

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

G525259751

FACILITY: Oakland Co. Service Center		SRN / ID: G5252
LOCATION: 1200 North Telegraph Building 22 East, PONTIAC		DISTRICT: Warren
CITY: PONTIAC		COUNTY: OAKLAND
CONTACT: Joseph Murphy , Facilities Manager		ACTIVITY DATE: 08/19/2021
STAFF: Robert Elmouchi	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Targeted inspection.		
RESOLVED COMPLAINTS:		

NOTE: This activity report is a compliance review of both the Oakland County Animal Shelter (OCAS) and the Oakland County Department of Facilities Central Powerhouse (Powerhouse). Both the OCAS and the Powerhouse operate under one state registration number (SRN) because they are under the control of a single entity. Furthermore, a single SRN was issued to identify major source threshold applicability whenever new emission units are permitted. Both facilities are located at the Oakland County seat, which is at 1200 North Telegraph Road, Pontiac, Michigan.

Oakland County Animal Shelter (OCAS)

SRN: G5252

On August 19, 2021, I conducted a scheduled inspection of the Oakland County Animal Shelter (OCAS). The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and Air Use Permit to Install (PTI) 180-16.

The Oakland County Animal Shelter (OCAS) is in building 42 East. PTI 180-16 was approved on February 10, 2017, for the installation of a Matthews IEB-16 pet cremation system (EU-CREMATORY-01). In addition to pathological waste, this natural gas-fired cremation system is also used to incinerate contraband or prohibited goods and take-back pharmaceutical wastes. PTI 180-16 was issued under the name of Oakland County.

I entered the facility and met with Chief Joanie Toole.

EU-CREMATORY-01 was installed in September 2017. The first cremation occurred on September 27, 2017. OCAS has two freezers where remains can be stored before cremation.

I observed the cremation unit (EU-CREMATORY-01). It appeared properly maintained and in acceptable operating condition. Per the previous inspection report, I looked at the crack running lengthwise along the top of the primary chamber refractory lining. Subjectively, the crack appeared slightly larger. The primary combustion chamber appeared to be properly maintained but in need of maintenance because of a new vertical crack in the refractory liner at the entrance

to the secondary combustion chamber. Chief Toole indicated that she would have the maintenance staff evaluate the observed cracks.

It is important to note that the OCAS cremation unit is not operated as frequently as a pathological incinerator at a dedicated crematorium facility. Therefore, the refractory liner experiences more temperature cycling extremes as compared to an incinerator that is operated from 8 or more hours per day. Limited use appears to cause more thermal fracturing of the refractory liner and the incomplete combustion of pathological materials that permeate the refractory liner.

MATERIAL LIMITS

This crematorium is permitted to combust pathological wastes, per 40 CFR 60.15c; contraband or prohibited goods, per 40 CFR 6.2887; and take-back pharmaceutical wastes, as defined in EU-CREMATORY-01, II.1. Only natural gas is used to fuel this incinerator.

PROCESS/OPERATIONAL RESTRICTIONS

A review of the temperature charts appeared to indicate that OCAS has maintain a minimum temperature of 1600°F in the secondary combustion chamber.

MONITORING/RECORDKEEPING

VI.2. Temperature charts indicate that the permittee monitored and recorded the temperature in the secondary combustion chamber of EU-CREMATORY-01 on a continuous basis.

VI.3. The permittee maintained daily records of the time (duration of burn), description of waste type, and waste weight in pounds of each charge combusted in EU-CREMATORY-01.

Recordkeeping per special condition VI.3 requires the permittee to keep daily records of the waste weight in pounds and as a percentage of the total charge combusted. The other records required per VI.3 appear to demonstrate compliance with the material limits in special conditions II.3 and 4.

The records I reviewed appeared to demonstrate compliance with the SC II.7 requirement that the permittee shall burn a minimum of 90 percent pathological waste by weight.

VI.4. The permittee's detailed recordkeeping appears to automatically satisfy the requirement to keep records on a calendar quarter basis of the periods of time when only pathological waste is burned in the incinerator, as required by 40 CFR 60.50c(b). The permittee records appear to satisfy this requirement because OCAS records the weight and description of each charge as

well as records daily and monthly totals. It appears that monthly recordkeeping automatically satisfies the quarterly basis recordkeeping.

VI.5. The permittee satisfactorily recorded and kept secondary combustion chamber temperature charts

VI.6. Service and maintenance records were provided.

STACK/VENT RESTRICTIONS

A visual inspection of the exhaust stack appears to be in agreement with the maximum diameter of 15 inches and a minimum height of 24.1 feet above the ground.

CONCLUSION

The permittee appears to be in compliance with PTI No. 180-16.

