity rating of 1,010 MMBTU/hour. Each boiler serves a GE steam turbine/generator set rated at 78,973 KW each. Units 7, 8 and 9 are controlled with Low NOx burners, an ESP, and a TOXECON fabric filter baghouse. The TOXECON baghouse was installed in 2005 for mercury emissions control.

Various ash handling processes are controlled with concentric loading/venting systems and/or baghouse dust collectors. Ash handling methods incorporate dust control measures and work practices as specified in the *Fugitive Dust Minimization Plan*.

Material handling dust control measures include cyclonic and fabric filter dust collectors, wet dust collectors, sweeping, flushing, water sprays, dust suppressants, enclosures, barriers, and work practices as specified in the *Fugitive Dust Minimization Plan*.

PIPP also operates two emergency, diesel-fired generators and a diesel-fired emergency fire pump.

Permits: On May 10, 2013, the AQD issued MI-ROP-B4261-2013. The ROP expires May 10, 2018.

On March 3, 2014, a significant modification (application # 201300171) to revise Appendix 9 for Phase II NOx compliance and NOx Averaging Plans was issued as MI-ROP-B4261-2013a.

On May 27, 2015, a minor modification (application # 201500042) to include the one year MATS extension to April 16, 2016 was issued as MI-ROP-B4261-2013b.

On August 7, 2015, Permit to Install (PTI) No. 3-15A, was issued to incorporate the conditions of a consent decree with the EPA (United States and MDEQ vs. Wisconsin Electric Power Company, Civil Action No. 03-C-0371).

MACTS: PIPP is a major source for HAPs, making the facility subject to the following standards:

Units 5-9: Are exempt from the requirements of 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boiler and Process Heaters, because they are subject to Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (Utility MACT).

The Boiler Units are also subject to the Federal Acid Rain Program promulgated in Title 40 CFR, Part 72 and the Cross State Air Pollution Rule (CSAPR), which replaced the Clean Air Interstate Rule (CAIR) effective January 1, 2015. The CSAPR Rules will be incorporated into PIPP's ROP renewal.

EUCDIESEL2 and FGCDIESELS: 40 CFR Part 63, Subpart ZZZZ, National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Inspection: On September 8, 2016, I arrived at the PIPP guard shack for an announced inspection. PIPP had contracted a stack testing company, the week of the inspection, to conduct quarterly PM testing on the TOXECON baghouse outlet duct for Units 7-9, to show compliance with Subpart UUUUU. A Relative Response Audit (RRA) on the PM CEMS of the TOXECON outlet duct was being conducted the day of the inspection.

Mr. Frank Price, Chief Engineer, and Ms. Amanda Studinger, Associate Environmental Consultant, met me at the guard shack. We proceeded to a conference room for a brief meeting with Mr. Les Kowalski, Asset Manager, Mr. Rob Breggar and Ms. Cynthia Brandt, We Energies-Milwaukee, Mr. Chris Eagling, Material Handling, Mr. Carl Daavettila, Operations Manager. As each of the boilers has nearly identical conditions I explained my emphasis for this inspection would be to review Unit #5 record-keeping and operational parameters and the emergency generators. I was informed Unit #5 was not operating, but Units 6-9 were operational, I then decided to observe Unit #6 operations.

In the boiler operator's room I noted the following operating conditions for Unit #6:

- Tons of western coal burned: 72,167.7 tons at 9:20 AM. Four coal pulverizers, each feeding the boiler at approximately 14,900 pounds per hour;
- Stack gas flow: 237,000 acf
- Baghouse dp: 1.5 inches water column;
- ESP outlet pressure: -5.2 inches water column, all four sections were energized;

CEMS readings:

- Opacity: 0.6%;
- CO:38.0 ppm;
- NOx: 150 ppm
- NOx: 0.279 pounds per MMBtu;
- SO2: 0.498 lbs/MMBtu; and
- Oxygen: 4.44%

Permit Conditions (EUBOILER5):

PIPP conducted stack tests for particulate matter (PM) and mercury emissions from Unit 5 on May 16, 2016, to show compliance with the Utility MACT. Filterable PM emissions were 0.0014 lb/MMBtu, in compliance with both the Utility MACT and Special Condition (SC) Nos. I.2 and IV.1. As noted above, the SO2 CEMS reading was 0.498 lbs/MMBtu, below the limit in SC I.3.

