

## DEPARTMENT OF ENVIRONMENTAL QUALITY

## AIR QUALITY DIVISION

## FCE Summary Report

Facility : JACKSON COUNTY RESOURCE RECOVERY FACILITY	SRN : N1125
Location : 1990 E PARNALL RD	District : Jackson
	County : JACKSON
City : JACKSON State: MI Zip Code : 49201	Compliance Status : Compliance
Source Class : MAJOR	Staff : Brian Carley
FCE Begin Date : 12/1/2012	FCE Completion Date : 12/16/2013
Comments : The facility was no longer operating as of October 1, 2013.	

## List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
12/12/2013	Excess Emissions (CEM)	Compliance	For Unit 1, they reported no exceedances of the CO (1hr), CO (24hr), and the SO <sub>2</sub> (3hr) emission limits out of 2308 hours of operation. They did report 31 exceedances of the 6-minute opacity limit (186 minutes total), 6 exceedances of the O <sub>2</sub> (1hr) limit (6 hours total), 2 exceedances of the CO (4hr) limit (8 hours total), and 2 exceedances of the combustion zone temperature (1hr) limit (2 hours total) during that same time frame. The opacity exceedances occurred in three different time frames. During the time frame of 8/15/13 through 8/18/13, 16 exceedances occurred. Except for two occurrences where there were two consecutive exceedances, the exceedances were single occurrences that were corrected by changing the airflow through the baghouse and cleaned the optics on the monitor. On 8/18/13, it was determined that one of the three compartments in the baghouse needed to have the bags changed out and during this change-out 4 of those 16 exceedances occurred. During the time frame of 9/20/13 through 9/23/13, 10 exceedances occurred all of which were single incidents

12/12/2013	Excess Emissions (CEM)	Compliance	<p>that were corrected by cleaning the analyzer reflectors and lenses and adjusting the air flow across the baghouse. It was determined that another compartment in the baghouse needed to have the filters also changed, which was done without causing more exceedances. The remaining timeframe of 9/24/13 through 9/25/13 was caused by a tube leak which caused them to shut down the boiler at a date sooner than they were planning on. The 6 O<sub>2</sub> limit exceedances were isolated incidents, each occurring on a different day. The main cause of 4 of the exceedances was boiler upsets which were controlled by manual control of grate speed and air flow. The remaining two were caused by an inoperable fan damper, which was repaired, and by the previously mentioned tube leak. The 2 CO (4hr) exceedances were consecutive incidents that was caused by fuel feed equipment problems and were corrected by manually controlling the grate speed and air flow. The 2 combustion zone temperature (1hr) exceedances were two isolated incidents that were promptly corrected.</p> <p>For Unit 2, they reported no exceedances of the opacity (6min), O<sub>2</sub> (1hr), CO (24hr), and SO<sub>2</sub> (3hr) emission limits out of 1068 hours of operation. They did report that they had 2 exceedances of the CO (1hr) limit, 3 exceedances of the CO (4hr) limit, and 13 exceedances of the combustion zone temperature (1hr) limit. A fuel obstruction on 7/4/13 caused an exceedance of the CO (1hr), CO (4hr), and combustion zone temperature (1hr) limits. A tube leak on 7/14/13 through 7/15/13 caused 5 exceedances of the combustion zone temperature limit and the boiler was shut down. On 7/29/13, wet fuel caused an upset in the boiler and the boiler was shut down and 4 combustion zone temperature limit exceedances and 1 CO (1hr) emission limit exceedance were recorded. On</p>
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12/12/2013	Excess Emissions (CEM)	Compliance	<p>8/12/13, another tube leak occurred and the boiler was shut down and 3 combustion zone temperatures exceedances were recorded. Tube leaks on 9/5/13 and 9/12/13 caused an exceedance of the CO (4hr) limit on each day and the boiler was shut down to repair.</p> <p>Based on the information provided, I determined the report acceptable as submitted.</p>
12/12/2013	Scheduled Inspection	Compliance	Scheduled Inspection
09/17/2013	ROP Other	Compliance	They submitted the required reporting per 40 CFR Part 62, Subpart JJJ which includes carbon usage and emission limit exceedances. The report is acceptable as submitted.
09/05/2013	ROP Semi 1 Cert	Compliance	They reported one deviation for each boiler, which were for previously reported emissions in quarterly EERs. The third deviation was also for a CAM excursion of not meeting the temperature drop in the quench reactor over a 2 hour period. Once the facility submitted a revised CAM exceedance/excursion report, the report is acceptable as submitted.

