

B2132

MANILA

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

B213231137

FACILITY: WYANDOTTE DEPT MUNI POWER PLANT		SRN / ID: B2132
LOCATION: 2555 VAN ALSTYNE, WYANDOTTE		DISTRICT: Detroit
CITY: WYANDOTTE		COUNTY: WAYNE
CONTACT: Charlene Hudson , Supervising Engineer		ACTIVITY DATE: 09/14/2015
STAFF: Stephen Weis	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Compliance inspection of the Wyandotte Department of Municipal Services Power Plant. The Wyandotte Power Plant is scheduled for inspection in FY 2015.		
RESOLVED COMPLAINTS:		

Location:

Wyandotte Department of Municipal Services
Power Plant (SRN B2132)
2555 Van Alstyne
Wyandotte

Date of Activity:

Monday, September 14, 2015

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Kim Kemper, Environmental Coordinator, Wyandotte
Charlene Hudson, Power Systems Supervising Engineer, Wyandotte
Chris Brohl, Plant Superintendent, Wyandotte
Kim Alfonsi, Barr Engineering Company
Nick Hansen, Barr Engineering Company

Purpose of Activity

A self-initiated inspection of the City of Wyandotte Department of Municipal Services ("WMS") Power Plant facility (hereinafter "Wyandotte" or "power plant") was conducted on Monday, September 14, 2015. The Wyandotte facility was on my list of sources targeted for an inspection during FY 2015. The purpose of this inspection was to determine compliance of operations at the Wyandotte facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), and Federal standards. The facility is also subject to the terms and conditions of Renewable Operating Permit (ROP) No. MI-ROP-B2132-2010 and DEQ-AQD Permit to Install No. 202-14.

Facility Description

The WMS is a municipal entity, owned and operated by the City of Wyandotte, that provides electricity, water, telephone, internet and cable television services to the residents of Wyandotte. The electricity is generated by the City of Wyandotte Municipal Power Plant. The power plant is located on the western shore of the Detroit River, just north of the downtown area of Wyandotte. The facility is bounded by the Detroit River to the east; to the north is Henry Ford Wyandotte Hospital, a small marina and some residences along the marina; to the south is Bishop Park; and to the west and southwest is an area that is primarily a mix of residential types of properties (houses, condominiums, a senior apartment complex) as well as one of the City of Wyandotte's libraries.

The power plant currently has three boilers on site, identified as Units 5, 7 and 8. The boilers are used to power turbines to generate electricity for WMS's electrical customers, and to generate and provide steam to meet the steam needs of contract customers. There is a fuel storage area in the southern half of the power plant property, all the way to the fence line with Bishop Park, in which fuels (coal, tire-derived fuel) and limestone are stored. At

the north end of the facility, along the border with the hospital's parking lot, are the ash silos that collect ash generated by the burning of solid fuels. The ash is collected in the silos, and loaded onto trucks for off-site disposal.

In addition, Wyandotte operates three diesel-fired compression ignition engine generators to provide back-up power to the power plant. These generators are located approximately ½ mile north of the power plant on James DeSana Drive. The parcel of property on which the generators are located lies to the north of the Henry Ford Wyandotte Hospital, and it borders the southern portion of the BASF complex property.

Facility Operations

The Wyandotte facility is a municipal utility that operates 24 hours per day, 7 days per week, and every day of the year.

The power plant currently consists of three boilers. Unit 5 is a 22.5 MW natural gas-fired boiler that is used as a back-up to the other two boilers. Unit 7 is a 32.5 MW wall-fired pulverized coal-fired boiler that is capable of firing coal, natural gas and propane. The exhaust air from Unit 7 is directed to an electrostatic precipitator (ESP) to control particulate matter emissions when Unit 7 fires coal, but Unit 7 has been firing exclusively natural gas since the first calendar quarter of 2012. Unit 8 is a 25 MW circulating fluidized bed boiler capable of firing coal, untreated virgin wood chip waste and tire-derived fuel (TDF). The exhaust air from Unit 8 is directed to a baghouse with limestone injection to control SO₂ and particulate matter emissions. Unit 8 has only operated periodically throughout 2014 and 2015.

The southern portion of the power plant property is used to store the solid fuels that are fired in the boilers. This area, which is roughly two acres in size, has traditionally contained coal piles, an area to store tire-derived fuel (TDF) and wood, and an area close to the river to store limestone that is used to control SO₂ emissions from Unit 8. These materials are delivered to the facility via ship or truck.

