

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

B283632858

FACILITY: B. C. Cobb Plant		SRN / ID: B2836
LOCATION: 151 N. Causeway, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Janet Zondlak ,		ACTIVITY DATE: 01/07/2016
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection (FCE) for FY '016. See CA_B283632858. (SLachance, 1/8/16)		
RESOLVED COMPLAINTS:		

SL conducted an unannounced inspection of Consumer Energy's BC Cobb Plant at 151 North Causeway, Muskegon, Michigan. On-site activities took place on Thursday, January 7, 2016. The primary purpose of the inspection was to determine the facility's compliance with current Renewable Operating (RO) Permit No. MI-ROP-B2836-2011.

Ms. Janet Zondlak (231-727-6243) of the facility accompanied SL during the inspection; and Mr. Roger Vargo (site CEMS manager) provided assistance with CEMS/COMS discussions and reports. Other BC Cobb personnel (unit operators, etc.) variously assisted during the inspection activities.

On-site activities commenced at about 12:30 PM. Weather conditions were generally calm with partly cloudy skies and temperatures between 40 and 45 degrees F. Upon approaching the site vicinity, SL assessed stack emissions; Visible Emissions were generally assessed as 0-10% opacity.

NOTE: this facility is slated for closure by April 16, 2016. Per Consent Agreement, no electric generation can take place after that date. The MDEQ-AQD has provided an extension for Boiler MACT compliance date until June 30, 2016 to allow for ancillary operations of the auxiliary boiler. All site operations (other than subsequent decommissioning) will be completed prior to the August 9, 2016 expiration of the existing ROP, although the company is conservatively planning on submitting an application for renewal of this permit.

FACILITY DESCRIPTION

The facility is located at 151 North Causeway, Muskegon, Michigan. Muskegon County is currently designated as attainment for all criteria pollutants.

The stationary source is subject to 40 CFR Part 70 because the potential to emit carbon monoxide, sulfur dioxide, nitrogen oxides, and particulate matter exceeds 100 tons.

The stationary source is considered a major source of Hazardous Air Pollutant (HAP) emissions because the potential to emit of a single HAP (hydrogen chloride) regulated by the Clean Air Act, Section 112 is greater than 10 tons per year.

The facility is an electricity generating station comprised of five units. Two coal-fired boilers, No's. 4 and 5, operate as base load units, while Unit No's. 1 through 3 were converted from coal to natural gas, are designed to operate as peaking units, but are currently in long-term cold storage status. Emissions from the coal-fired units are controlled through the use of blended eastern and western coal and electrostatic precipitators, while No. 5 is also equipped with low-NOx burners. The facility has Continuous Emissions Monitoring Systems (CEMS) installed on each unit for stack gas flow, carbon dioxide, and nitrogen oxides. Unit No.'s 4 and 5 also have CEMS for sulfur dioxide and a common stack Continuous Opacity Monitoring System (COMS) for opacity.

(Note, per federal consent decree, Units 4 and 5 are slated to cease operations in April, 2016.)

Consumers Energy operates a contiguous coal receiving system on the banks of Muskegon Lake. Coal is stockpiled via radial stacker equipment. Dust control agents are immediately applied as necessary as coal is unloaded. Additional dust control measures include rolling and compacting coal piles along with the use of a water sprinkling system and water trucks. Specific coal handling points are controlled with fabric filter baghouses and enclosures.

Other emission sources at the facility include an auxiliary back-up boiler subject to Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart Dc and National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boilers at Major Sources, 40 CFR 63 Subpart DDDDD; emergency standby Reciprocal Internal Combustion Engines (RICE); flyash collection equipment; and cold parts cleaners.

The stationary source was subject to Prevention of Significant Deterioration (PSD) (40 CFR 52.21) review because the modified, gas-fired units have the potential to emit nitrogen oxides and carbon monoxide greater than 100 tons per year. Particulate matter was also subject to PSD review, since the potential to emit was above significant levels.

The NOx limit for FGBOILERS1,2&3 established under PSD/BACT review is more stringent than the limit established for these boilers under 40 CFR 60, Subpart Da.

The facility is subject to the Acid Rain (Title IV) provisions of the Clean Air Act of 1990, as amended. The facility's Acid Rain Permit, based on the permittee's original application, is included in the Renewable Operating Permit.

EUBOILERS1 through 5 are regulated by Michigan's Part 8 Rules ("Emission Limitations and Prohibitions – Oxides of Nitrogen"). EUBOILERS1 through 5 are also subject to the Clean Air Interstate Rule (CAIR) NO_x annual trading program pursuant to Rules 802a, 803, 821, and 830 through 834; to the CAIR NO_x ozone season trading program pursuant to Rules 802a, 803 and 821 through 826; and to the CAIR SO₂ annual trading program pursuant to Rule 420. The applicable requirements are included in the CAIR permits, which are incorporated into the ROP as Appendices.

(NOTE; Cross-State Air Pollution Rule (CSAPR) permits are currently in public review.)

