

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

FCE Summary Report

Facility : LBWL, Eckert, Moores Park & REO Cogeneration		SRN :	B2647
Location : 601 Island Ave PO Box 13007		District :	Lansing
		County :	INGHAM
City : LANSING	State: MI	Zip Code : 48901	Compliance Status : Compliance
Source Class : MAJOR	Staff : Julie Brunner		
FCE Begin Date : 3/23/2016	FCE Completion Date :	3/23/2017	
Comments :			

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
03/21/2017	ROP SEMI 2 CERT	Compliance	Semi-Annual 2 Deviation Report for ROP No. MI-ROP-B2647-2012c. Certified by Lori Myott, Manager ESD. EUBOILER6 on 7/4/2016 and 8/31/2016 had COMS downtime of less than 4 mins of data for the 6 min average during unit startup. EUBOILER5 on 8/17/2016 had an opacity exceedance of 6 min due to ESP trouble (corrective action was to check ESP functions). EUBOILER5 on 9/18/2016 had an opacity exceedance, 2 events, 6 min each associated with startup (corrective action was to adjust air flow). EUNGINE on 9/2/2016 - Test plan not submitted 30 days prior. EUBOILER4 on 11/14/2016 had COMS downtime of less than 4 mins of data for the 6 min average during unit startup. EUBOILER4 had opacity exceedances on 10/17/2016 of 6 min and on 10/30/2016 of 18 min, both associated with unit startup (corrective action was to pull ash, and adjust air flow).
03/21/2017	CAM Excursions/Exceedances	Compliance	ROP No. MI-ROP-B2647-2012c - No excursions reported.

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03/21/2017	MACT (Part 63)	Compliance	Semi-Annual MATS (40 CFR 63, Subpart UUUUU) Report - Fuel used in EUBOILER4, EUBOILER5, & EUBOILER6 was low sulfur fuel oil for startup and flame stabilization, and subbituminous coal. Most recent boiler tune-ups were conducted on 11/11-12/2015 for EUBOILER4, and 11/18-19/2015 for EUBOILER5 and EUBOILER6. The boilers rely on paragraph 1 of the definition of startup in 40 CFR 63.10042. Hg emissions measured continuously using sorbent traps. Hg monitor downtime for EUBOILER4 was 351 hours (12.38%) and complete emissions report submitted. Quarterly CI and PM testing shows compliance with LEE emission limits.
03/20/2017	ROP Annual Cert	Compliance	ROP No. MI-ROP-B2647-2012c. Certification signed by Lori Myott, Manager ESD. See Quarterly (CEM) reports and Semi-Annual Reports for any exceedences and deviations.
03/20/2017	CAM monitor downtime	Compliance	ROP No. MI-ROP-B2647-2012c. Opacity downtime - 2 incidents on EUBOILER6 and 1 incident on EUBOILER4. 6-min duration for each.
03/01/2017	Scheduled Inspection	Compliance	Compliance inspection of LBWL – Eckert Power Station and REO Town Plant (ROP No. MI-ROP-B2647-2012c and PTI 149-10C)