The fly ash collectate from the Unit 7 and 8 particulate control devices (electrostatic precipitator and baghouse, respectively) is pneumatically conveyed to fly ash silos at the northwest corner of the facility where it is loaded into trucks for offsite disposal. Potential fugitive dust emissions from the load out area are controlled by wet suppression. The ash collection system has not operated much in the past couple of years due to Unit 7 firing natural gas, and the limited use of Unit 8.

The three engine generators located to the north of the power plant are each 2,000 kW standby compression ignition diesel-fired engine generators. Emissions from each of the engines are controlled by a catalytic oxidation emission control system.

Wyandotte is planning some changes to the power plant. These changes were presented to DEQ-AQD as part of a Permit to Install application, which was reviewed by AQD's Permit Unit. Permit to Install No. 202-14 was issued to Wyandotte per correspondence from DEQ-AQD dated July 21, 2015. The changes that will be occurring at the Wyandotte facility, as permitted by PTI No. 202-14, include:

- The installation of a new natural gas-fired boiler, which is identified as boiler Unit 9 in the permit. Unit 9 will be rated at 160 MMBTU/hour maximum heat input, will be used to generate steam to meet customer demand, and will be equipped with low-NO_x burners and flue gas recirculation for emissions control.
- The installation of another new natural gas-fired boiler, which is identified as boiler Unit 10 in the permit. Unit 10 will have a maximum rated heat input capacity of 90 MMBTU/hour, will be also be used to generate steam to meet customer demand, and will be equipped with low-NO_x burners and flue gas recirculation for emissions control.
- The installation of a 20 MW natural gas-fired combustion turbine. The combustion turbine will have a maximum rated heat input capacity of 247 MMBTU/hour, and be used to generate electricity. The combustion turbine will be equipped with dry low NO_x emission control. The combustion turbine will be paired with a heat recovery steam generator (HRSG) to cogenerate electricity and steam for nearby facilities. The HRSG will be equipped with a natural gas-fired duct burner rated and 90

MMBTU/hour. According to the information associated with the permit, the HRSG is not capable of operating independently of the combustion turbine.

- When the new boilers and the combustion turbine have been installed and operational, Unit 8 will be permanently shut down.

When Unit 8 is shutdown, there will no longer be any combustion equipment at the power plant that fires solid fuel. As a result, the storage area and yard will no longer have storage piles of fuel (coal, tire-derived fuel, wood) or limestone. In addition,

Inspection Narrative

I arrived at the Wyandotte power plant at 10:15am. I checked in at the security gate, and walked up to the facility offices. I was met by Kim Kemper, WMS's Environmental Coordinator. Kim took me to her office, where I was met by Charlene Hudson, Power Systems Supervising Engineer; Chris Brohl, Plant Superintendent, Wyandotte; and Kim Alfonsi and Nick Hansen of Barr Engineering Company, who provide environmental compliance consulting services for WMS.

We proceeded to Chris' office and began to discuss the compliance status of the Wyandotte facility. We first discussed the new equipment addressed by Permit to Install No. 202-14. No ground has been broken, as yet, to begin construction of the new boilers and the combustion turbine, and there is no set timeline, as to when this project is going to begin.

I was told that WMS has been stressing employee education regarding the environmental regulations and responsibilities at the power plant. Charlene told me that there have been training programs for staff in order to familiarize them with the permit limits, and how to operate and manage the facility in compliance with the permits and regulations. Barr assisted Wyandotte by creating instructional signs that are displayed at the facility. The signs provide a summary of the environmental regulations and permit requirements that apply to the facility in relation to the air and water media. Charlene told me that the training classes will be held yearly in order to keep staff aware of the environmental regulations and responsibilities.

Kim K., Kim A., Nick and I then proceeded to discuss the compliance status of the power plant with the terms and conditions of the ROP. During the course of our discussion, we reviewed records (both paper and electronic), and we looked at data in the "Stack Vision" program that WMS is using at the power plant, which provides real-time emissions data and checks the information against applicable emission limits. The Stack Vision program stores data from the data loggers associated with the Continuous Emissions Monitoring System (CEMS) that are installed on the boilers. It was explained to me that the information from Stack Vision is used for many reporting purposes at the facility. The quarterly excess emission reports that are submitted to DEQ-AQD are generated from information in this program. The program tracks CEMS monitor downtime, calibrations that are performed, and calibration gas bottle inventory. The information in Stack Vision also works to provide data for the Acid Rain program requirements in 40 CFR Part 75, as well as for the Clean Air Interstate Rule (CAIR) and Cross-State Air Pollution Rule (CSAPR) programs. The next section of this report will provide details regarding the compliance discussion that occurred during the site visit.

