

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection**

N554549988

FACILITY: CROSWELL LIGHT AND POWER DEPT	SRN / ID: N5545
LOCATION: 120 E SANBORN AVE, CROSWELL	DISTRICT: Saginaw Bay
CITY: CROSWELL	COUNTY: SANILAC
CONTACT: Peck John , Lead Linesman; Supervisor	ACTIVITY DATE: 08/14/2019
STAFF: Matthew Karl	COMPLIANCE STATUS: Compliance
SUBJECT: Self initiated inspection to determine compliance with PTI No. 438-94.	SOURCE CLASS: SM OPT OUT
RESOLVED COMPLAINTS:	

On Wednesday (8/14/19) I (Matt Karl) conducted a compliance inspection at the City of Croswell Light & Power Department located at 120 East Sanborn Avenue, Croswell, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) Administrative Rules; the Title V Opt-Out Permit to Install (PTI) No. 438-94. Mr. John Peck, Supervisor, assisted me by providing requested records.

Facility Description

The City of Croswell Light & Power Department operates five (5) Fairbanks-Morse compression ignition opposing piston engines. Units 1 and 3 are diesel fuel fired engines, while Units 2, 4 and 5 are dual fuel fired, however, they also have only been run on diesel fuel historically. Currently the city uses the engines for emergencies and is not in a contractual agreement to provide energy. The last time the engines were operated was in 2013.

Site Inspection

I arrived on site around 1:45 pm. I met with Scott, who provided me with updated contact information for John Peck, who was not on site at the time of my inspection. Scott then assisted me in providing access to the engine room. I toured the engine room, which appeared clean and orderly. I recorded information from the boiler plates on each of the engines in the table below. I confirmed that this information was correct with John Peck via email on 8/15/19. I departed the site around 2:15 pm.

Unit No.	Make	Model	Serial No.	HP	KW	RPM	Fuel
1	Fairbanks-Morse	38 D 8 ½	968368	840	600	600	Diesel
2	Fairbanks-Morse	38 DD 8 ½	969621	960	700	720	Dual-Fuel
3	Fairbanks-Morse	38 D 8 1/8	968967	1700	1208	720	Diesel
4	Fairbanks-Morse	38 DD 8 1/8	968546	1920	1360	720	Dual-Fuel
5	Fairbanks-Morse	38 DD 1/8	38D896005DFS12	1920	1360	720	Dual-Fuel

Records Review

The engines have not operated since 2013. I reviewed the Michigan Air Emissions Reporting System (MAERS) report from 2013 as well as the previous inspection notes from 2013 where records from 2011 were reviewed to look at previous emissions from the facility. PTI No. 438-94 has conditions that limit NOx and CO emissions as well as limiting the fuel usage in the engines so the facility can be classified as a synthetic minor source.

From the 2013 MAERS report, the facility uses MAERS emission factors (EF) for Source Classification Code (SCC) 2-01-001-02 for reciprocating internal combustion engines fired on oil, used for electric utility generation. For CO, this emission factor is 1.3×10^2 pounds/1000 gallons of diesel fuel and for NOx the emission factor is 6.04×10^2 pounds/1000 gallons of diesel fuel.

In 2011, the engines used 469.3 gallons of diesel fuel. Using the emission factors above, this results in emissions of 61.009 lbs CO and 283.4572 lbs NOx. In 2013, the engines used 451.7 gallons of diesel fuel. Using the emission factors above, this results in emissions of 58.721 lbs CO and 272.8268 lbs NOx.

I also reviewed the "2013 Year End Cost Report: Jan 2013- Dec 2013" to review the maximum hourly diesel fuel usage for each of the units. I've included the diesel fuel usage rate calculations for 2013 in the table below:

Unit	Diesel Fuel Usage (gal)	Hours Operated (hrs)	Diesel Fuel Usage Rate	Diesel Fuel Usage Rate
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			(gal/hr)	Limit (gal/hr)
1	43.7	1.8	24.3	44
2	47.6	1.6	29.8	50
3	119.6	1.75	68.3	89
4	122.3	1.5	81.5	100
5	118.5	1.7	69.7	100

Summary

At the time of my inspection, the City of Croswell Light & Power Department appeared to be in compliance with the conditions of PTI No. 438-94.

NAME Matthew R. KarelDATE 8/20/19SUPERVISOR C. Hase