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02/09/2017	ROP Qrtly Cert	Compliance	<p>4Q 2016 ROP No. MI-ROP-B2647-2012c Report - Certification by Lori Myott, Manager, Environmental Services Department, Responsible Official - Excess emissions, monitoring systems performance and opacity performance summary. For Eckert, Units 4, 5 and 6 operated. Unit 4 had COMS downtime for 0.0001% of the operational time. For the NOx CEMS for the REO Town Plant - EUTURBINE1, EUTURBINE2, and EUAUXBOILER, monitor downtime reported for all units. The highest downtime reported was 1.73% of operating time for EUAUXBOILER.</p> <p>Linearity Test Reports - All REO Town Plant units passed the linearity testing.</p> <p>DAILY SO2 COMPLIANCE - Highest SO2 emission rate of 0.628 lb/MMBtu for EUBOILER5. SO2 limit is 1.67 lb/MMBtu.</p>
02/09/2017	Excess Emissions (CEM)	Compliance	<p>4Q 2016 ROP No. MI-ROP-B2647-2012c Report - Certification by Lori Myott, Manager, Environmental Services Department, Responsible Official. For Eckert - Units 4, 5 and 6 operated. Unit 4 had excess emissions for 0.03% of the operational time. There were no reported excess emissions of NOx for the REO Town Plant - EUTURBINE1, EUTURBINE2, and EUAUXBOILER.</p>
01/30/2017	Stack Test	Compliance	<p>Fourth quarter 2016 MATS test report for Unit 5 (EUBOILER5). Stack testing results of PM and HCl (meet LEE status under 40 CFR 63, Subpart UUUUU). PM emissions were 0.0099 lb/MMBtu (33.0% of standard). HCl emissions were 0.0006 lb/MMBtu (30.0% of standard).</p>
01/05/2017	ROP Tech Review Notes	Compliance	DRAFT Tech Review Notes - 1/5/17

Activity Date	Activity Type	Compliance Status	Comments
01/03/2017	Stack Test	Compliance	4th Quarter 2016 MATS test report, EUBOILER4 and EUBOILER6, Stack testing results of PM and HCl (meet LEE status under 40 CFR 63, Subpart UUUUU). For EUBOILER4, PM emissions were 0.0058 lb/MMBtu (19.3% of standard) and HCl emissions were 0.0009 lb/MMBtu (45% of standard). For EUBOILER6, PM emissions were 0.0038 lb/MMBtu (12.7% of standard) and HCl emissions were 0.0009 lb/MMBtu (45% of standard).
12/16/2016	CEM RATA	Compliance	REO Town HRSG1. RATA test report for NOx and O2. The NOx and O2 measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
12/16/2016	CEM RATA	Compliance	REO Town HRSG2. RATA test report for NOx and O2. The NOx and O2 measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
12/16/2016	CEM RATA	Compliance	REO Town Aux Boiler. RATA test report for NOx and O2. The NOx and O2 measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
12/12/2016	Stack Test	Compliance	3rd Quarter 2016 MATS test report, EUBOILER5, Stack testing results of PM and HCl to document LEE status under 40 CFR 63, Subpart UUUUU. PM emissions were 0.0095 lb/MMBtu (31.7% of standard). HCl emissions were 0.0010 lb/MMBtu (50% of standard).
12/01/2016	Stack Test	Compliance	Performance emissions testing for the REO Town emergency engine (EUNGINE) per the conditions of ROP No. MI-ROP-B2647-2012c; RO. Mark Matus, Director Technical Services; Measured emissions below permit limits: CO = 0.27 g/bhp-hr (10.8% of limit), NOx = 0.11 g/bhp-hr (22.0% of limit), and VOC = 0.53 g/bhp-hr (65.4% of limit). Process information "engine output" during the 1-hr test runs as required by the test plan approved 11/12/2016 is missing from the report.

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11/07/2016	ROP Qrtly Cert	Compliance	<p>3Q 2016 ROP No. MI-ROP-B2647-2012c Report certified by Mark Matus, Director - Technical Services, Responsible Official - Excess emissions, monitoring systems performance and opacity performance summary. Deviations identified for opacity exceedences, COMS downtime at Eckert station, and CEMS downtime at REO Town.</p> <p>Linearity Test Reports - All REO Town Plant units passed the linearity testing.</p> <p>DAILY SO2 COMPLIANCE - Highest SO2 emission rate of 0.717 lb/MMBtu on 9/7/16 for EUBOILER4. SO2 limit is 1.67 lb/MMBtu.</p>
11/07/2016	Excess Emissions (CEM)	Compliance	<p>3Q 2016 ROP No. MI-ROP-B2647-2012c Report - Certification by Mark Matus, Director - Technical Services, Responsible Official. For Eckert - Units 4, 5 and 6 operated. Unit 5 opacity monitor had 0.03% of the operational time with excess emissions of 18 minutes. Unit 6 opacity monitor had 0.0002% of operational downtime for a duration of 12 minutes.</p> <p>There were no reported excess emissions of NOx for the REO Town Plant - EUTURBINE1, EUTURBINE2, and EUAUXBOILER. For EUTURBINE1, there was 123.22 hrs of CEMS downtime (9.46% of operating time) reported.</p>
09/30/2016	Stack Test Observation	Compliance	Stack Test for EUNGINE - The testing is required by ROP No. MI-ROP-B2647-2012c and 40 CFR 60, Subpart JJJJ.
09/22/2016	Stack Test Observation	Non Compliance	Stack Test for EUNGINE - The testing is required by ROP No. MI-ROP-B2647-2012c and 40 CFR 60, Subpart JJJJ. Test rescheduled.