After the records review and related discussion, Charlene and Chris joined us for a closing discussion. Kim K. led me, along with Kim A. and Nick, on a walk around the power plant facility grounds. We first stopped in the ash load out area. The gated driveway leading offsite was clean, as was the area around the ash load out area. We then walked over to the coal yard. Much of this area was now open due to the lack of solid fuel now being stored on site. There were two small piles of coal at the southern end of the yard, and a small pile of limestone along with a small pile of TDF at the east end, close to the river. Kim K. showed me the extent of the unpaved area for which WMS contracts to have dust suppressant applied.

I left the facility at 12:35pm.

Permits/Orders/Regulations

Permits

The primary source of the regulatory air requirements that are currently applicable to the Wyandotte facility are found in the facility's current Renewable Operating Permit No. **MI-ROP-B2132-2010**, which was effective on April 15, 2010, and **Permit to Install No. 202-14**, which was issued via correspondence from DEQ-AQD to WMS dated July 21, 2015. A ROP renewal application was submitted to DEQ-AQD in September 2015. In the time since the ROP renewal application was received, WMS applied for and received PTI No. 202-14. WMS also applied for another Permit to Install, which was assigned No. 112-14, to address the installation and operation of two temporary boilers, with one of them operating between November 1, 2014 and March 31, 2015, and the other operating between November 1, 2014 and October 31, 2015. WMS decided not to install these temporary boilers, and the permit application was withdrawn.

During the course of this inspection, we did not address the requirements of Permit to Install No. 202-14 as the proposed new boilers and the combustion turbine have not been constructed, thus none of the conditions in this permit are applicable to the facility, as yet. The compliance discussion focused on the current ROP, MI-ROP-B2132-2010.

These two DEQ-AQD permits reference the applicable State air regulatory requirements, as well as the applicable Federal air regulatory requirements.

The following paragraphs provide a summary of the compliance of the operations at the Wyandotte power plant with the terms and conditions put forth by the ROP, with the headings representing the sections of the ROP.

EUUNIT5BLR

This Emission Unit covers the requirements for boiler Unit 5. This Unit is a natural gas-fired boiler used for back-up purposes. For purposes of the annual Relative Accuracy Test Audit (RATA) that is performed to certify the Continuous Emissions Monitoring System (CEMS) on Unit 5, the unit is set up as a peaking unit.

There are no emission limits or material limits associated with this Emission Unit.

III. Process/Operational Restrictions

Wyandotte is **in compliance** with the two Special Conditions (S.C.) – the maximum heat input to Unit 5 does not exceed 260 MMBTU/hour (S.C. III.1), and natural gas is the only fuel fired in this Unit (S.C. III.2).

VI. Monitoring/Recordkeeping

Wyandotte is **in compliance** with the requirements to monitor and record NO_x, CO and stack gas flow, and to calculate and record SO₂ emissions in accordance with 40 CFR Part 75.

VII. Reporting

Wyandotte is **in compliance** with the reporting requirements.

IX. Other Requirements

The Special Conditions in this section put forth the requirements of the Federal Acid Rain and CAIR programs. Wyandotte demonstrates compliance with these programs to US EPA. The facility looks to be **in compliance** with these requirements.

EUUNIT7BLR

This Emission Unit puts forth the permit and regulatory requirements for boiler Unit 7. Recall that Unit 7 is identified as a coal-fired boiler that is capable of firing natural gas, and that this boiler has been firing exclusively natural gas since the first quarter of 2012. Some of the permit conditions that are associated with this Emission Unit relate to the boiler when it is firing coal. As part of the ROP renewal application, Wyandotte has proposed the addition of permit conditions to address the firing of natural gas.

I. Emission Limits

Special Conditions I.1 through I.3 put forth emission limits from 40 CFR Part 60, Subpart D for SO₂, NO_x and particulate matter and Michigan Administrative Rule 331 for particulate. The Part 60 limits are associated with coal.

