

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

FCE Summary Report

Facility : J.B. Sims Generating Station	SRN : B1976
Location : 1231 N. Third St.	District : Grand Rapids
	County : OTTAWA
City : GRAND HAVEN State: MI Zip Code : 49417	Compliance Status : Compliance
Source Class : MAJOR	Staff : Kaitlyn DeVries
FCE Begin Date : 12/18/2017	FCE Completion Date : 12/17/2018
Comments : FY 2019 FCE	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
12/12/2018	Stack Test Observation	Compliance	MATS Day 2 Stack Test Observations.
12/12/2018	Scheduled Inspection	Compliance	The purpose of the inspection was to determine compliance with MI-ROP-B1976-2018.
11/19/2018	MACT (Part 63)	Compliance	The Auxilliary Boiler MACT Tune-up Record Compliance Certification Report pursuant to MI-ROP-B1976-2018 and 40 CFR Part 63 Subpart DDDDD was received on time and complete. All required inspections, tune-ups, and adjustments were made as necessary.

Activity Date	Activity Type	Compliance Status	Comments
11/02/2018	Stack Test	Compliance	<p>The 3rd Quarter PM and HCl Stack Test report pursuant to MI-ROP-B1976-2018 and 40 CFR Part 63 Subpart UUUUU (MATS) was received on time and complete. It should be noted that an ROP certification form was not originally included in the submission, but was subsequently received on October 31, 2018, while the actual test report was received on October 4, 2018.</p> <p>The report indicates a PM emission rate of 0.00181 lbs/MMBTU, which is compliant with the MATS limit of 0.03 lbs/MMBTU and the Low Emitting Electric Generating Unit (LEE) limit of 0.015 lbs/MMBTU. The report also indicates a HCl emission rate of 0.0001097 lbs/MMBTU, which is compliant with the MATS limit of 0.0020 lbs/MMBTU and the LEE limit of 0.0010 lb/MMBTU. A total of three consecutive years of quarterly testing is required to obtain LEE Status for a particular pollutant.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/02/2018	MACT (Part 63)	Compliance	<p>The Semiannual MATS compliance report pursuant to 40 CFR Part 63 Subpart UUUUUU (MATS) was received on time and complete. The report was first received on October 24, 2018 without a ROP certification form, but the form was received on October 31, 2018.</p> <p>Only bituminous Northern Appalachian Coal and natural gas was used in the boiler for the reporting period. The natural gas is used for start-up. The unit operated for a total of 2058.74 hours during the reporting period, and was completely shutdown from February 25th through May 31st due to debris in the river impeding the cooling system.</p> <p>All required testing was completed, and the results indicated compliance with the LEE limits. J.B Sims has successfully met the LEE requirements for Mercury (Hg), displaying that three (3) consecutive years of annual Hg test are below the LEE limit. The required boiler tune-up was also completed on April 13, 2018.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/02/2018	Stack Test	Compliance	<p>The Annual 30-day Mercury Stack Test Report pursuant to MI-ROP-B1976-2018 and 40 CFR Part 63 Subpart UUUUU (MATS) was first received on October 4, 2018, but was received without a ROP certification form . The Certification form was subsequently received on October 31, 2018 making it a complete submittal.</p> <p>Testing occurred from June 11 through July 30. Results indicated a 30 day average emission rate of 0.762 lbs/TBtu and 0.00260 lb/GWh, both of which are both acceptable for MATS, and for the Low Emitting Emission Unit (LEE) standards.</p> <p>AQD's TPU has reviewed this report and made note of some errors in the report including: Aborted runs not provided, used default H2O, used wrong F factor, Run 4 spike stopped sampling midway through run, printouts missing tube/DGM SNs, leak checks, other info, no lb/yr reported. AQD's TPU is following up with the testing group and the company on this, but does not think that this will affect compliance status.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/02/2018	Excess Emissions (CEM)	Compliance	<p>The 3rd Quarter Excess Emissions report was received on time and complete. The required linearity test and cylinder gas audit was also included; not issues were noted for either. The unit operated for a total of 3550.62 hours.</p> <p>The CO2 outlet, for which there is not applicable emission limit, and the CO2 inlet reported zero (0) excess emissions with 0.03% CEMS monitor downtime for the outlet and no downtime for the inlet. The downtime was due to a shutdown/startup situation due to the unit tripping.</p> <p>There is a 20% opacity limit for the unit. No excess emission were reported for the quarter, but a total of 0.03% monitor downtime was reported, due to issues with shutdown/startup issues. A total of seven (7) instances of excess emissions were reported accounting for 0.020%, but the instances were not consecutive. The source reports that they were likely false readings due to high water vapor from low exhaust temperatures.</p> <p>NOx emissions are limited to a 30 day rolling average of 0.46 lb/MMBTU. No CEMS monitor downtime was reported, and average emissions for the period was 0.291 lb/MMBTU.</p> <p>No excess emissions or monitor downtime was reported for the SO2 inlet. Similarly, no excess emissions and a total of 0.03% downtime was reported for the SO2 outlet. The SO2 outlet has emissions limits of 0.84 lb/MMBTU and 0.600 lb/MMBTU, both 30 day rolling averages. The average SO2 emissions for the reporting period is 0.049 lb/MMBTU accounting for an average 99.8% SO2 removal efficiency.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/02/2018	Other	Compliance	The facility submitted a revised Q2 opacity and NOx report due to errors noted during the data compilation for the semi-annual compliance report.
10/01/2018	ROP Semi 1 Cert	Compliance	This report, pursuant to MI-ROP-B1976-2018, was received on time and complete. A total of 24 deviations were reported for the reporting period; many of the deviations are the same but occurred on different days. All of the deviations were for EU-UNIT-3_BLR. Some of the deviations were for mission opacity data, and one (1) reading of an opacity exceedance. Other deviations were for missing CO2, SO2, and NOx data. The deviations were due to frozen lines to the CEMS shelter, multiple startups and shutdowns due to excess debris in the river, and for errors in the communication systems. For each instance, appropriate action was taken either to thaw the lines, shutdown the plant to clean out the debris impeding the intake area, and fix the errors in the system. No further action is required.
10/01/2018	CAM Excursions/Exceedances	Compliance	This report was received on time and complete. One (1) instance of an excursion was reported, where the COMS was reading at a high opacity, but visual observations were less than 5% opacity. Since visual observations did not constitute a violation >20% for a 6 minute average, no further action is necessary.