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09/21/2016	ROP Semi 1 Cert	Compliance	Semi-Annual 1 Certification for ROP No. MI-ROP-B2647-2012c. Mark Matus responsible official. Previously reported deviations in Qrtly Cert identified for opacity exceedences and monitor downtime at Eckert station.
09/21/2016	CAM Excursions/Exceedances	Compliance	ROP No. MI-ROP-B2647-2012c - No excursions reported.
09/21/2016	CAM monitor downtime	Compliance	ROP No. MI-ROP-B2647-2012c. Opacity downtime - 4 Incidents on EUBOILER5 due to calibrations.
09/12/2016	CEM RATA	Compliance	EUBOILER4 RATA test report: July 19 & 21, 2016. Flow, SO2, NOx and CO2 RATA of the CEMS associated with EUBOILER4. The flow, SO2, CO2 and NOx measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
09/12/2016	Stack Test	Compliance	EUBOILER6, Stack testing results for PM and HCl (meeting LEE status under 40 CFR 63, Subpart UUUUU). PM emissions were 0.0075 lb/MMBtu (25% of standard). HCl emissions were 0.0009 lb/MMBtu (45% of standard).
09/12/2016	CEM RATA	Compliance	EUBOILER6 RATA test report: July 25 & 26, 2016. Mercury (Hg) RATA of the CEMS associated with EUBOILER6. The Hg measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
09/12/2016	Stack Test	Compliance	EUBOILER4, Stack testing results of PM and HCl to document LEE status under 40 CFR 63, Subpart UUUUU. PM emissions were 0.0053 lb/MMBtu (17.7% of standard). HCl emissions were 0.0010 lb/MMBtu (50% of standard).
09/12/2016	CEM RATA	Compliance	EUBOILER6 RATA test report: July 26 & 27, 2016. Flow, SO2, NOx and CO2 RATA of the CEMS associated with EUBOILER6. The flow, SO2, CO2 and NOx measurements demonstrate the CEMS is operating within allowable relative accuracy limits.

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09/12/2016	Stack Test	Compliance	ROP No. MI-ROP-B2647-2013C, RO. Mark Matus (Dir. Tech. Services) - Test protocol for perf. emissions testing of the emergency engine (EUNGINE) at REO Town.
09/12/2016	CEM RATA	Compliance	EUBOILER4 RATA test report: July 19 & 20, 2016. Mercury (Hg) RATA of the CEMS associated with EUBOILER4. The Hg measurements demonstrate the CEMS is operating within allowable relative accuracy limits.
08/30/2016	Excess Emissions (CEM)	Compliance	<p>2Q 2016 REPORT, George Stojic, Executive Director, Responsible Official - Excess emissions, monitoring systems performance and opacity performance summary. For Eckert - Units 4, 5 and 6 operated. Monitors spent less than 0.10% of the operational time in deviation. EUBOILER5 had the longest duration of excess emissions of 60 minutes.</p> <p>There were no reported excess emissions of NOx for the REO Town Plant - EUTURBINE1, EUTURBINE2, and EUAUXBOILER. For EUAUXBOILER, there was 25.63 hrs of CEMS downtime (3.02% of operating time) reported.</p> <p>Linearity Test Reports - All REO Town Plant units passed the linearity testing.</p>

