B2103
MANUAL-FCE

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility :	GLWA Water Resource Recovery Facility	**SRN :**	B2103
Location :	9300 W. JEFFERSON AVE	**District :**	Detroit
		County :	WAYNE
City :	DETROIT **State:** MI **Zip Code :** 48209	**Compliance Status :**	Compliance
Source Class :	MAJOR	**Staff :**	Stephen Weis
FCE Begin Date :	6/20/2018	**FCE Completion Date :**	6/20/2019
Comments :	FY2019 FCE Report for the Great Lakes Water Authority Water Resource Recovery Facility in Detroit.		

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
06/20/2019	Scheduled Inspection	Compliance	Compliance inspection of the Great Lakes Water Authority's Water Resource Recovery Facility (WRRF). The WRRF facility is scheduled for inspection in FY 2019.
05/15/2019	Other	Compliance	Review of RY2018 MAERS submittal.

04/16/2019	NSPS (Part 60)	Compliance	The 40 CFR Subpart MMMM Semi-Annual Deviation report was submitted, in accordance with the requirements of 40 CFR 60.5235 (d). This report covers the second semi-annual period of 2018 (July 1 – December 31). GLWA reported 17 deviations of the requirements of Subpart MMMM that occurred during the semi-annual period. The facility reported 10 deviations relating to temporary bypasses of the scrubber on an operating Complex 2 sewage sludge incinerator (SSI). The SSIs temporarily bypassed the main stack and associated pollution control equipment during the semi-annual period on 7/3, 7/25, 8/6, 8/9, 8/23, 9/6, 9/22, 9/28, 9/30, and 10/6. As part of the description of the deviation, GLWA provides that this type of deviation resulted in "...emissions standards deviation for all pollutants listed in Table 3 to subpart MMMM". The longest of these deviations occurred on September 6, lasting for 102 minutes. The SSI system is operated and programmed such that when the bypass stack opens, the sludge/biosolids feed to the SSI shuts down. The sludge/biosolids material that is already in the SSIs will continue to burn in the combustion chamber, so emissions continue to be generated, with emissions from some of the pollutants generated by the SSIs uncontrolled. In an e-mail dated April 15, 2019, GLWA staff sent me a spreadsheet that they use to estimate emissions during reported bypasses of the main stack. The spreadsheet includes uncontrolled emission factors in lb/hour specific to each of the SSIs for each of the pollutants, and combines these emission factors with the time that the SSI was venting to the bypass stack, in hours, to estimate the emissions associated with each bypass event. A copy of the spreadsheet that was provided to AQD, which covers bypass events from 1/19/18 through 3/21/19, is attached to this report.

04/16/2019	NSPS (Part 60)	Compliance	The remaining seven deviations reported for this semi-annual period relate to instances during which the 12-hour block average of certain SSI and air pollution control equipment operating parameters exceeded established limits during the operation of SSIs. Subpart MMMM requires that operating parameters for daily sludge feed rate, hearth 1 afterburner temperature, total scrubber differential pressure, total scrubber water flow and scrubber outlet water pH be established for the SSIs during compliance emissions testing required by Subpart MMMM. 40 CFR 60.5210 requires that the operating parameters be continuously monitored, and that the monitoring data be kept using the averaging time specified in Table 4 of Subpart MMMM. As put forth in 60.5210(d), the operating limits are established so as to ensure ongoing compliance with the emission limits put forth in Subpart MMMM. GLWA reported instances during the semi-annual period during which the SSIs operated when the afterburner temperature, the differential pressure across the scrubber, the scrubber liquid flow rate, and the scrubber water pH were outside of their respective established, acceptable ranges. The reporting of deviations from the established operating parameters is required by 40 CFR 60.5235(d). The facility is required to report the deviations, and at this time, there is no direct correlation of the deviations to excess emissions from the SSIs. GLWA included data with their Subpart MMMM deviation report that provides the daily block averages for the four monitored parameters, and that shows the block averages that were outside of the established range (the exceedance is highlighted). This information is attached to the report. GLWA also tracks the daily data for these parameters, which is monitored continuously and recorded every 15 minutes. This information was provided to

04/16/2019	NSPS (Part 60)	Compliance	AQD electronically.
04/03/2019	ROP SEMI 2 CERT	Compliance	The Great Lakes Water Authority (GLWA) submitted the ROP Certification Report for the second semi-annual period of 2018, which addresses the timeframe between July 1 and December 31, 2018. GLWA reported 33 deviations that occurred during the semi-annual period; these reported deviations consisted of three different types of reported issues. The first type of deviation relates to temporary bypasses of the scrubber on an operating incinerator. GLWA reported that the SSIs temporarily bypassed the main stack and associated pollution control equipment on 10 occasions during the semi-annual period. The second type of deviation involves opacity of greater than 20% from an operating incinerator/SSI. There were 16 reported deviations of this type during the semi-annual period. The remaining seven deviations reported for this semi-annual relate to instances during which the 12-hour block average of certain SSI and air pollution control equipment operating parameters exceeded established limits during the operation of SSIs. Due to a limit on the amount of characters in the MACES "Comments" field, further information is attached to this report.
04/03/2019	ROP Annual Cert	Compliance	This report includes the total deviations for both semi-annual periods of 2018.
01/25/2019	Stack Test Observation	Compliance	Review of stack test report for the Biosolids Drying Facility.
12/12/2018	Stack Test Observation	Compliance	Observation of a portion of the compliance emissions stack testing for SO2 at the GLWA Biosolids Drying Facility. Some information that was obtained during the site visit and a summary of observations is in the facility file.