09/05/2013	Excess Emissions (CEM)	Compliance	<p>For Unit 1, they reported no exceedances of the CO (24 hr) and SO2 (3 hr) emission limits out of 1,432 hours of operation. They did report one exceedance of the opacity limit, five exceedances of the O2 (1hr) limit, 3 exceedances of the CO (1 hr) limit, 7 exceedances of the CO (4 hr) limit, and 7 exceedances of the combustion zone temperature (1 hr) limit. Of these total 23 exceedances, 15 of them occurred on 3 different days. A power loss to the facility on 4/17/13 caused one exceedance of the CO (1 hr) limit, 2 exceedances of the CO (4hr) limit, and one exceedance of the combustion zone temperature limit over an 8 hour period. A tube leak on 5/29/13 caused 2 exceedances of the CO (1hr) limit, one exceedance of the CO (4hr) limit, and 3 exceedances of the combustion zone temp. limit over a 4 hour period. Another tube leak on 6/13/13 caused 2 exceedances of the CO (4hr) limit, one exceedance of the O2 (1hr) limit, and 2 exceedances of the combustion zone temp. limit over an 8 hour period. The remaining exceedances were each isolated incidents.</p> <p>For Unit 2, they reported no exceedances of the CO (24hr) limit out of 1,598 hours of operation. They did report that they had one opacity limit exceedance, 2 exceedances of the O2 (1hr) limit, 4 exceedances of the CO (1hr) limit, 6 exceedances of the CO (4hr) limit, 4 exceedances of the SO2 (3hr) limit, and 6 exceedances of the combustion zone temperature (1hr) limit. Of the 23 exceedances, 15 of them occurred on 5 different days. A fuel feed problem on 4/20/13 caused one exceedance of the CO (1hr) limit, one exceedance of the CO (4hr) limit, and one exceedance of the combustion zone temp. (1hr) limit over a 4 hour period. A tube leak on 5/19/13 caused on exceedances of the CO (1hr) limit and one exceedance of the combustion zone temp. (1hr) limit over a one hour period. A fuel</p>
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09/05/2013	Excess Emissions (CEM)	Compliance	<p>pluggage on 6/8/13 caused one exceedance of the CO (1hr), CO (4hr), and combustion zone temp. (1hr) limits over a 4 four period. A tube leak on 6/12/13 caused one exceedances of the O2 (1hr) and CO (4hr) limits and 2 exceedances of the combustion zone temp. (1hr) limit over a 6 hour period. A fuel feed problem on 6/19/13 caused one exceedance of the CO (1hr), CO (4hr), and combustion zone temp. (1hr) limits over a 4 hour period. The remaining 8 exceedances were each isolated incidents.</p> <p>No enforcement action is necessary. The report is acceptable as submitted.</p>
09/05/2013	CAM Excursions/Exceedances	Compliance	<p>They initially reported no CAM exceedances or excursions. After reviewing semi-annual ROP certification and deviation report, I determined that they did have one excursion. I contacted the facility and they realized that they had reported no CAM exceedances or excursions by mistake. They resubmitted their CAM report via email on 9/16/2013 and by mail. They reported one CAM excursion due to operational problem with their quench reactor. They commenced boiler shutdown to complete repairs. The report is acceptable as submitted.</p>
09/05/2013	CAM monitor downtime	Compliance	<p>All monitor downtime for the reporting period was previously reported in quarterly EERs. The report is acceptable as submitted.</p>