Oakland County Service Center Powerhouse

SRN: G5252

On August 19, 2021, I conducted a scheduled inspection of the Oakland County Service Center powerhouse. The facility is in Building No. 22 at 1200 North Telegraph Road, Pontiac, Michigan. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules, and Air Use Permit to Install (PTI) 150-03.

PTI 150-03 was approved on January 21, 2004, for the installation of four (4) natural gas and fuel oil-fired boilers. These boilers are used to provide heat and cooling for the buildings at the Oakland County seat. PTI 150-03 was issued under the name of Oakland County.

I entered the site and met with Mr. Hank Roehl, Chief of Boiler Area; Mr. Dan Cole, Boiler Mechanic; and Mr. Spencer Sand, Day Shift Boiler Operator. Mr. Joseph M. Murphy, Facilities Manager was not able to attend this inspection.

The Oakland County Service Center powerhouse is in Pontiac within the Oakland County campus. The powerhouse consists of four (4) boilers that produce steam for heating and cooling county buildings in the surrounding county service center. The facility runs 24 hours a day, 7 days a week.

Three of the four boilers (Nos. 1 through 3) are drum water tube boilers, manufactured by Erie City Boilers, which are rated at 30,000 lbs. steam per hour and can be fired on either natural gas or No. 6 fuel oil (bunker oil). Each of the three boilers has a heat input rating of 36 MMBTU/hour each. Since February 2014, natural gas has been the primary fuel. The main reason for firing with natural gas is because of its relative low cost. The permittee has the option to combust No. 6 fuel oil or natural gas.

From April 8 through April 15, 2020, 13,100 gallons of No. 6 fuel oil was combusted to empty the contents of tank number 2 for cleaning and inspection. 7,513 gallons of No. 6 fuel oil was transferred to another tank and 1,524 gallons was removed for disposal (trucking manifest number 007992273) The PTI limits the use of fuel oil to 757,000 gallons per 12-month rolling time period and there is no use limit on natural gas. Zero fuel oil was combusted during the previous 12-month rolling time period. The records provided indicate that the permittee has maintained compliance with the fuel oil use limit.

The fourth boiler (No. 4) is a water tube keystone boiler, which can only burn natural gas. This boiler is manufactured by Zurn (with a Coen burner) rated at 60,000 lbs. steam per hour and has a heat input rating of 72 MMBTU/hour.

The boilers at this facility are not subject to 40 CFR Part 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, because this facility is not a major source of hazardous air pollutants (HAPs).

There are three (3) storage tanks in the facility basement with a total capacity of 90,000 gallons of No. 6 Fuel oil. Per PTI special condition 1.3, the sulfur weight percent of all fuel oil is limited to 1.5% or less. The certificate of analysis record provided by Mr. Roehl indicates that the weight percent of sulfur in the fuel delivery was less than 0.5%, which is less than one-third of the permitted limit.

TANK READINGS

On August 19, 2021, I observed the following panel display readings for the storage tanks:

Tank No.1: 20,423 gallons,

Tank No.2: 710 gallons,

Tank No.3: 25,277 gallons.

The monthly and 12-month rolling SO₂ calculations indicate that the annual emissions since 2016 have been less than 1.0 ton per year, which complies with the permit limit of 89.4 tons per year.

EMERGENCY GENERATOR

Emergency generator specifications:

- * Caterpillar generator model 250,
- * Rated at 250 KW
- * Engine model C9, rated at a maximum of 375 hp – USEPA Certified
- * Cylinder displacement of 8.8 liters
- * Manufactured 4/2018.
- * Serial number CAT000C9JNTX00327
- * Diesel engine consumes 19.4 gallons per hour at 100 percent load.
- * Heat input rate is 2,665,191 BTU/hr. based on 137,381 Btu/gallon diesel

R 336.1201(1) APPLICABILITY DETERMINATION

R 336.1285(2)(g) states in part,

“Rule 285.

(1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(g) Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

Therefore, this emission unit appears to be exempt from the requirement to obtain a permit to install per R 336.1201(1).”

40 CFR Part 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

§63.6590(3)(c) states in part,

“Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source.”

Therefore, it appears that 40 CFR Part 63 Subpart ZZZZ does not apply to the emergency generator emission unit.

40 CFR Part 60 Subpart IIII, Standards of Performance for New Stationary Sources, Stationary Compression Ignition Combustion Engines.

This emergency generator appears to be subject to 60.4211(f), which restricts non-emergency use to a maximum of 100 hours per calendar year. On August 19, 2021, the non-resettable hours meter displayed 63.7 hours, which appears to indicate compliance.

CONCLUSION

The Oakland County Service Center powerhouse appears to be in compliance with PTI No. 150-03.

NAME

Robert Elmarchi

DATE 9/9/2021

SUPERVISOR

Joyce