

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

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|---|---------------------------------------|
| Facility : Consumers Energy Co. - Zeeland Generating Station | SRN : N6521 |
| Location : 425 Fairview Rd. | District : Grand Rapids |
| | County : OTTAWA |
| City : ZEELAND State: MI Zip Code : 49464 | Compliance Status : Compliance |
| Source Class : MAJOR | Staff : Kaitlyn DeVries |
| FCE Begin Date : 1/6/2020 | FCE Completion Date : 1/5/2021 |
| Comments : Fiscal Year 2021 Full Compliance Evaluation | |

List of Partial Compliance Evaluations :

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|---|
| 12/21/2020 | Excess Emissions (CEM) | Compliance | <p>The 3rd quarter excess emission report pursuant to MI-ROP-N6521-2020 was received on time and complete. The report is for Units 1A, 1B, 2A, and 2B. Units 1A and 1B are simple cycle turbines and Units 2A and 2B are combined cycle turbines.</p> <p>Unit 1A had a total operating time of 1149.33 hours. No CO or NOx CEMS monitor downtime or excess emissions were reported.</p> <p>Unit 1B had a total operating time of 883.58 hours with no CEMS monitor downtime for NOx and CO. No excess emissions was reported for either.</p> <p>Unit 2A operated for a total of 1801.27 hours during the reporting period with one (1) hour (0.06%) NOx CEMS downtime and 11 hours (0.61%) CO CEMS monitor downtime. No excess emissions were reported for either. Downtime was due to monitor malfunctions and associated repairs.</p> <p>Unit 2B operated for a total of 1502.38 hours for the reporting period. No NOx or CO CEMS had monitor downtime, and there was no associated excess emissions.</p> <p>Linearity tests and Cylinder Gas Audits (CGA's) were also included in this submission with no notable issues.</p> |
| 12/07/2020 | Off-site Inspection | Compliance | <p>The purpose of the inspection was to determine compliance with MI-ROP-N6521-2020 and other applicable air quality rules and regulations.</p> |
| 10/14/2020 | ROP Semi 1 Cert | Compliance | <p>The Semi-Annual Compliance Report pursuant to MI-ROP-N6521-2015a and MI-ROP-N6521-2020 was received on time and complete (Postmarked 9-14-20). No deviations were reported for the reporting period.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|---|
| 09/25/2020 | Excess Emissions (CEM) | Compliance | <p>The 2nd quarter excess emission report pursuant to MI-ROP-N6521-2015a and MI-ROP-N6521-2020 was received on time and complete. The report is for Units 1A, 1B, 2A, and 2B. Units 1A and 1B are simple cycle turbines and Units 2A and 2B are combined cycle turbines.</p> <p>Unit 1A had a total operating time of 626.43 hours. A total of 0.07% CEMS monitor downtime was reported each for NOx and CO. No excess emissions were reported.</p> <p>Unit 1B had a total operating time of 233.29 hours with 0.16% CEMS monitor downtime each for NOx and CO. No excess emissions was reported for either.</p> <p>Unit 2A operated for a total of 1449.78 hours during the reporting period with 0.03% NOx and CO CEMS monitor downtime, each, and no excess emissions.</p> <p>Unit 2B operated for a total of 1444.27 hours for the reporting period. The NOx and CO CEMS had 0.07% monitor downtime, each, and no associated excess emissions.</p> <p>Linearity tests and Cylinder Gas Audits (CGA's) were also included in this submission with no notable issues.</p> |
| 09/25/2020 | NSPS (Part 60) | Compliance | <p>The Semi-Annual NOx Emissions data report pursuant to MI-ROP-N6521-2015a, MI-ROP-N6521-2020, and 40 CFR Part 60 Subpart Da for Units 2A and 2B were received on time and complete. Only Natural Gas was combusted during the reporting period. The required NOx emission data reports and 30 day rolling averages report no issues with 30 day rolling averages of 0.07 and 0.08 lbs/MWH for Units 2A and 2B, respectively.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|---|
