

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

FCE Summary Report

Facility : UNIVERSITY OF MICHIGAN	SRN : M0675
Location : 1239 KIPKE DR EHS / CSSB	District : Jackson
	County : WASHTENAW
City : ANN ARBOR State: MI Zip Code : 48109	Compliance Status : Compliance
Source Class : MAJOR	Staff : Diane Kavanaugh-Vetort
FCE Begin Date : 11/1/2016	FCE Completion Date : 12/26/2017
Comments : Major Source, FCE Compliance Inspection	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
12/08/2017	Stack Test	Compliance	UM Test Plan/protocol for Emergency Generator EU-VARSITYDR. Test Plan received December 11, 2017. Test date proposed January 1, 2018. TPU approval letter issued December 12, 2017. Cummins GTA50 CC, 805 HP, baseload 600 KW, nat. gas.. Museums Research Center
11/27/2017	ROP Other		Contact Brandi Campbell notified AQD by email that a deviation was identified on 11/22 involving malfunction of the NOx water monitor/recording device on the Turbine at CPP. Other monitoring shows water to boiler (NOx to water ratio) continued uninterrupted. Temperatures and flows and other Turbine operating parameters all were normal. It appears it is a recording device disconnect/malfunction only. UM did decide to cease operating Turbine until cause is found and repaired. She will report back to me when she knows more.

Activity Date	Activity Type	Compliance Status	Comments
11/27/2017	Reg. Applicability Determination	Compliance	Turbine Change Out Notification, UM - North Campus Research Complex (NCRC). Per request notify within 30 days of completion of Gas Turbine overhaul project. Letter dated 11/27, emailed to AQD, hard copy rec'd 12/1 to Scott Miller, DS. Completed 11/5/17. Original determination request 9/29/09 and AQD approval 11/12/09. Represents routine maintenance; being part of UM normal maintenance program. Consider complies with Rule 201 exemption Rule 278 and R 336.1285(a)(vi) [Now, Rule 285(2)(a)(vi)].
11/15/2017	Scheduled Inspection	Compliance	Conducted complete scheduled inspection over two dates: 11/15 and 11/17. FCE Major Source ROP. On 11/15: Power and heating plants - CPP, HHP, Brehm, NCRC, Boiler MACT review On 11/17: Crematory, Ethylene Oxide sterilizers, Emergency Generator EPA Certification vs Testing Review (NSPS JJJJ, IIII, RICE MACT ZZZZ).
11/09/2017	Stack Test Observation	Compliance	Emergency Engine Test Observation- South Quad. TPU: Regina Hines (new) and Mark Dziados assigned and also observed. Cummins 550, natural gas, scheduled for every 3 years.
10/20/2017	Stack Test	Compliance	UM South Quad, Emergency Generator Test Plan / protocol received. Test scheduled for November 9, 2017. TPU approval letter dated October 25, 2017. Assigned to Mark Dziados and Regina Hines (new). Cummins GTA38 CC, 850 HP, baseload 550 KW, natural gas.

Activity Date	Activity Type	Compliance Status	Comments
10/09/2017	ROP Semi 1 Cert	Compliance	1st Semi-annual ROP Cert/Dev Report. Full ROP condition checklist attached. Report same deviation occurred on three separate EU/FG Turbines T0260-09, -10, and BT0260-CO in Central Power House. Intermittent NOx water loss between 1/2/17 and 2/24/17. Less than 10 seconds except 1/19 14 minutes and 2/13 20 minutes. Corrected by investigation w/Solar Company, replaced pumps and worked on program. Acceptable.
08/02/2017	Stack Test	Compliance	Institute for Social Research emergency generator emissions test report, performed on 4/13/2017. Stack Test Results Report. ISR Engine, is new and will be added to ROP FG-EMERG -JJJJ upon renewal. Emissions tested (NOx, CO, VOC) subject to 40 CFR Part 60, Subpart JJJJ. Cummins GTA28. 750 HP Natural Gas fired. Required initial test within 1 yr start up and every 3 yrs (8760 hrs operation). Both Tom Maza, TPU, and DKV observed portions of testing. Report indicates compliance - well below limits. Report in file.
06/01/2017	Stack Test	Compliance	Stack Test Results Report. EU-CSSB Campus Safety Services Building emergency generator emissions test report (NOx, CO, VOC). Subject to 40 CFR Part 60, Subpart JJJJ. Cummins GTA38. Natural Gas fired. Required initial test within 1 yr start up and every 3 yrs (8760 hrs operation). Both Tom Maza, TPU, and DKV observed portions of testing. Report indicates compliance - well below limits. Report in file.
05/22/2017	MAERS	Compliance	MAERS received timely. Support documentation hard copy only. All units reported. Always up/down changes for boilers and emergency gen operations. Turbines consistent. Natural gas, some distillate used. 159 tons CO; 345 tons NOx; 16 tons PM10; 12 tons VOC.

