

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Off-site Inspection

N751559015

FACILITY: DETROIT WATER & SEWERAGE, FRANKLIN PUMPING STATION		SRN / ID: N7515
LOCATION: 7404 INKSTER RD, W BLOOMFIELD		DISTRICT: Warren
CITY: W BLOOMFIELD		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 06/17/2021
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2021 self-initiated (off-site) inspection of Great Lakes Water Authority - Franklin Service Center ("GLWA"), 7404 Inkster Road, West Bloomfield, Michigan 48301.		
RESOLVED COMPLAINTS:		

Great Lakes Water Authority (GLWA) (N7515)
7404 Inkster road
West Bloomfield, Michigan 48301

Active PTI: Permit-to-Install No109-06 dated May 24, 2006, issued to Detroit Water and Sewerage Department (DWSD) - Franklin Service Center (West Bloomfield) for two emergency power (no peak shaving) generators (Cummins QSK60-G6).

Name change (2014): Detroit Water and Sewerage Department (DWSD) (N6622) → Great Lakes Water Authority (GLWA) (N6622). GLWA was created upon Detroit's municipal bankruptcy (Chapter 9 bankruptcy Case No. 13-53846 filed on July 18, 2013) under Michigan Municipal Emergency Law.

PTI Voids: PTI No. 215-05 (Received: 08/12/2005; Approved: 08/22/2005; Voided: 08/20/2002). The same equipment is covered by Permit-to-Install No109-06 dated May 24, 2006.

Emergency generators (2) are subject to Area Source NESHAP / MACT ZZZZ or 4Z, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines / Final rule (Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final rule.).

On June 17, 2021, I conducted a level-2 **FY 2021 self-initiated (off-site)** inspection of Great Lakes Water Authority - Franklin Service Center ("GLWA"), located at 7404 Inkster Road, West Bloomfield, Michigan 48301. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994, PA 451; Michigan Department of Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules; and PTI No. 109-06.

During the prior inspection, Mr. Naythan Ward (Cell: 313-316-0443; Fax: NA; E-mail: NA), EACT (Electrician), assisted me. During FY 21 inspection, Mr. Thomas C. Hall (Cell: 313-999-1455; Fax: NA; E-mail: Thomas.Hall@glwater.org), TEAM LEAD - Field Services, assisted me via phone and e-mail.

GLWA assumed the operations of DWSD under 40-year lease deal approved on June 12, 2015. GLWA provides water and sewer services four (≈ 4) million customers in Southeast Michigan (Wayne, Oakland and Macomb counties, 125 communities). GLWA operates freshwater booster station at Southfield, one of many including Franklin booster station. For emergency power, GLWA depends upon two Cummins QSK60-G6 engines that power generators. No peak shaving at Franklin.

PTI No. 109-06 Emission Units

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUENGINE1	Cummins QSK60-G6 diesel-fired engine generator, 2000 kW, 17.25 MMBtu/hr.	2005	FGENGINES
Cummins Engine Model No. QSK60-G6 & Serial No.75547-9 Cummins Generator Model No. 2000DQKC-5432 & Serial No. L050869164 Hours meter reading: 119.5 (08/21/2019)			
EUENGINE2	Cummins QSK60-G6 diesel-fired engine generator, 2000 kW, 17.25 MMBtu/hr.	2005	FGENGINES
Cummins Engine Model No. QSK60-G6 & Serial No.75547-8 Cummins Generator Model No. 2000DQKC-5432 & Serial No. L050869165 Hours meter reading: 113.5 (08/21/2019)			
Neither engine (FGENGINES: Egn1 & Eng2) Load Bank Test Report (6/15/2021) noted hours meters reading. However, per MAERS-2020, Engine1 ran for 24 hours and Engine2 ran for 23 hours (total 47 hours) using 2,887 & 2,795 (total 5,682) gallons of ULSD, respectively.			
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

PTI No. 109-06 Flexible Group

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGENGINES	Two diesel fired engine generators for emergency power and no peak shaving.	EUENGINE1, EUENGINE2

The only fuel burned is Ultra Low Sulfur Diesel (dyed 15 ppm S ULSD) (PTI No. 109-06, FGENGINES, 1.2 limit: 0.5% S). Generators have been operated only for testing purposes and never for peak shaving (PTI No. 109-06, FGENGINES, 1.3 limit: 234,771 gallons of 0.5% Diesel per year). During CY 2020, GLWA-FRANKLIN used **2,887** (EUENGINE1) PLUS **2,795** (EUENGINE2) = **5,682** (FGENGINES or Total at Franklin) gallons of ULSD per year.

GLWA keeps records of fuel usage, NOx emissions, sulfur content (ULSD), hours meter readings, etc. (PTI No. 109-06, FGENGINES, 1.2- 1.8). In CY2021, GLWA Franklin emitted 659 and 1,911 pounds of CO and NOx, respectively.

RICE MACT 4Z

Emergency generators (2) are subject to Area Source NESHAP / MACT ZZZZ or 4 Z, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines / Final rule (Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final rule.).

RICE MACT 4Z requirements may be summarized as:

1. Change oil and filter: every 500 hours of operation or annually whichever occurs first.
2. Inspect air cleaner: every 1,000 hours of operation or annually whichever occurs first.
3. Inspect all hoses: every 500 hours of operation or annually whichever occurs first.
4. Operate / maintain engine and control devices according to manufacturer's recommendation
5. Install non-resettable hours meter and maintain records
6. Keep maintenance records
7. NSPS Notification not required

Emergency engines:

1. 100 hours per year for maintenance checks and readiness testing
2. 50 hours per year for non-emergency (non-income generating)

3. No hours limit for genuine emergency

A contractor performs semi-annual maintenance, which includes inspection of installation (vibration, structural integrity, etc.), cooling system (radiator / heat exchanger, belts, hoses, antifreeze, etc.) starting system, lubrication system (sample oil and change if necessary, etc.) control panels and generator, fuel system, exhaust system, etc. Replace fuel filters, oil filters, lubricating oil filters, coolant filters, if necessary and dispose of waste oil and filters properly.

While peak shaving is allowed in Southfield (PTI No. 230-99B, B6622), it is NOT allowed in Franklin (PTI No. 215-05, N7515). However, neither freshwater booster station performs peak shaving. Starting from 2015, emergency engines would be required to use cleaner fuel - ultra low sulfur diesel (ULSD) - if they operate, or commit to operate, for more than 15 hours annually as part of blackout and brownout prevention, also known as emergency demand response.

Conclusion

GLWA-Franklin is in compliance with PTI No. 109-06.

NAME *L S McManahall* DATE July 23, 2021 SUPERVISOR *Joyce*