Activity Date	Activity Type	Compliance Status	Comments
10/01/2018	CAM monitor downtime	Compliance	<p>This report was received on time and complete. Four (4) instances of CAM downtime occurred constituting total of 252 minutes (4.2 hours). The reasons for the downtime was due to multiple times that the plant tripped due to extended outages due to debris in the river. Another reason was due to communication errors with the system programs. Each of these instances were quickly fixed either by shutting the plant down, getting the plant up and running properly, and manually adjusting the system to fix the communication errors. No further action is necessary at this time.</p>
08/28/2018	ROP Other		Updated CAM Plan Received.
08/14/2018	Stack Test Observation	Compliance	MATS Day 1 Stack Test Observations
08/08/2018	Stack Test	Compliance	<p>The make-up 1st Quarter PM and HCl Stack Test report was received on time and complete. The testing was conducted in Q2 due to an extended outage at the plant that did not allow for testing. The make-up of the test in Q2 is acceptable per 40 CFR Part 63 Subpart UUUUU for which this testing is pursuant to.</p> <p>The report indicates a PM emission rate of 0.0021 lbs/MMBTU, which is compliant with the MATS limit of 0.03 lbs/MMBTU and the Low Emitting Electric Generating Unit (LEE) limit of 0.015 lbs/MMBTU. The report indicates an HCl emission rate of 0.0000776 lbs/MMBTU, which is compliant with the MATS limit of 0.0020 lbs/MMBTU and the LEE limit of 0.0010 lb/MMBTU. A total of three consecutive years of quarterly testing is required to obtain LEE Status for a particular pollutant.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/08/2018	CEM RATA	Compliance	The Part 75 Continuous Emission Monitor Relative Accuracy Test Audit for Boiler #3 Scrubber Inlet & Exhaust Stack was received on time and complete. The Relative Accuracy (RA) for SO2 needs to be less than 20% of the reference method (RM) of less than 10% of the limit. The RA for NOx needs to be less than 10% of the RM and The RA for CO2 needs to be less than 10% of the RM or have an average difference of less than 1.0%. The results for everything appear to be compliant, but this report will need to be further evaluated by TPU for an actual compliance determination.
08/08/2018	Stack Test	Compliance	The 2nd Quarter PM and HCL test reports were received on time and complete. The report indicates a PM emission rate of 0.0024 lbs/MMBTU, which is compliant with the MATS limit of 0.03 lbs/MMBTU, and the Low Emitting Electric Generating Unit (LEE) limit of 0.015 lbs/MMBTU. The report also indicates an HCl emission rate of 0.00006841 lbs/MMBTU, which is compliant with the MATS limit of 0.0020 lbs/mMBTU and the LEE limit of 0.0010 lbs/MMBTU. Three consecutive years of quarterly testing is required to obtain LEE status for a particular pollutant.