Activity Date	Activity Type	Compliance Status	Comments
05/22/2017	ROP Annual Cert	Compliance	Annual Certification and Deviation Report. Support information attached. Report 4 deviations for Second Semi-annual. In December 2016 NOx water loss for less than 10 seconds intermittent times. Investigations & maintenance still have not found cause. Effected EUT0260-09, -10, FGBT0260-CO. Added one deviation (1st semi period now has 2 deviations) of Crematory Unit due to fan failure, got temporary & operated without fan. PTI formally issued w/o fan 4/20/16. 1st Semi had reported only a VE deviation for the Crematory. Annual 5 total (1 prior + 4 now)
05/22/2017	ROP SEMI 2 CERT	Compliance	2nd Semi-annual Certification and Deviation Report. Support information attached. Report 4 deviations. (3) In December 2016 NOx water loss for less than 10 seconds intermittent times. Investigations & maintenance still have not found cause. Effected EUT0260-09, -10, FGBT0260-CO. Added one deviation (1st semi period now has 2 deviations) of Crematory Unit due to fan failure, got temporary & operated without fan. PTI formally issued w/o fan 4/20/16. 1st Semi had reported only one VE deviation for the Crematory. Annual now 5 total (1 prior + 4 now)
04/13/2017	Stack Test Observation	Compliance	ROP Source. Facility stack test of NSPS JJJJ natural gas fired emergency generator, it is a NEW Unit and has not yet been named or added to the ROP. It is located at the UM Institute for Social Research (ISR). Observed testing with TPU, Tom Maza. Tester: Derenzo & Associates.
03/27/2017	Stack Test Observation	Compliance	ROP Source. Facility stack test of NSPS JJJJ natural gas fired emergency generator, EU-CSSB at the UM Campus Safety Services Building. Observed testing with TPU, Tom Maza. Tester: Derenzo & Associates.
03/15/2017	Stack Test	Compliance	2017 Annual Relative Accuracy Test Audit Test Report. RATAs performed 1/17-1/19/17

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03/15/2017	ROP R215 Notification	Compliance	Installation of two 1,500 KW diesel emergency generator sets. Permit 188-16.
03/15/2017	ROP Other	Compliance	2016 MAERS Report ROP Cert
03/10/2017	Stack Test	Compliance	TEST PLAN RECEIVED: Institute for Social Research Building emergency generator emissions test plan. Derenzo =Tester. TPU assigned: Mark Dziadosz. GTA28 700HP SI-RICE with non selective catalytic reduction (NSCR) system. New emergency engine subject to FG-EMERG-JJJJ Table in ROP.
03/01/2017	Stack Test	Compliance	Test Protocol received for EU-CSSB at Campus Safety Services Building. Cummins 500kW, 800 HP Emergency natural gas fired SI-RICE subject to NSPS JJJJ. Assigned Tom Maza, TPU; Tester: Derenzo Environmental Services. Protocol approval letter dated 3/7/17. Test date:3/27/17.
01/27/2017	ROP Other	Compliance	Boiler No. 6 quarterly emissions report.
01/23/2017	Telephone Notes		Called to report two compliance issues: 1) missed last quarter 2016 linearity on EU-B0260-06 (CPP Boiler 6). Has call into Tom G. to discuss: make-up, do next quarter, any other options? 2) NOx water injection system CPP Turbines experiencing short time stoppages, usually 2-3 seconds but up to 1-3 minutes, intermittent and non continuous. Has happened once in past and cause was pump. Now replacing equipment and still occurring - unknown cause still. Both will be reported as deviations w/plan corrective actions.
01/03/2017	CEM RATA	Compliance	2017 Annual Relative Accuracy Test Audit Test Plan. Boiler Nos. 3, 4, and 6 at Central Power Plant. RATA on the NOx and O2 CEMS. David Patterson, TPU assigned.

Activity Date	Activity Type	Compliance Status	Comments
11/23/2016	ROP Semi 1 Cert	Compliance	1st Semi-annual Certification and Deviation report. Report one deviation related to Crematory, excessive VE. UM obtained a temporary PTI during the year to remove an added fan and allow limited operation/testing to determine if acceptable. AQD was notified when this incident occurred which was unusual. Procedures updated/normal ops do not cause VEs and PTI subsequently approved & issued. Report includes ROP condition checklist. Acceptable.

Name: *Frank G. Vetter* Date: *1/22/18* Supervisor: *[Signature]*