

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility : HOLLAND BOARD OF PUBLIC WORKS-Holland Energy Park	SRN : P0465
Location : 1 Energy Park Way	District : Grand Rapids
	County : OTTAWA
City : HOLLAND State: MI Zip Code : 49423	Compliance Status : Compliance
Source Class : MAJOR	Staff : Kaitlyn DeVries
FCE Begin Date : 3/3/2022	FCE Completion Date : 3/2/2023
Comments : FY 2023 FCE	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
02/13/2023	ROP Annual Cert	Compliance	The Annual Deviation report pursuant to MI-ROP-P0465-2018 was received on time and complete. Two (2) deviations were reported for the reporting period, both for Unit 11. Both were for exceedances of the CO startup emission limit for 4 and 5 minutes, and were previously reported to the AQD.
02/13/2023	ROP SEMI 2 CERT	Compliance	The Second Semi-Annual Deviation report pursuant to MI-ROP-P0465-2018 was received on time and complete. Two (2) deviations were reported for the reporting period, both for Unit 11. Both were for exceedances of the CO startup emission limit for 4 and 5 minutes, and were previously reported to the AQD.
02/13/2023	CAM Excursions/Exceedances	Compliance	The CAM excursion/exceedance report was received on time and complete. No excursions or exceedances were reported for Unit 10, while Unit 11 reported a total of 11 minutes of exceedances for CO, where there were process issues and the unit was shut down. These issues are further detailed in the deviation report for this reporting period.

Activity Date	Activity Type	Compliance Status	Comments
02/13/2023	CAM monitor downtime	Compliance	<p>The CAM monitor downtime report was received on time and complete. Downtime was reported for both Units 10 and 11, with all instances lasting 5 hours or less. The downtime was due to quarterly maintenance, monitor malfunctions and repairs made to the CEMS, as well as calibrations.</p>
02/13/2023	Excess Emissions (CEM)	Compliance	<p>The 4th Quarter 2022 Excess Emissions Report pursuant to MI-ROP-P0465-2018 was received on time and complete.</p> <p>Unit 10 reported a total of 1740 hours of operation for the reporting period with 22 hours (1.26%) of downtime reported for CO and 18 hours (1.03%) downtime for NOx CEMs. Neither resulted in excess emissions. For both, the downtime was for required calibration, monitor malfunctions, and other causes.</p> <p>Unit 11 reported a total of 1986 hours of operation for the reporting period. A total of 16 hours (0.81%) was reported each for the CO and NOx CEMS. No excess emissions reported for either NOx or CO. The downtime was due to QA calibrations, and monitor malfunctions.</p> <p>The results of the Quarterly Linearity test and the Cylinder Gas Audit was also received. No issues were noted for either.</p>
02/02/2023	On-site Inspection	Compliance	<p>The purpose of this inspection was to determine compliance with MI-ROP-P0465-2018.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/07/2022	Excess Emissions (CEM)	Compliance	<p>The 3rd Quarter 2022 Excess Emissions Report pursuant to MI-ROP-P0465-2018 was received on time and complete.</p> <p>Unit 10 reported a total of 2194 hours of operation for the reporting period with 8 hours (0.36%) of downtime reported for CO and NOx CEMs. Neither resulted in excess emissions. For both, the downtime was for required calibrations and monitor malfunctions.</p> <p>Unit 11 reported a total of 2020 hours of operation for the reporting period. A total of 13 hours (0.64%) was reported the CO CEMS while 7 hours (0.35%) was reported for the NOx CEMS. No excess emissions reported for either NOx or CO. The downtime was due to QA calibrations, and monitor malfunctions.</p> <p>The results of the Quarterly Linearity test and the Cylinder Gas Audit was also received. No issues were noted for either.</p>
08/26/2022	Stack Test	Compliance	<p>The Facility Net Heat Rate Performance Test Report pursuant to MI-ROP-P0465-2018 was received on time and complete. The results indicated a facility wide net heat rate of 7,658 Btu/kWh (HHV), which is compliant with the limit of 8,361 btu/kWh</p>
08/04/2022	ROP Semi 1 Cert	Compliance	<p>The First Semi-Annual Compliance report pursuant to MI-ROP-P0465-2018 was received on time and complete. No deviations were reported for the reporting period.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/04/2022	Excess Emissions (CEM)	Compliance	<p>The 2nd Quarter 2022 Excess Emissions Report pursuant to MI-ROP-P0465-2018 was received on time and complete.</p> <p>Unit 10 reported a total of 1797 hours of operation for the reporting period with 4 hours (0.22%) of downtime reported for CO and NOx CEMs. Neither resulted in excess emissions. For both, the downtime was for required calibrations.</p> <p>Unit 11 reported a total of 1105 hours of operation for the reporting period. A total of 2 hours (0.18%) was reported each for the NOx and the CO CEMS. No excess emissions reported for NOx and CO. The downtime was due to QA calibrations.</p> <p>The results of the Quarterly Linearity test and the Cylinder Gas Audit was also received. No issues were noted for either.</p>
08/04/2022	CAM Excursions/Exceedances	Compliance	The CAM excursion/exceedance report was received on time and complete. No excursions or exceedances were reported during the reporting period.
08/04/2022	CAM monitor downtime	Compliance	The CAM monitor downtime report was received on time and complete. Downtime was reported for Units 10 and 11 for the CO CEMS, lasting durations of 1 to 3 hours each time . The downtime was due to maintenance and recalibrations.
08/01/2022	CEM RATA	Compliance	The Continuous Emission Monitoring Systems (CEMS) Relative Accuracy Test Audit (RATA) report for Units 10 & 11 was received on time and complete. The results for both units for both NOx and CO, indicated RA less than 10% or less than 0.015 lb/mmBTU, as required by 40 CFR Parts 60 and 75. The full results will be evaluated by AQD's TPU.
06/14/2022	Stack Test Observation	Compliance	Observations of Net Heat Rate Testing