08/08/2018	Excess Emissions (CEM)	Compliance	<p>The 2nd Quarter Excess emissions report was received on time and complete. The Cylinder Gas Audit (CGA) results and Linearity tests were also included in the submission. No issues were noted in the CGA or the Linearity results. The unit operated for a total of 730.28 hours.</p> <p>The unit came back online on June 3 of this quarter after an extended outage. The CO2 outlet, for which there is not applicable emission limit, and the CO2 inlet reported zero (0) excess emissions with 0.96% CEMS monitor downtime for the outlet and 1.78% downtime for the inlet. The downtime was due to issues with startup from the extended outage.</p> <p>There is a 20% opacity limit for the unit. No excess emission were reported for the quarter, but a total of 0.74% monitor downtime was reported, due to issues with startup from the extended outage.</p> <p>NOx emissions are limited to a 30 day rolling average of 0.46 lb/MMBTU. A total of 2.05% CEMS monitor downtime was reported, and average emissions for the period was 0.287 lb/MMBTU. However, it is important to note that the period was only 27 days due to the outage.</p> <p>No excess emissions were reported for the SO2 inlet, and 2.33% monitor downtime was reported. Similarly, no excess emissions and a total of 1.23% downtime was reported for the SO2 outlet. The SO2 outlet has emissions limits of 0.84 lb/MMBTU and 0.600 lb/MMBTU, both 30 day rolling averages. The average SO2 emissions for the reporting period is 0.042 lb/MMBTU accounting for an average 99.0% SO2 removal efficiency. However it is important to note that this is for a 27 day operating period due to the extended outage.</p>
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Activity Date	Activity Type	Compliance Status	Comments
06/27/2018	Stack Test Observation	Compliance	Day 2 MATS Stack Test Observations
06/12/2018	Scheduled Inspection	Compliance	The purpose of the inspection was to determine compliance with MI-ROP-B1976-2018.
06/12/2018	Stack Test Observation		Stack Test Observations - Day 1

06/08/2018	Excess Emissions (CEM)	Compliance	<p>The 1st quarter Inlet CEM Data Report, linearity, and cylinder gas audit was received pursuant to MI-ROP-B1976-2011 and 2018 were received on time and complete. No issues were noted in the linearity and cylinder gas audits.</p> <p>Unit 3 operated for a total of 1328.46 hours during this quarter. The unit went down on February 25, 2018.</p> <p>The CO2 outlet, for which there is not applicable emission limit, and the CO2 inlet reported zero (0) excess emissions with 0.60% CEMS monitor downtime for the outlet and 0.83% downtime for the inlet. The downtime was frozen lines to the CEMS shelter, and excess river debris.</p> <p>There is a 20% opacity limit for the unit. No excess emission were reported for the quarter, but a total of 0.06% monitor downtime was reported, due to a startup, and when the plant tripped multiple times due to excessive debris in the river.</p> <p>NOx emissions are limited to a 30 day rolling average of 0.46 lb/MMBTU. A total of 0.60% CEMS monitor downtime was reported, and average emissions for the period was 0.308 lb/MMBTU.</p> <p>No excess emissions were reported for the SO2 inlet, and 0.83% monitor downtime was reported. Similarly, no excess emissions and a total of 0.60% downtime was reported for the SO2 outlet. The SO2 outlet has emissions limits of 0.84 lb/MMBTU and 0.600 lb/MMBTU, both 30 day rolling averages. The average SO2 emissions for the reporting period is 0.141 lb/MMBTU accounting for an average 97.1% SO2 removal efficiency.</p> <p>Also attached to this report, is a letter that was sent to EPA, and AQD, regarding the missed Q1 stack test due to the plant coming off line prior to the scheduled testing event. The plant tripped</p>
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06/08/2018	Excess Emissions (CEM)	Compliance	<p>due to an overabundance of debris in the river which created issues with the facility's cooling system. When trying to re-start, the facility blew a boiler tube causing the facility to shutdown again, and only came back in in June. Per 40 CFR Part 63 Subpart UUUUU, a make-up test can be completed in the next quarter, which is scheduled.</p>
05/02/2018	MAERS	Compliance	<p>ROP Certification form for MAERS received on 2/2/18; The source is primarily relying on CEMS, Stack test, and MAERS emission factors. The facility reported SO2 emissions without a CE inserted for the AQD calculated emissions, but the CEMS data has this accounted for. The CE was added. Additionally no CE was entered for PM10, but was for PM2.5. The correct CE was confirmed and updated (see the new uploaded document). The actual reported emissions from the facility were not changed.</p>
04/17/2018	Stack Test	Compliance	<p>The 4th Quarter HCl & PM Stack Test reports were received on time and complete. The report indicates a PM emission rate of 0.003 lb/mmBTU, which is compliant with the MATS limit of 0.03 lb/mmBTU and the Low emitting electric generating unit (LEE) limit of 0.015 lb/mmBTU. For HCl, the report indicates an HCl emission rate of 0.00055 lb/mmBTU which is compliant with the MATS limit of 0.0020 lb/mmBTU, and with the LEE limit of 0.0010 lb/mmBTU. These test results indicate compliance with the MATS limits and the LEE limit for PM. Three (3) consecutive years of quarterly testing is required to obtain LEE status for a particular pollutant. Since the 3rd quarter did not achieve LEE status for HCl, this begins the start of the required time period for HCl to obtain LEE status.</p> <p>AQD TPU reviewed the results from this test, and deemed the results to be acceptable.</p>