Wyandotte monitors SO₂ and NO_x emissions continuously using CEMS. Based on recent quarterly excess emission reports, Unit 7 is **in compliance** with the limits for these pollutants. In addition, Wyandotte checked the CEMS data against the Subpart D NOX standard for natural gas, which is 0.2 pounds/MMBTU, which indicated that Unit 7 is complying with this limit, as well. The natural gas limit of 0.2 is effective per Subpart D, as well as per the requirements of a Consent Order that was entered into between DEQ-AQD and WMS, Consent Order AQD No. 45-2014.

On November 5, 2014, emissions testing was performed on Unit 7 to test for particulate matter. The results of this testing indicated that particulate matter emissions are **in compliance** with the permit limits. The test results for particulate matter showed:

- 0.0017 lbs./MMBTU vs. the permit limit of 0.10 lbs./MMBTU (S.C. I.3.1)
- 0.0016 lbs./1,000 lbs. exhaust air vs. the permit limit of 0.078 lbs./1,000 lbs/ exhaust air (S.C. I.3.2)
- 0.78 lbs. of particulate per hour vs. the permit limit of 44 lbs. per hour (S.C. I.3.3)

II. Material Limits

There are no material limits contained in EUUNIT7BLR.

III. Process/Operational Restrictions

Condition III.1 addresses the operation of the electrostatic precipitator (ESP). The ESP is operated when coal is fired in Unit 7 to control particulate emissions. This condition is not currently applicable as Unit 7 is firing natural gas.

IV. Design/Equipment Parameter

Condition IV.1 addresses the operation of the electrostatic precipitator (ESP). The ESP is operated when coal is fired in Unit 7 to control particulate emissions. This condition is not currently applicable as Unit 7 is firing natural gas.

V. Testing/Sampling

As mentioned previously, a particulate matter emissions test was performed on November 5, 2014. Wyandotte is **in compliance** with this requirement.

VI. Monitoring/Recordkeeping

Special Conditions:

VI.1 – **Compliance**. Wyandotte continuously monitors and records the required information.

VI.2 – **Compliance**. Wyandotte includes the required information on their Semi-annual reports.

VI.3 – 5 – These permit conditions relate to the CAM (Compliance Assurance Monitoring) plan for particulate matter, which relates the opacity data that is measured by the Continuous Opacity Monitoring System (COMS) to compliance with the particulate matter emission limit. These conditions are meant to address periods when coal is fired in this boiler, and emissions are vented through the ESP. Wyandotte does operate the COMS, in accordance with S.C. VI.4. The facility is **in compliance** with the applicable parts of these permit conditions.

VI.6 – **Compliance**. Wyandotte performs audits of the COMS on a quarterly basis.

VII. Reporting

Wyandotte is **in compliance** with the applicable provisions of the reporting requirements in Special Conditions VII.1 – VII.6.

IX. Other Requirements

Special Conditions:

IX.1 – **Compliance.** A Malfunction Abatement Plan (MAP) and Maintenance Procedures and Schedules Plan are on file for Unit 7. WMS and Barr Engineering have created updated and revised plans for the power plant. I met with Kim Kemper and Kim Alfonsi on July 7, 2015 at the AQD-Detroit Office to discuss the proposed updates and revisions to the various plans required by the ROP, and we agreed on the direction and format for the revisions. The updated and revised MAP and Maintenance Procedures and Schedules Plan for Unit 7 were submitted to the AQD-Detroit Office via correspondence dated September 9, 2015.

IX.2 – IX.9 - These Special Conditions put forth the requirements of the Federal Acid Rain and CAIR programs. Wyandotte demonstrates compliance with these programs to US EPA. The facility looks to be **in compliance** with these requirements.

IX.10-IX.12 – **In compliance.** Wyandotte complies with the applicable portions of the CAM plan for Unit 7.

IX.13 – This condition addresses the opacity limits put forth in 40 CFR Part 60, Subpart Y, which applies to coal handling. At this time, no coal is being handled in relation to the operation of Unit 7. **Compliance.**

EUUNIT8BLR

This Emission Unit puts forth the permit and regulatory requirements for boiler Unit 8. Recall that this Emission Unit has not operated much over the past couple of years, and that, when the new boilers and combustion turbine are installed and operational, Unit 8 will be permanently shut down.

I. Emission Limits

Special Conditions I.1 through I.8 put forth emission limits for Unit 8. These emission limits are based on 40 CFR Part 60, Subpart Da, Federal Prevention of Significant Deterioration (PSD) rules, and state regulations.