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08/30/2016	ROP Qrtly Cert	Compliance	<p>2Q 2016 ROP No. MI-ROP-B2647 -2012c Report - Certification by George Stojic, Executive Director, Responsible Official. Deviations identified for opacity exceedences and COMS downtime at Eckert station. EUBOILER5 - On 5/25/16, there was 6 minutes of opacity exceedence due to load change. Corrective action was to adjust air flow. EUBOILER5 - On 5/26/16 there was 18 minutes total (2 events) of opacity exceedence due to ESP trouble. Corrective action was to reduce load and check ESP function. EUBOILER5 - On 6/5/16, there was 18 minutes of opacity exceedence due to boiler startup. Corrective action was to adjust the air flow. EUBOILER5 - On 6/19/16, there was 18 minutes of opacity exceedence due to shut down. Corrective action was to adjust the air flow. EUBOILER6 - On 6/23/16, there was a 6 minute opacity exceedence due to shut down. Corrective action was to adjust air flow. EUBOILER5 - On 5/7/16, there was 6 minutes of opacity downtime for COMS recalibration. EUBOILER6 - On 5/9/16, there was 6 minutes of opacity downtime for COMS recalibration. EUBOILER5 - On 6/1/16, there was 6 minutes of opacity downtime for COMS recalibration. EUBOILER5 - On 6/11/16, there was 6 minutes of opacity downtime for COMS recalibration.</p> <p>2Q 2016 REPORT DAILY SO2 COMPLIANCE - Highest SO2 emission rate of 0.584 lb/MMBtu on 5/22/16 for EUBOILER5. SO2 limit is 1.67 lb/MMBtu.</p>
08/12/2016	CEM RATA	Compliance	<p>EUBOILER5 RATA test report. Testing performed June 6-9, 2016. Flow, SO2, NOx, Hg, and CO2 RATA of the CEMS associated with EUBOILER5. The flow, SO2, CO2, Hg, and NOx measurements demonstrate the CEMS is operating within allowable relative accuracy limits.</p>

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08/12/2016	Stack Test	Compliance	<p>Stack Testing of EUBOILER5 for 40 CFR 63, Subpart UUUUU (MATS) - The emission rate for filterable PM was measured at 0.0121 lb/MMBtu. The emission rate for HCl was measured at 0.0014 lb/MMBtu. Emissions of both pollutants are below the emission limits in MATS.</p> <p>Appendix A - Plant Operating Data indicates that the boiler output was ranging between 40 MW to 65 MW, but was operating at ~62 MW during the test runs. The boiler is rated at 65 MW and testing is required at loads of 90% to 100%. (Report submitted to CEDRI on 8/24/16.)</p>
07/20/2016	Stack Test Observation	Compliance	<p>Stack testing of EUBOILER4 at Lansing Board of Water and Light - Eckert Power Station. The testing is required by ROP No. MI-ROP-B2647-2012c, 40 CFR 75, and 40 CFR 63, Subpart UUUUU.</p>

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06/15/2016	ROP Qrtly Cert	Compliance	<p>1Q 2016 - Certification for MI-ROP -B2647-2012c. Mark Matus responsible official. Deviations identified for opacity exceedences at Eckert station. EUBOILER5 - On 3/27/16, there was a 18 minutes of opacity exceedence due to boiler startup. Corrective action was to adjust the air flow. EUBOILER5 - On 3/31/16 there were 3 events for 24 minutes total of opacity exceedence due to unit upset. Corrective action was adjustment of air flow. EUBOILER6 - On 1/4/16 there was a 6-min opacity exceedence due to boiler startup. Corrective action was to adjust the air flow. EUBOILER6 - On 1/9/16 there was a 6 minute total opacity exceedence due to a boiler process problem. Corrective action was to adjust the air flow. EUBOILER6 - On 2/8/16 there was a 12 minute total opacity exceedence due to boiler startup. Corrective action was to adjust air flow. EUBOILER6 - On 3/23/16 there was a 12 minute total opacity exceedence due to boiler startup. Corrective action was to adjust air flow.</p> <p>1Q 2016 REPORT DAILY SO2 COMPLIANCE - Highest SO2 emission rate of 0.646 lb/MMBtu on 2/13/16 for EUBOILER5. SO2 limit is 1.67 lb/MMBtu.</p>

