

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

B542134407

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| FACILITY: Vandyke Generating Plant - <i>Wolverine Power</i> | | SRN / ID: B5421 |
| LOCATION: 3150 143rd Avenue, DORR | | DISTRICT: Kalamazoo |
| CITY: DORR | | COUNTY: ALLEGAN |
| CONTACT: Randy Boyles , | | ACTIVITY DATE: 04/29/2016 |
| STAFF: Dale Turton | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MAJOR |
| SUBJECT: | | |
| RESOLVED COMPLAINTS: | | |

An unannounced inspection was conducted on this electrical generating power plant used historically as a peaking station. Randy Boyles and Russ Fein were both available during the inspection. Russ was able to conduct a tour of the facility and Randy helped with the review of the necessary records.

The turbines were not being operated during the inspection. The turbines were not operated much during 2015 but are expected to be operated more often during 2016. The plant is permitted under ROP-MI-ROP-B5421-2014.

EUTURBINE01

Turbine #6 (EUTURBINE01) is a 231 MM Btu/hr, 23 MW rated unit. It operated for about 20 hours in 2015. Wolverine is keeping records of the natural gas usage as required by the permit. They are using pipeline quality gas with less than 0.005% sulfur content. There have been no significant changes in the equipment since the last inspection. This grandfathered turbine has no emission limits and no testing requirements. This unit uses an electrical motor as a starter.

EUTURBINE02

Turbine #8 (EUTURBINE02) is a 316 MM Btu/hr, 24.8 MW rated unit. This is subject to Subpart GG, the NSPS for Stationary Gas Turbines. It operated for about 20 hours in 2015. Wolverine is keeping records of the natural gas usage as required by the permit. They are using pipeline quality gas with less than 0.005% sulfur content. There have been no significant changes in the equipment since the last inspection. A diesel fired starter engine is used (EUSTARTERENGINE).

The proper records are also being kept. The natural gas usage and the NOx emissions are being recorded and calculated. The NOx tons per year was way below the permit limit. They are also keeping the SSM log as required by the permit.

Condition V(1) requires testing for NOx once during the term of the ROP. The testing was last conducted in 2012. The next testing required by the ROP is not yet scheduled but will likely be in 2017.

EUSTARTER ENGINE / FG-RICEMACT-BLACKSTART

The diesel fired starter engine is operated during the startup of EUTURBINE02. This is sometimes started and briefly run regardless of whether or not the turbine is started. It must be kept in a ready condition.

The certificate of analysis on a sample of the oil showed that the sulfur content is 10.4 ppm (0.00104% by weight). The spec for the oil purchased is for the sulfur to be less than 15 ppm, which is less than the permit requirement of 0.05% by weight.

The starter engine is subject to CFR 60 Subpart ZZZZ, which is the RICE MACT. The conditions for this regulation are contained in the FG-RICEMACT-BLACKSTART flexible group.

Condition III(3)a requires that the oil be changed annually or after 500 hours of operation. Condition III(3)b requires that the air cleaner be inspected annually or after 1000 hours of operation. Condition III(3)c requires that the hoses and belts be inspected annually or every 500 hours of operation. They are inspecting the hoses and air cleaner annually, and it was last done in April 2016. Since the engine did not operate much in the past year, they have opted to have an oil analysis done instead of getting an oil change. According to the company, an oil analysis done in April 2016 showed that the oil is still within a good enough range that the change was not necessary.

NAME Dale TurtonDATE 5/3/2016 SUPERVISOR MA 5/3/2016