Activity Date	Activity Type	Compliance Status	Comments
05/17/2022	Excess Emissions (CEM)	Compliance	<p>The 1st Quarter 2022 Excess Emissions Report pursuant to MI-ROP-P0465-2018 was received on time and complete.</p> <p>Unit 10 reported a total of 2052 hours of operation for the reporting period with 2 hours (0.10%) of downtime reported for CO and NOx CEMs. Neither resulted in excess emissions. For both, the downtime was for required calibrations.</p> <p>Unit 11 reported a total of 1109 hours of operation for the reporting period. A total of 5 hours (0.45%) was reported each for the NOx and the CO CEMS. No excess emissions reported for NOx and CO. The downtime was due to QA calibrations.</p> <p>The results of the Quarterly Linearity test and the Cylinder Gas Audit was also received. No issues were noted for either.</p>

Activity Date	Activity Type	Compliance Status	Comments
05/17/2022	Stack Test	Compliance	<p>The stack test report for testing for EUAUXBOILER and EUCTGHRSG10 pursuant to MI-ROP-P0465-2018 was received on time and complete. Emissions were reported as the following:</p> <p>EUAUXBOILER: Filterable Particulate Matter - Emission Rate: 0.0002 lb/MMBTU Emission Limit: 0.0018 lb/MMBTU</p> <p>Total Particulate Matter- Emission Rate: 0.0008 lb/MMBTU Emission Limit: 0.007 lb/MMBTU</p> <p>Carbon Monoxide - Emission Rate: 0.054 lb/MMBTU Emission Limit: 0.077 lb/MMBTU</p> <p>Oxides of Nitrogen (NOx) - Emission Rate: 0.042 lb/MMBTU Emission Limit: 0.005 lb/MMBTU</p> <p>Volatile Organic Compounds - Emission Rate: 0.007 lb/MMBTU Emission Limit: 0.008 lb/MMBTU</p> <p>EUCTGHRSG10: Filterable Particulate Matter - Emission Rate: 0.0003 lb/MMBTU Emission Limit: 0.007 lb/MMBTU</p> <p>Total Particulate Matter - Emission Rate: 0.0013 lb/MMBTU Emission Limit: 0.0014 lb/MMBTU</p> <p>VOC - Emission Rate:0.09 ppmvd @ 15% O2 Emission Limit: 4 ppmvd @15% O2</p>
04/28/2022	MAERS	Compliance	<p>Report certification received 3/22/22 (postmarked 3/18/22): CEMS and stack test data primarily used with other MAERS EF's. Stack test data was used for the reporting information and the EF used is what was determined during stack testing. Some of the EU's had higher emissions this year due to additional stack test requirements, particularly for the AUXBLR. The space heaters were not used this year. No changes were made to the report. 4.28.2022</p>