Activity Date	Activity Type	Compliance Status	Comments
04/17/2018	Excess Emissions (CEM)	Compliance	<p>The 4th Quarter Excess Emissions Report was received on time and complete. The quarterly cylinder gas audits and linearity tests were also included. No issues were identified in the linearity reports. Unit 3 operated for a total of 5896 hours during this quarter.</p> <p>The CO2 outlet, for which there is not applicable emission limit, and the CO2 inlet reported zero (0) excess emissions with 0.05% CEMS monitor downtime for the outlet and 0.05% downtime for the inlet. The downtime was due to a startup.</p> <p>There is a 20% opacity limit for the unit. No excess emission were reported for the quarter, but a total of 0.01% monitor downtime was reported, due to a startup.</p> <p>NOx emissions are limited to a 30 day rolling average of 0.46 lb/MMBTU. A total of 0.05% CEMS monitor downtime was reported, and average emissions for the period was 0.303 lb/MMBTU.</p> <p>No excess emissions were reported for the SO2 inlet, and 0.05% monitor downtime was reported. Similarly, no excess emissions and a total of 0.05% downtime was reported for the SO2 outlet. The SO2 outlet has emissions limits of 0.84 lb/MMBTU and 0.600 lb/MMBTU, both 30 day rolling averages. The average SO2 emissions for the reporting period is 0.132 lb/MMBTU accounting for an average 96.9% SO2 removal efficiency.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/12/2018	ROP Annual Cert	Compliance	<p>The Annual Compliance Report pursuant to MI-ROP-N1976-2011 was received on time and complete. A total of 46 deviations were reported for the entire reporting period. All of the deviations were previously reported; many of the deviations were the same, but occurred on different days. OF the deviations, most were for missing data due to startup and shutdowns. Appropriate actions were taken to correct the deviations. No further action is necessary.</p>
02/12/2018	ROP SEMI 2 CERT	Compliance	<p>A total of 28 deviations were reported for the reporting period. Many of the deviations are the same, but happened on multiple days. Many of the deviations had to do with startups and shutdowns, resulting in missing NOx, CO2, SO2, and Opacity data. The duration for the missing data for the dates are relatively small and do not impact the required data for compliance with the permitted limits. Corrective actions were taken fix the issues causing the boiler to trip and have multiple startups and shutdowns. No further action is necessary.</p>
02/12/2018	CAM Excursions/Exceedances	Compliance	<p>The required CAM excursion/exceedance report was received on time and complete. One (1) exceedances was reported for Opacity, lasting 13 minutes. The report indicates the cause to be the re-heats were not operating, but the issue was corrected. The report also states that it was visually verified that the excess opacity did not exceed 20%. No further action is necessary.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/12/2018	CAM monitor downtime	Compliance	The required CAM monitor downtime report was received on time and complete. Several instances of downtime were reported, with the longest duration lasting 20 Minutes. The reasons for the downtime were due to unexpected auto calibrations, and restarts. There was also one note of computer communication errors. The report states that while the computer indicates there is missing data, the data is present. The total minutes of downtime, excluding the computer communication errors total 68 minutes. No further action is necessary.
01/22/2018	ROP Other	Compliance	Per AQD's request, Grand Haven Board of Light and Power J.B Sims Generating Station resubmitted the 2nd Quarter PM Stack Data, pages 48 and 49 due to inadvertent errors in the data. These pages serve to replace the erroneous data on those two (2) pages only.

Name: *Kathleen Dineen*

Date: 12/17/2018

Supervisor: *[Signature]*