Wyandotte monitors opacity, SO₂, NO_x and CO emissions continuously using COMS and CEMS. Based on recent quarterly excess emission reports, Unit 8 is **in compliance** with the limits for these pollutants.

On November 24-26, 2014, emissions testing was performed on Unit 8 to test for particulate matter, PM₁₀, VOC and lead. The results of this testing indicated that measured emissions are **in compliance** with the permit limits. The test results are summarized as follows:

- For particulate matter - 0.010 lbs./MMBTU vs. the permit limit of 0.025 lbs./MMBTU (S.C. I.2.1), and 2.92 lbs./hour vs. the permit limit of 9.23 lbs./hour (S.C. I.2.2).
- For PM₁₀ - 0.013 lbs./1,000 lbs. exhaust air vs. the permit limit of 0.025 lbs./1,000 lbs. exhaust air (S.C. I.1.1), and 3.77 lbs./hour vs. the permit limit of 9.23 lbs./hour (S.C. I.1.2).
- For VOC - 0.50 lbs. of VOC per hour vs. the permit limit of 8.86 lbs. per hour (S.C. I.3.3).
- For lead – 0.00078 lbs./hour vs. the permit limit of 0.005 lbs./hour (S.C. I.7).

II. Material Limits

The conditions in the section place limits on the amount of coal and TDF that can be fired in Unit 8. Unit 8 has not been operating much over the past couple of years. It operated in November 2014 in order to complete the emissions testing described in the last section. Wyandotte has prepared an updated and revised Fuel Management Plan for Unit 8 that describes how the different types of fuel used in the boiler are tracked. The updated Plan was submitted to the AQD-Detroit Office on September 9, 2015. Based on the limited use of Unit 8, the facility is well **in compliance** with these material limits.

III. Process/Operational Restrictions

Compliance. WMS states that they are complying with the requirements of this section when Unit 8 is operating.

V. Testing/Sampling

V.1 – **Compliance** . Wyandotte performed the required emissions testing in November of 2014.

VI. Monitoring/Recordkeeping

Special Conditions:

VI.1 – **Compliance.** Wyandotte continuously monitors and records the required information.

VI.2 - **Compliance.** Wyandotte continuously monitors and records the required information.

VI.3 and VI.4 – **Compliance.** Wyandotte monitors the fuels fired in Unit 8 using the procedures as found in the Fuel Management Plan for Unit 8.

VI.5 – 7 – These permit conditions relate to analyses for the fuels that can be fired in Unit 8. Wyandotte has maintained this information in the past. Due to the limited use of Unit 8, I did not request to see documentation relating to the fuel analyses.

VI.8 – **Compliance.** Wyandotte maintains records associated with the MAP and Maintenance Procedures and Schedules Plan. As with Unit 7, an updated and revised MAP and Maintenance Procedures and Schedules Plan were submitted to the AQD-Detroit Office on September 9, 2015.

VI.9 through VI.15 – All of these conditions relate to the CAM plan. Wyandotte is **in compliance** with the applicable provisions of these requirements.

VII. Reporting

Wyandotte is **in compliance** with the applicable provisions of the reporting requirements in Special Conditions VII.1 – VII.6.

IX. Other Requirements

Special Conditions:

IX.1 – IX.6 - These Special Conditions put forth the requirements of the Federal Acid Rain and CAIR programs. Wyandotte demonstrates compliance with these programs to US EPA. The facility looks to be **in compliance** with these requirements.

IX.6 – **Compliance.** Unit 8 complies with 40 CFR Part 60, Subpart Da.

IX.8-IX.10 – **In compliance.** Wyandotte complies with the applicable portions of the CAM plan for Unit 8.

IX.11 – This condition addresses the opacity limits put forth in 40 CFR Part 60, Subpart Y, which applies to coal handling. **Compliance.**

FGWMS ENGINES

This Flexible Group contains the regulatory requirements for the three standby compression ignition diesel fuel-fired engine generators.