Activity Date	Activity Type	Compliance Status	Comments
03/28/2022	ROP Annual Cert	Compliance	<p>The Annual ROP certification pursuant to MI-ROP-P0465 was received on time and complete. A total of six (6) deviations were reported. These deviations were for the exceedance of the CO startup emission limit. This was due to the definition of startup and the definition of an hour. HEP had previously reported that the definition of and shutdown in the ROP was not correctly aligned with what was being used for the CEMS equipment. When this was discovered HEP staff notified the AQD via phone call to explain the situation. HEP re-evaluated the new CEMS data with this mis-alignment and the data changed very slightly. HEP subsequently changed the CEMS configuration to match the startup/shutdown definition in the ROP. This resulted in five (5) instances of exceedances of the CO startup emission limit lasting 5 minutes or less each time that were not previously reported. The hourly limit for this has been defined as a clock hour, so when the turbine generator breaker was closed signaling the end of startup, this was at the last minutes of the clock hour. There is no definition required for "hour", so the definition of hour will be clarified in the upcoming ROP renewal.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/28/2022	ROP SEMI 2 CERT	Compliance	<p>The Semi-Annual ROP certification pursuant to MI-ROP-P0465 was received on time and complete. A total of six (6) deviations were reported. These deviations were for the exceedance of the CO startup emission limit. This was due to the definition of startup and the definition of an hour. HEP had previously reported that the definition of and shutdown in the ROP was not correctly aligned with what was being used for the CEMS equipment. When this was discovered HEP staff notified the AQD via phone call to explain the situation. HEP re-evaluated the new CEMS data with this misalignment and the data changed very slightly. HEP subsequently changed the CEMS configuration to match the startup/shutdown definition in the ROP. This resulted in five (5) instances of exceedances of the CO startup emission limit lasting 5 minutes or less each time that were not previously reported. The hourly limit for this has been defined as a clock hour, so when the turbine generator breaker was closed signaling the end of startup, this was at the last minutes of the clock hour. There is no definition required for "hour", so the definition of hour will be clarified in the upcoming ROP renewal.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/28/2022	CAM Excursions/Exceedances	Compliance	<p>The CAM excursion/exceedance report was received on time and complete. There were six (6) instances excursions, three (3) for unit 10 and two (2) for unit 11. These were for the CO CEMS were due to startup/shutdown operating conditions where the turbine generator breaker closed too closed to the end of an hour. The hourly limit for this has been defined as a clock hour, so when the turbine generator breaker was closed signaling the end of startup, this was at the last minutes of the clock hour. There is no definition required for "hour", so the definition of hour will be clarified in the upcoming ROP renewal. Since there was no way of knowing that the CEMS data was off slightly from the definition of startup, no further action will be taken.</p>
03/28/2022	CAM monitor downtime	Compliance	<p>The CAM monitor downtime report was received on time and complete. Several instances of CO CEMS monitor downtime was reported for EUCTGHRSG10 and EUCTGHRSG11. The downtime was all due to equipment repairs, re-calibrations, maintenance, and linearity testing. No instance of downtime lasted for longer than 6 hours, and that was for repairs and maintenance.</p>

03/28/2022	Excess Emissions (CEM)	Compliance	<p>The 4th Quarter 2021 Excess Emissions Report pursuant to MI-ROP-P0465-2018 was received on time and complete.</p> <p>Unit 10 reported a total of 1623 hours of operation for the reporting period with 11 hours (0.68%) of downtime reported for CO and NOx CEMs. Neither resulted in excess emissions. For both, the downtime was due equipment malfunctions and for required calibrations.</p> <p>Unit 11 reported a total of 1746 hours of operation for the reporting period. A total of 16 hours (0.92%) was reported each for the NOx and the CO CEMS. No excess emissions reported for NOx and CO. The downtime was due to QA calibrations.</p> <p>The results of the Quarterly Linearity test and the Cylinder Gas Audit was also received. No issues were noted for either.</p> <p>Additionally, HEP staff reported that it was recently discovered that the definition of startup and shutdown in the ROP was not correctly aligned with what was being used for the CEMS equipment. When this was discovered HEP staff notified the AQD via phone call to explain the situation. HEP re-evaluated the new CEMS data with this misalignment and the data changed very slightly. HEP subsequently changed the CEMS configuration to match the startup/shutdown definition in the ROP. This resulted in five (5) instances of exceedances of the CO startup emission limit lasting 5 minutes or less each time that were not previously reported. The hourly limit for this has been defined as a clock hour, so when the turbine generator breaker was closed signaling the end of startup, this was at the last minutes of the clock hour. There is no definition required for "hour", so the definition of hour will be clarified in the upcoming ROP renewal. These instances will be reported as deviations moving forward.</p>
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03/28/2022	Excess Emissions (CEM)	Compliance	Since there was no way of knowing that the CEMS data was off slightly from the definition of startup, no further action will be taken.
03/09/2022	Stack Test Observation	Compliance	Stack Test Observation Notes for March 8 and March 9, 2022.

Name: Kaitlyn DeWitt Date: 03/02/2023 Supervisor: AA