10/25/2018	NSPS (Part 60)	Compliance	The 40 CFR Subpart MMMM Semi-Annual Deviation report was submitted, in accordance with the requirements of 40 CFR 60.5235 (d). This report covers the first semi-annual period of 2018 (January 1 – June 30). GLWA reported 34 deviations that occurred during the semi-annual period. 29 of the reported deviations relate to temporary bypasses of the scrubber on an operating Complex 2 sewage sludge incinerator (SSI). The SSIs are identified as SSI Nos. 7-14, or EUINC07 through EUINC14 in the ROP. The SSIs temporarily bypassed the main stack and associated pollution control equipment during the semi-annual period on dates between January 19 and June 25, 2018. As part of the description of these deviations, GLWA provides that this type of deviation resulted "... emissions standards deviation for all pollutants listed in Table 3 to subpart MMMM". The longest of these deviations occurred on June 20, lasting for 120 minutes. Some of the reported deviations were related to a single issue – There was a reported power loss at the facility on 2/19 that caused four of the reported deviations; a loss of instrument pressure on 3/2 caused three of the reported deviations; a "brief power outage" on 3/17 caused ID fans to cease working which caused four of the reported deviations. GLWA staff have stated that the SSI system is operated and programmed such that when the bypass stack opens, the sludge/biosolids feed to the SSI shuts down. The sludge/biosolids material that is already in the SSIs will continue to burn in the combustion chamber, so emissions continue to be generated, with emissions from some of the pollutants generated by the SSIs now uncontrolled. GLWA previously reported several of these deviations to EGLE-AQD right after they occurred. GLWA included a description for each occurrence that provided the identified issue that led to the use of the bypass stack, and what was

10/25/2018	NSPS (Part 60)	Compliance	done to correct the issue. There were four reported deviations that involve occurrences during which operating parameters that are being monitored from either the SSIs or their associated control equipment was outside of the operating range that was established as part of the most recent compliance emissions test prior to the semi-annual reporting period. There were reported occurrences involving the monitoring of the 12-hour block average of the afterburner operating temperature of SSIs, the 12-hour block average of the pressure drop across a scrubber, the 12-hour block average of the scrubber liquid flow rate, and the 3 -hour block average of the pH of scrubber water. GLWA provided AQD with an electronic file that contains the readings for the operating parameters, taken every 15 minutes, for the semi-annual operating period. The data highlights the readings that are outside of the established range for each operating parameter. GLWA also provided a file that contains the 12-hour block averages for hearth 1 temperature, scrubber pressure drop and scrubber liquid flow, and the 3-hour block average for pH for each day during the semi-annual period. The blocks that exceeded the established ranges for these parameters are highlighted. A copy of a printout of this file is attached to this write-up. The last reported deviation relates to the compliance emissions test not being performed within the required 11-13 months of the completion of the last test. The testing was completed in July 2018,but some of it needed to be completed by June 2018 to be compliance with the timeline requirement. A Violation Notice was issued to GLWA relating to this issue.

Activity Date	Activity Type	Compliance Status	Comments
10/25/2018	NSPS (Part 60)	Compliance	40 CFR Part 60 Subpart MMMM Annual Compliance Report. This report is required per the provisions of 40 CFR 60.5235(c).
10/25/2018	ROP Semi 1 Cert	Compliance	The Great Lakes Water Authority (GLWA) submitted the ROP Certification Report for the first semi-annual period of 2018, which addresses the timeframe between January 1 and June 30, 2018. GLWA reported 47 deviations that occurred during the semi-annual period. The first type of deviation relates to temporary bypasses of the scrubber on an operating incinerator. GLWA reported that the SSIs temporarily bypassed the main stack and associated pollution control equipment on 29 occasions during the semi-annual period. The second type of deviation involves opacity of greater than 20% from an operating incinerator/SSI. There were 13 reported deviations of this type during the semi-annual period. Three of the reported deviations reported for this semi-annual relate to instances during which the 12-hour block average of certain SSI and air pollution control equipment operating parameters exceeded established limits during the operation of SSIs. There were two other reported deviations - one related to compliance emissions testing not being conducted within the required timeframe (a violation notice was issued), and one related to an issue with properly determining whether three malfunction events needed to be reported per Rule 912. Due to a limit on the amount of characters in the MACES "Comments" field, further information is attached to this report.

Activity Date	Activity Type	Compliance Status	Comments
07/12/2018	Scheduled Inspection	Compliance	Compliance inspection of the Great Lakes Water Authority's Water Resource Recovery Facility (WRRF). The WRRF facility is scheduled for inspection in FY 2018.

Name: Steve Wes **Date:** 9/25/19 **Supervisor:** JK