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06/15/2016	Excess Emissions (CEM)	Compliance	<p>1Q 2016 REPORT, Mark Matus responsible official - Excess emissions, monitoring systems performance and opacity performance summary. For Eckert - Units 4, 5 and 6 operated. Monitors spent less than 0.07% of the operational time in deviation. EUBOILER5 had the longest duration of excess emissions of 42 minutes.</p> <p>There were no reported excess emissions of NOx for the REO Town Plant - EUTURBINE1, EUTURBINE2, and EUAUXBOILER.</p> <p>Linearity Test Reports - All REO Town Plant units passed the linearity testing.</p>
06/09/2016	Stack Test Observation	Compliance	Stack testing of EUBOILER5 at Lansing Board of Water and Light - Eckert Power Station. The testing is required by ROP No. MI-ROP-B2647-2012c, 40 CFR 75, and 40 CFR 63, Subpart UUUUU.
04/26/2016	Telephone Notes		Mark called to notify AQD that a computer hack has occurred at LBWL. The hack occurred at approximately 4:00 AM, April 25, 2016. This effects the data collection systems for the CEMS at Eckert, REO Town, and Erickson (B4001). At the time of the notification, Eckert boiler #4, REO Town turbines #1 and #2, and Erickson boiler 1 were operating. All units are operating normally according to the monitors. The hourly average CEMS data is being manually recorded. Performing daily calibrations of the analyzers and the CEMS is operating properly. But electronic recording of the data and downloading it to the DAS is a problem and looking for alternatives to downloading and storing the data. Right now unsure of extent and duration of the problem, but keep us appraised of the situation.
04/14/2016	CAM Excursions/Exceedances	Compliance	ROP No. MI-ROP-B2647-2012c

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04/14/2016	CAM monitor downtime	Compliance	ROP No. MI-ROP-B2647-2012c. Opacity downtime - 2 Incidents on EUBOILER3 due to COMS returned to normal operation before diagnostic complete, 4 Incidents on EUBOILER4 due to DAHS PTech support/software upgrades, and 1 Incident on EUBOILER5 due to COMS returned to normal operation before diagnostic complete.
04/14/2016	ROP SEMI 2 CERT	Compliance	Semi-Annual 2 Certification for ROP No. MI-ROP-B2647-2012c. Mark Matus responsible official. Previously reported deviations in Qrtly Cert identified for opacity exceedences and monitor downtime at Eckert station. Deviations reported for REO EUTURBINES1 and EUTURBINES2 from 8/12/15 to 11/25/15 for maximum design heat input capacity of the turbines not matching what was permitted. The design capacity was corrected in PTI 149-10C.
04/14/2016	ROP Other	Compliance	ROP Other Report certification for ROP No. MI-ROP-B2647-2012c, Responsible official: Mark Matus. Test Plan for RATA - SO2, NOx, CO2 and Quarterly stack testing - Hg for Eckert Boilers 4, 5, and 6. EUBOILER5 is scheduled to be tested June 6-10, 2016. EUBOILER4 and EUBOILER6 will be scheduled the third quarter of 2016.
04/13/2016	ROP Annual Cert	Compliance	Certification for ROP No. MI-ROP-B2647-2012c. Mark Matus responsible official. See Quarterly EE(CEM) reports and Semi-Annual Reports for any exceedences. Deviations were mostly minor monitor downtime/malfunctions/recalibrations, and opacity exceedences at Eckert station due to startup/shutdown, boiler upset, tube leak, unknown causes, and soot blowing.

Name: Julie L. Brown Date: 3/23/17 Supervisor: _____