Activity Date	Activity Type	Compliance Status	Comments
07/03/2013	Excess Emissions (CEM)	Compliance	<p>For Unit 1 they reported no exceedances of the CO (1hr), CO (24hr), opacity, and SO<sub>2</sub> (3hr) emission limits out of 1983 hours of operation. They did report four exceedances of the CO (4hr) emission limit, one exceedance of O<sub>2</sub> (1hr) emission limit, and seven exceedances of the combustion zone temperature (1hr) limits. All four of the CO (4hr) and six of the seven combustion zone temperature exceedances occurred over a 3 day period and all were caused by boiler upsets. The corrective action for these exceedances was manual control of grate speed and air flow and using the auxiliary burners. The remaining two exceedances were isolated incidents.</p> <p>For Unit 2 they reported no exceedances of the CO (1hr), CO (24), opacity, and SO<sub>2</sub> (3hr) emission limits out of 2043 hours of operation. They did report two exceedances of the CO (4hr) emission limit, six exceedances of the combustion zone temperature (1hr) limit, and six exceedances of the O<sub>2</sub> (1hr) emission limit. All of the CO (4hr) exceedances all of the combustion zone temperature (1hr) exceedances, and two of the O<sub>2</sub> (1hr) exceedances occurred on four days out of the quarter and were caused by either tube leaks or boiler upsets. All were corrected by manual control of grate speed and air flow and using auxiliary burners. The remaining two exceedances were isolated incidents.</p> <p>It was determined that no enforcement action is necessary. The report is acceptable as submitted.</p>
04/11/2013	MAERS	Compliance	Acceptable as submitted. See comments in MAERS for additional information.

Activity Date	Activity Type	Compliance Status	Comments
03/06/2013	ROP SEMI 2 CERT	Compliance	They reported 2 deviations for the reporting time period. The deviations were for the excess emissions that had been previously reported on quarterly excess emissions reports for Unit 1 and Unit 2, respectively (for more information see analysis of excess emission reports). They also included a summary of the exceedances and the activated carbon usage for the time period. The report is acceptable as submitted.
03/06/2013	CAM Excursions/Exceedances	Compliance	They reported no exceedances or excursions for the reporting time period. The report is acceptable as submitted.
03/06/2013	Excess Emissions (CEM)	Compliance	<p>For Unit 1, they reported no exceedances of the 6 minute opacity limit, combustion zone temperature (1 hr), CO (1 hr), CO (4 hr), CO (24 hr), and SO2 (3 hr) emission limits out of 2003 hours of operation. They did report four separate incidents where the O2 (1 hr) emission limit was not met. All four were caused by boiler upsets and were rectified by manual control of grate speed and air flow.</p> <p>For Unit 2, they reported no exceedances of the 6 minute opacity limit, combustion zone temperature limit (1 hr), CO (1 hr), CO (4 hr), CO (24 hr), and SO2 (3 hr) emission limits out of 1892 hours of operation. They did report 3 consecutive exceedances of the O2 (1 hr) emission limit. They said it was caused by an O2 cell failure and it was rectified by replacing the O2 cell.</p> <p>I determined that no enforcement action is necessary. The report is acceptable as submitted.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/06/2013	ROP Annual Cert	Compliance	The two deviations were for previously reported emission exceedances for Unit 1 and Unit 2. They also included the information that is required by 40 CFR Part 63, Subpart JJJ with the exception of the test results of the emissions testing that was done in December 2012. The results of the stack tests were submitted separately on 2/7/13, which is acceptable considering the analysis that required. The report is acceptable as submitted.
03/06/2013	Stack Test	Compliance	JCRRF submitted the results of their emissions testing and RATA that took place December 17 to 20, 2012. The results of the RATA showed that all of their CEMS for both units satisfied the requirements of 40 CFR Part 60, Appendix B and F. The emissions test results for both units also showed that they were in compliance with all their permit limits. The results showed the average temperature of the inlet of the baghouse for Units 1 and 2 were 316 degree F (158 C) and 307 (153 C) degree F, respectively. They will now be required to not let the baghouse inlet temperature to rise more than 63 degrees F (17 C) to remain in compliance with the dioxin/furans emission limits. They also reported that the steam flow during the dioxin/furans test for Units 1 and 2 were 24,683 lbs/hr and 24,901 lbs/hr, respectively. They can not operate at more than 110% of those steam flows. Both the baghouse inlet temperature and steam flow lbs/hr will remain as limits until the next time they do a dioxin/furans emission test. The combustion zone temperature during the tests was in the acceptable range. They also were meeting the CAM requirements during the testing. The reports are acceptable as submitted.
03/06/2013	CAM monitor downtime	Compliance	They stated that they did have monitor downtime, but it had already been previously reported in the 3rd and 4th quarter of 2012 excess emission reports. The report is acceptable as submitted.

Name: Brian C. Long Date: 12/16/13 Supervisor: [Signature]