I. Emission Limits

This Flexible Group puts forth an emission limit for NO_x, and a requirement that the CO emissions from the engines be reduced by at least 70%, which serves as a surrogate/equivalent emission limit to the formaldehyde limit found in 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). Wyandotte performs annual compliance emissions

testing of the engines in accordance with Section V. of this Flexible Group. The last compliance emissions test was performed on December 16-17, 2014. The test results showed **compliance** with the emission limits. NO_x was tested for Engine 1, and an emission rate of 26.99 lbs./hour was measured. This number is factored with the actual usage of the engines, in hours, to estimate NO_x emissions. For the 2014 calendar year, approximately 1075 lbs. of NO_x was estimated to have been emitted using this calculation method. All three engines were tested for CO destruction efficiency. The lowest measured CO destruction efficiency for the three engines was 93.28% (the other two measured over 95% CO destruction).

II. Material Limits

Compliance. WMS monitors the sulfur content of the diesel fuel used in the engines.

III. Process/Operational Restrictions

Special Conditions:

III.1 and 2 – **Compliance.** WMS has maintained a Preventative Maintenance Plan for FGWMSENGINES. A revised and modified plan was submitted to the AQD-Detroit Office on September 9, 2015.

III.3 – **Compliance.** The total break-in hours of the engines did not exceed 200 hours.

III.4 – The engines are **in compliance** with Subpart ZZZZ.

IV. Design/Equipment Parameters

IV.1 – **Compliance.** WMS has contracted with the engine manufacturer to develop a preventative maintenance and parts replacement schedule. The engines are operated within the guidelines put forth in this permit condition (and, in turn, Subpart ZZZZ).

V. Testing/Sampling

The emissions testing required in Special Conditions V.1 and V.2 has been conducted. During the site visit, I was told that this year's test is being scheduled.

VI. Monitoring/Recordkeeping

Special Conditions:

VI.1 and VI.2 – **Compliance.** WMS monitors the diesel fuel usage rate. During the site visit, I was shown some samples of the "Diesel Generator Operation Tracking Log" report, which monitors and records operating parameters for each engine every 10 minutes while it is running. An example of this report is attached for reference; it shows the log for the operation of Engine 2 on 3/12/15. WMS submits a monthly diesel fuel usage record for FGWMSENGINES with the annual MAERS (Michigan Air Emissions Reporting System) report for the Wyandotte facility.

VI.3 and VI.4 – **Compliance.** WMS has installed equipment to continuously monitor the catalyst inlet temperature and the pressure drop across the catalyst when the engines are operating.

VI.5 – **Compliance.** The required parameters are being monitored.

VI.6 – **Compliance.** The NO_x emission calculation records are being kept. They are provided as part of the annual MAERS report.

VI.7 – **Compliance.** WMS is monitoring fuel sulfur content information.

VI.8 – **Compliance.**

VII. Reporting

WMS is **in compliance** with the conditions in this section. All of the required records are completed and submitted. WMS includes the semi-annual report required by Subpart ZZZZ with their Annual/Semi-annual ROP Deviation reports.

IX. Other Requirements

IX.1 – **Compliance.** WMS is monitoring fuel sulfur content information.

FGMATVENTS

This Flexible Group covers the emission units that relate to coal, fly ash and limestone handling at the facility. These activities have seen limited operation due to Unit 7 firing natural gas, as well as the limited use of Unit 8. This Flexible Group also addresses fugitive dust control at the Wyandotte facility. According to Kim K., WMS walk the facility yard every morning checking for fugitive dust issues, and every Wednesday an inspection is made of all potential fugitive dust sources at the facility.

I. Emission Limits

There is a particulate matter emission limit for the limestone and fly ash handling systems. The method for determining compliance is to perform a certified Method 9 visible emission reading of each coal, limestone and ash handling system baghouse/filter exhaust point at least once per year, while the system is operating. **Compliance.**

III. Process/Operational Restrictions

III.1 – **Compliance.** The coal, limestone and ash handling systems are only operated when their associated baghouses are installed and operating properly.

V. Testing/Sampling

V.1 – **Compliance.** WMS conducts the required Method 9 readings.

VI. Monitoring/Recordkeeping

VI.1 – **Compliance.** WMS performs weekly Method 22 visible emission observations at least once a week.

VI.2 – **Compliance.** During the site visit, WMS showed me their fugitive dust records. I requested and received copies of the weekly fugitive dust log sheet for the week of September 7, 2015, and an invoice for an application of calcium chloride dust suppressant on the unpaved areas on the Wyandotte property. Kim K. showed me the areas that receive periodic applications of dust suppressant during our walk around at the end of my site visit.

VII. Reporting

Wyandotte is **in compliance** with the reporting requirements associated with FGMATVENTS.