The diesel-powered reciprocating internal combustion engine (RICE) used as a source of emergency backup power (EUACEMERGEN) is subject to the National Emission Standards for Hazardous Air Pollutants from Stationary RICE, 40 CFR 63, Subpart ZZZZ. The unit is an existing "emergency use" RICE which does not have to meet the requirements of this subpart or Subpart A. If the unit is reconstructed, the unit may be subject to applicable emission limitations and/or operational restrictions as well as initial notification requirements.

The stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule (40 CFR 64) because EUFLYASH, EUFUELHAND, EUBOILER4 and EUBOILER5 have both a control device and potential pre-control emissions of particulate greater than the major source threshold level. In addition, post-control emissions of particulate from EUBOILER4 and EUBOILER5 are over the major source threshold level. CAM requirements are included in the ROP.

NOTE: The filter separator dust collector associated with the fly ash collection system is considered inherent process equipment and is therefore not considered a control device pursuant to Compliance Assurance Monitoring (CAM: 40 CFR Part 64). The dust collector is for purposes of material recovery in order to route to dry fly ash to the silo; exhaust flow from this dust collector is routed to a wet venturi system which discharges to the ash ponds. Only the fly ash silo and truck loading dust collectors are subject to CAM monitoring/recordkeeping and reporting.

COMPLIANCE EVALUATION

This inspection/evaluation entailed a series of report reviews (Title V certifications, quarterly excess emissions/CEMS performance reports, MAERS, CAM reports, etc.), visible emissions observations and on-site activities. The applicable requirements are listed in RO Permit No. MI-ROP-B2836-2011.

This write-up will focus specifically on data collected and observations made during these inspection activities; supplementary information pertinent to the Full Compliance Evaluation (FCE) is documented in the FCE Checklist accompanying this report.

The day's on-site activities began with an entrance interview with Ms. Zondlak at about 12:30 PM:

*****SL provided a copy of DEQ's Brochure entitled "Environmental Inspections; Rights and Responsibilities".**

*****No recent changes in equipment; no pertinent current operational issues. (It became apparent over the course of the inspection and through discussion that the coal-fired units are currently opacity-limited in their operations. These are base-loaded units, but maximum output is limited by opacity restraints and the lower heating value of the 100% western coal now being used.)**

*****No reported user issues with the renewed ROP No. MI-ROP-B2836-2011.**

*****The facility's Units 4 and 5 now 100% western coal.**

*****Units 1, 2 and 3 remain in certified "Long Term Cold Storage."**

*****The most recent PM testing for Units 4 and 5 (as required by ROP) was completed in late summer, 2015, with no known issues (see below.)**

*****Operations on this day were reportedly quiet and normal, with no known issues. The units continue to operate at base load conditions. The maximum operations are limited by opacity and western fuel constraints, and so maximum operations for each unit are about 140 MW (gross).**

*****SL requested the following reports: Daily CEM/COMS calibration data for each unit for January 6 and 7, 2016; a combined Opacity Matrix for these same dates; Daily Hourly Average Reports for each unit for these dates. SL left the site with all this in hand. See discussions and attachments,**

below.

The inspection then continued with emphasis on the Control Room for Units 4 and 5 and the CEMS Room.

EUAUXBLR

This equipment (maximum heat input capacity of 20.9 mmBtu/hr, dated 1991) was not in operation at the time of the inspection. Fuel oil service is no longer available to this equipment, as the diesel tank for it has been removed. The only possible use of oil in this boiler would involve running a temporary line to the other diesel tank (for mobile equipment) on-site. Laboratory results of the fuel used, from a sample taken during the 2007 inspection, indicate compliance with Part 4 sulfur-in-fuel limitations. All subsequent bills of lading indicate the purchase of "Ultra Low Sulfur Diesel" which is defined as less than 15 ppm (0.0015% sulfur). This same source of fuel oil is used for all site equipment.

This unit is subject to the Boiler MACT for Major Sources (40 CFR 63, Subpart DDDDD), but as an existing Gas1 Emergency Use Unit, the boiler is not subject to testing requirements, but rather pending Work Practice and Energy Assessment requirements. Note that the Gas1 category allows for 48 hours of oil use (unlimited during gas curtailment.)

The facility requested an extension of the compliance date for this rule (1/31/16); and this request has been granted through June 30, 2016.

EUACEMERGEN

This equipment was not in operation at the time of the inspection. The only recent operations have been short-term, weekly tests for availability. Laboratory results of the fuel used, from a sample taken during the 2007 inspection, indicate compliance with Part 4 and permit sulfur-in-fuel limitations. All subsequent bills of lading indicate the purchase of "Ultra Low Sulfur Diesel". See also FGEMERENGINES.

EUFLYASH

Wetted ash continues to be hauled to the JH Campbell landfill. The loading equipment was not in use at the time of inspection. Previous site discussions and CAM reporting all indicate that CAM has been properly implemented and that the control equipment (baghouses and enclosures) is operated properly. Note, "No" visible emissions is the accepted CAM indicator. Differential pressure and bag detector alarms are used to identify conditions that might lead to a control device failure, but visible

emissions triggers required CAM action.