| 06/24/2020 | Excess Emissions (CEM) | Compliance | <p>The 1st quarter excess emission report pursuant to MI-ROP-N6521-2015a was received on time and complete. The report is for Units 1A, 1B, 2A, and 2B. Units 1A and 1B are simple cycle turbines and Units 2A and 2B are combined cycle turbines.</p> <p>Unit 1A had a total operating time of 644.17 hours. No CEMS monitor downtime was reported for NOx or CO. No excess emissions were reported.</p> <p>Unit 1B had a total operating time of 192.4 hours no CEMS monitor downtime for NOx or CO. No excess emissions was reported for either.</p> <p>Unit 2A operated for a total of 2184 hours during the reporting period with no NOx or CO CEMS monitor downtime, and no excess emissions.</p> <p>Unit 2B operated for a total of 2175.35 hours for the reporting period. The NOx and CO CEMS did not have any monitor downtime and no associated excess emissions.</p> <p>Linearity tests and Cylinder Gas Audits (CGA's) were also included in this submission with no notable issues.</p> |
| 06/24/2020 | CEM RATA | Compliance | <p>The Relative Accuracy Test Audit (RATA) for EUGT1A and 1B and EUGT2A and 2B continuous emissions monitoring systems (CEMS). The results for CO and NOx for all four (4) units indicate passing results. This report, however, needs to be reviewed by AQD's TPU for complete analysis of pass/fail status.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 03/23/2020 | MAERS | Compliance | <p>ROP Certification form for MAERS received 3/12/20.</p> <p>MAERS EF's, EPA EFs, CEMS and Stack test data was used to calculate the emissions. The facility updated the way they calculate the PM emissions from the cooling tower, but the way they calculate it is consistent with other facilities and the supporting documentation specifies how it is calculated using the flow rate through the cooling towers. The changes in the throughput between the years is consistent with the changes in the emission from the previous year. All EFs, if applicable, were accounted for in the emissions supporting documentation that was provided and is reproduceable. No changes were made to the report. 3.23.2020. KDeVries.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|--|
| 02/12/2020 | Excess Emissions (CEM) | Compliance | <p>The 4th quarter excess emission report pursuant to MI-ROP-N6521-2015a was received on time and complete. The report is for Units 1A, 1B, 2A, and 2B. Units 1A and 1B are simple cycle turbines and Units 2A and 2B are combined cycle turbines.</p> <p>Unit 1A had a total operating time of 417 hours. A total of 24 hours (5.76%) of CEMs downtime for CO was reported, and no monitor downtime was reported for NOx. The downtime was all in one (1) single day and was due to equipment malfunctions, and subsequent recalibration. No excess emissions were reported.</p> <p>Unit 1B had a total operating time of 210.30 hours with 0.78 hours (0.37%) of CEMS downtime for NOx and 0.78 hours (0.37%) downtime for CO. No excess emissions was reported for either.</p> <p>Unit 2A operated for a total of 2180.62 hours during the reporting period with 1.32 hours (0.06%) NOx monitor downtime and 0.32 hours (0.01%) CO monitor downtime with no excess emissions.</p> <p>Unit 2B operated for a total of 2176.70 hours for the reporting period. The NOx and CO CEMS each had 4 hours (0.18%) monitor downtime and no associated excess emissions.</p> <p>Linearity tests and Cylinder Gas Audits (CGA's) were also included in this submission with no notable issues.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|---|
| 02/05/2020 | NSPS (Part 60) | Compliance | The Semi-Annual NOx Emissions data report pursuant to MI-ROP-N6521-2015a and 40 CFR Part 60 Subpart Da for Units 2A and 2B were received on time and complete. Only Natural Gas was combusted during the reporting period. The required NOx emission data reports and 30 day rolling averages report no issues with 30 day rolling averages of 0.07 and 0.08 lbs/MWH for Units 2A and 2B, respectively. |

Name: Kaitlyn Devries Date: 1/5/2021

Supervisor: AA