IX. Other Requirements

The requirements in this section of the ROP relate to fugitive dust management, and they cite **Consent Order SIP No. 34-1993** as an applicable requirement, as well as Michigan's fugitive dust regulations (Section 5524 of Act 451 and Administrative Rules 371 and 372). The Consent Order is part of the State of Michigan's State Implementation Plan (SIP); this part of the SIP was submitted by the State of Michigan as part of the attainment demonstration for PM-10. The Michigan Department of Natural Resources submitted the PM-10 SIP to EPA on June 11, 1993, and, after a couple of revisions, the nonattainment area PM SIP for Wayne County, Michigan was approved and became effective on February 16, 1995. One element of the SIP was the requirement that facilities with designated standard industrial classifications that are located in the area designated in Table 36 of Michigan Administrative Rule 371 "...develop and implement an approved fugitive dust control operating program and to have the program embodied in a legally enforceable order..." (this quote was taken from the preamble to the Consent Order). Many of the larger facilities in the portion of Wayne County designated in Table 36 were issued Orders as part of the SIP. The Wyandotte power plant was issued the Consent Order referred to as SIP No. 34-1993.

Special Condition IX.1 references the requirements of the Consent Order, and the content of the Order is included as Appendix B to the ROP. Wyandotte, along with other facilities, has been looking to make some

changes to the content of the Consent Order to accurately reflect current dust control measures at the facility while demonstrating that the current measures are at least as effective at controlling fugitive dust as the measures and methods described in the Order. The procedure for changing the Order was discussed during the site visit, and I followed up by e-mailing some information relating to the procedure to WMS and Barr.

In my view, the facility is **in compliance** with the fugitive dust management requirements.

Consent Orders

The Wyandotte facility is currently subject to **Consent Order AQD No. 45-2014**, which has an effective date of September 9, 2014, and a **Consent Decree with US EPA** that was entered on September 13, 2011.

The DEQ-AQD Consent Order addresses exceedances of the NO_x emission limit of 0.2 lbs./MMBTU for Unit 7 for portions of the 4th Quarter of 2013, and downtime for the NO_x and SO₂ monitors for Units 7 and 8, also the during the 4th Quarter of 2013. The Compliance and Implementation Schedule for the Consent Order requires WMS to apply for the renewal to ROP No. MI-ROP-B2132-2010 by October 15, 2014 (the application was submitted in September 2014), and to comply with the 0.2 lbs/MMBTU NO_x limit, when firing natural gas, as found in 40 CFR Part 60, Subpart D. The Consent Order is in effect for two years following the effective date, so while the Order is still effective, WMS has complied with the compliance plan associated with the Order.

The Consent Decree addresses identified exceedances of NO_x, SO₂, CO for Unit 8, exceedances of visible emission/opacity limits for Units 7 and 8, reporting violations for Units 7 and 8, and a Claim for Relief that states "Failure to Operate Affected Facilities in a Manner Consistent with Good Air Pollution Control Practice for Minimizing Emissions". The Decree requires WMS to implement prescribed compliance measures. WMS is working with US EPA to address the provisions of the Consent Decree. DEQ-AQD staff is currently not involved in the enforcement of the Decree.

Compliance Determination

Based upon the results of the September 14, 2015 site visit and subsequent records review, along with the results of the emissions testing that occurred in 2014 and various reports that were submitted by WMS throughout the year, the Wyandotte Power Plant appears to be **in substantial compliance** with the terms and conditions of Renewable Operating Permit MI-ROP-B2132-2010 and, in turn, applicable State and Federal regulations. The most recent Annual/Semi-annual ROP Certification report submitted by WMS indicated a minor issue relating to the required maintenance schedule for the engines in FGWMSENGINES. WMS contracted with the engine manufacturer, Caterpillar, to perform manufacturer-recommended maintenance, and the tasks and schedule that were recommended by Caterpillar have been presented as part of the revised Preventative Maintenance Plan for the engines that was submitted earlier this month. Caterpillar's maintenance differs from that prescribed in the current ROP, which is reported as a deviation, and WMS submitted revisions with the ROP renewal application to incorporate the manufacturer's recommendations for engine maintenance.

Attachments to this report: a print out of a Diesel Generator Operation Tracking Log, and copies of a log sheet and invoice related to fugitive dust management activities at the facility.

NAME

Steve Webb

DATE

9/23/15

SUPERVISOR

JK