PIPP burns a low sulfur western coal from the Powder River Basin, delivered by ship from the Duluth, MN port. Each shipment is analyzed for ash, sulfur and Btu content; no deviations were reported as per SC II.1. PIPP does not receive or burn petroleum coke (SC II.2).

The ESP and baghouse were observed, from the control room, to be operating properly during the inspection (SC Nos. III.1, 3 and 4). Low NOx burners are used on all the boilers (SC III.2).

PIPP continues to conduct PM emission rate testing every two years and submits test protocols and test reports within the established timelines (SC Nos. V.1 and 2).

PIPP uses the COMS to correlate the PM emissions from EUBOILER 5 and 6 (PTI No. 3-15, SC VI.1 and MI-ROP-B4261b SC VI.2 and 14). As noted above, continuous reading of the baghouse pressure drop are observed from the operator's control room, alarms are set to alert operators if the unit falls out of the established indicator range (SC Nos. VI. 1, 3-5). At the time of the inspection, PIPP was operating in compliance with the Compliance Assurance Monitoring (CAM) rules in SC Nos. VI.6-10 and IX.1-3). PIPP staff conducts daily calibrations of each monitoring system (SC Nos. VI.11 and 15) and are timely

in their quarterly excess emission reports (SC Nos. VI.12, 16 and 17). An annual audit of the COM was being conducted the day of my inspection.

PIPP is always timely in submitting their required reports (SC Nos. VII. 1-7). In a letter dated September 8, 2016, Ms. Brandt reports there were no excursions during the reporting period (January 1 – June 30, 2016) for Units 5-9. The differential pressure transmitters for the baghouses associated with Units 5-9 had no downtime events, while the opacity monitors for each unit had minimal downtime events ranging from 0.9 to 7.4 hours. Most of the events were listed as “quality assurance calibrations” or “other known causes”. Unit 9’s monitor had three (3) downtime incidences for monitor equipment malfunction.

PIPP has completed all compliance testing requirements established in the Utility MACT (SC IX.13), and continues to comply with the acid rain, CSAPR SO₂ Trading and CSAPR NO_x programs (SC Nos. IX.4-11).

Part 15 Emissions Limitations and Prohibitions – Mercury, SC IX.13, no longer applies as the facility is subject to 40 CFR 63, Subpart UUUUU.

PIPP operates in compliance with their Malfunction Abatement Plan, last updated October 2011 (SC IX.14).

EUICDIESEL2 and FGICDIESELS:

All three units are subject to 40 CFR Part 63, Subpart ZZZZ, National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the RICE MACT).

To comply with the RICE MACT the company has opted to comply by changing the oil and filter annually (or 500 hours of operation) and inspect the air cleaner and hoses and belts. The diesel units are tested monthly and run for about a half hour during the test. Each engine is equipped with a non-resettable hour meter and hours of operation records are kept for each unit. Mr. Price provided me the following data on the hours of operation for the three units:

	Hour Meter Reading May 3, 2013	Hour Meter Reading Sept. 7, 2016	Total Hours of Operation (40 Months)
5-9 diesel fire pump	2127.46	2159.74	32.28
5&6 emergency diesel	333.1 (2/27/2013)	386.5	55.4
7-9 emergency diesel	320.0	342.4	22.4

Based on a review of records and on-site inspection, PIPP is demonstrating compliance with the conditions of MI-ROP-B4261-2013b and PTI No. 3-15A.

NAME Ed Lancaster

DATE 11/21/16

SUPERVISOR 