EUFUELHAND

This unit is subject to CAM as PM is controlled at multiple points by baghouses. Observations indicated no visible emissions from either the "Breaker House" (ground-level) or "Unit 4/5 Filter Receiver" (scavenger on the roof of the bunker room) baghouses. Each of these new baghouses is equipped with bag leak detectors and differential pressure monitors, however CAM excursions are defined as periods of visible emissions.

This equipment was not operating at this time of day during the site visit.

Recent (March 2015) Visible Emissions testing of affected units pertaining to coal handling indicates compliance with NSPS, Subpart Y limits (no visible emissions noted.)

Observations during the March, 2015 Subpart Y testing specifically indicated operations within CAM-specified ranges; no visible emissions were noted from either control device, broken bag detectors were functional and indicating normal operations, and differential pressures were within specified ranges. Note, coal was being handled at the time of these observations.

No visible emissions were observed during the on-site inspection on July 13, 2015.

The CAM documentation discussed above was readily available upon request, with no issues noted.

EUBOILER4; see also FGBOILERS4&5

Control Room observations (with assistance from Control Room Operator "Dennis") at about 1:30 PM on 1/7/16 indicated 140 MW (gross).

Control Room charts indicated the following operations:

ESP on "Automatic" mode to minimize opacity

Opacity = 10.9% (combined stack opacity)

NOx = 0.333#/mmBtu

SOx = 1.005#/mmBtu

This unit's particulate matter (PM) emissions were last tested in late summer 2015, with a result of 0.0187 lb PM/1,000 exhaust gas, corrected to 50% excess air. This compares to the limit of 0.18 lb PM/1,000 exhaust gas, corrected to 50% excess air.

EUBOILER5; see also FGBOILERS4&5

Control Room observations (again with assistance from Control Room Operator "Dennis") at about 1:30 PM on 1/7/16 indicated 110 MW (gross; one of four coal feeders was unavailable.)

Control Room charts indicated the following operations:

ESP on "Automatic" mode to minimize opacity.

Opacity = 10.9% (combined stack opacity)

NO_x = 0.142#/mmBtu; note the benefit of the low-NO_x combustion technology, compared to Unit 4

SO_x = 0.965#/mmBtu

This unit's particulate matter (PM) emissions were last tested in late summer, 2015, with a result of 0.0263 lb PM/1,000 exhaust gas, corrected to 50% excess air. This compares to the limit of 0.18 lb PM/1,000 exhaust gas, corrected to 50% excess air.

FGBOILERS4and5

SL visited the CEMS shelter at about 2 PM. Mr. Vargo provided the various CEMS-based reports that were requested at the start of the inspection. There were no issues with the current performance of these CEMS, and so the CEMS values as presented here and in the Control Room are taken as valid at this time. Note, no compliance issues were noted based on the requested and reviewed materials and reports.

Specifically, SL requested and received Calibration Detail reports for each CEMS system for 1/6 and 1/7/16. See Attached. Data from all CEMS are valid; no issues were noted in the data for these dates.

SL also requested and received 1-Hour Average Data for each unit for 1/6 and 1/7/16. See Attached. SL also received (combined) Opacity Matrices for these same dates. See Attached. Again, no emissions issues are noted.

Note, Ms. Zondlak reported that the number of 6-minute average opacity exceedances was reduced by 32% in 2015 as compared to 2015.

FGBOILERS1,2&3

These were not in operation at the time of the inspection. These units are currently in long-term "cold storage" and the facility has submitted

necessary notifications per 40 CFR 75.61(a)(7) in order to waive on-going CEMS requirements, etc.

FGEMERENGINES

None of the emergency RICE were operating at the time of the inspection. The current RO Permit incorporates requirements for these, based on the new RICE MACT. SL had previously observed the required operations and maintenance logs for the emergency fire pump engine; no issues.

FGPARTSCLEANERS

None were observed during this site visit, but these were more thoroughly assessed in the previous inspection (July 2015) with no issues noted.

EXIT INTERVIEW

On-site activities concluded with an Exit Interview. SL stated no known concerns and acknowledged receipt of all requested information.


SUMMARY

Based upon the information reviewed, the facility appears to be in compliance with applicable rules and regulations as compiled in MI-ROP-B2836-2011. This conclusion is based on the contents of required reports submitted by the facility; review of requested records; as well as the on-site observations of January 7, 2016.

ATTACHMENTS

- Calibration Detail Reports for all CEMS/COMS for each unit for 1/6 and 1/7/16
- Hourly Average Data Reports for each unit for 1/6 and 1/7/16*
- Opacity Matrix Reports (combined units) for 1/6 and 1/7/16*

*Report for 1/7/16 is complete only through Noon or so based on timing of inspection

NAME  DATE 1/8/16 SUPERVISOR 