

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

P124570594

FACILITY: Faithful Companion Memorials, Inc.		SRN / ID: P1245
LOCATION: 1909 Thunderbird Street, TROY		DISTRICT: Warren
CITY: TROY		COUNTY: OAKLAND
CONTACT: Thomas E. Rood , Chief Operating Officer		ACTIVITY DATE: 01/10/2024
STAFF: Adam Bogнар	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On Wednesday, January 10, 2024, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bogнар, conducted a scheduled inspection of Faithful Companion Memorials, Inc. (the "Facility") located at 1909 Thunderbird Street, Troy, MI 48084.

The purpose of this inspection was to determine the facility's compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environment, Great Lakes, Energy -Air Quality Division (EGLE-AQD) rules; and Permit to Install No. 19-22A.

I arrived at the facility at 9 am. I met with Tom Rood, Chief Operating Officer, and two of his employees. I identified myself and stated the purpose of the inspection. Tom gave me a tour of the facility. After the tour we sat down and looked at records.

Faithful Companion Memorials provides a cremation service to pet owners. Only animals are cremated. The facility currently operates 7 crematory furnaces with an additional furnace being installed in the near future (EUCREMATORY12). There are over 100 employees operating this facility 24/7. During weekends, they do not generally operate at night. The facility provides a pick-up and drop-off service for deceased pets. Most of the employees are drivers that pick-up pet remains from customers and drop-off cremains to customers. If desired, the facility also provides an engraved box for the cremains and a clay paw-print mold of your pets paw.

Permit to Install No. 19-22A

This permit was issued for 8 animal cremation furnaces (7 currently operating). The operating conditions of the permit are nearly identical for each emission unit. The main difference is the size of the furnaces. Units 1, 5, 6, 7, and 8 have a 300lb/charge maximum capacity. Unit 11 has a 3,000 lb/charge maximum capacity and is used to burn multiple animals at the same time for instances where a customer does not want the ashes (cremains) back. Unit 9 has a 1,700lb/charge maximum capacity, and is equipped with four separate primary combustion chambers all routed to the same secondary combustion chamber. Each primary combustion chamber on Unit 9 is equipped with its own charge door. The 1,700lb/charge limit applies to the combined weight between all combustion chambers.

Emission Limits

For all eight furnaces, PM emissions are limited to 0.2 lbs/1000 lbs of exhaust gas. The furnaces should meet this emission limit based on proper operation of the secondary combustion chamber. AQD has not requested stack testing on any of the furnaces at this facility.

Material Limits

Each furnace is permitted to burn animal pathological waste and associated materials. No other waste is permitted to be burned. Tom stated that only animals are burned. The cremation records I reviewed showed that only animals were burned. Horses are not accepted at this facility.

Each furnace has an associated maximum charge that dictates how heavy of an animal can be put into the furnace. These range from 300 lbs on the smaller furnaces to 3000 lbs on the largest furnace. The larger furnace is used to cremate multiple animals simultaneously for cases where the customer does not want the cremains returned back. Tom stated that they do not cremate horses at this facility. I reviewed records of the weights charged to each furnace and did not see any exceedances of these maximum charge weights; however, it should be noted that there is no scale at this facility, staff estimate the weight of charges based on how it feels when they pick up the cremation box.

Each furnace has a requirement that only natural gas is burned at the facility. Tom stated that only natural gas is used. I observed natural gas piping going to each of the furnaces. I didn't see any evidence of other types of fuels being used. Crematory furnaces 5, 6, 7, 8, and 1 are each required to have their own dedicated natural gas regulator. Tom stated that all furnaces have their own natural gas regulator. I did not look at each natural gas regulator during this inspection. There are no limits on natural gas usage at this facility.

Process/Operational Restrictions

According to PTI 19-22, the facility cannot combust waste in any of the furnaces unless a minimum temperature of 1600 °F and a minimum retention time of 1 second in the secondary combustion chamber is maintained. Six of the seven installed furnaces were operating during my inspection. All furnaces were operating with a secondary combustion chamber temperature above 1600°F. Below are the secondary combustion chamber temperatures I noted during my inspection.

EU-CREMATORY 1 - 1760°F
EU-CREMATORY 5 - 1651°F
EU-CREMATORY 6 - 1623°F
EU-CREMATORY 7 - 1624°F
EU-CREMATORY 9 - 1601°F
EU-CREMATORY 11 - 1675°F

The secondary combustion temperature of EU-CREMATORY 9 is set higher than the other crematory units at 1700°F. All other units are set at 1650°F. This is because EU-CREMATORY9 is a multi-chambered furnace with four charge doors. During the course of cremation, one of the chambers will finish a burn while the others are still burning waste. When one of the charge doors is opened to empty the cremains and insert a new charge, the secondary combustion chamber temperature tends to dip. Operators are trained to minimize the amount of time the charge doors are open. The facility hopes that setting the temperature higher will keep the secondary

combustion chamber temperature from dipping below 1600°F when doors are opened, which was an issue based on conversations AQD has had with the facility.

Based on the continuous temperature records I reviewed, the facility did not properly operate the secondary combustion chamber in EU-CREMATORY9 (multi-chambered unit). While reviewing circular chart data for EU-CREMATORY9, AQD noticed that on both November 12, 2023 and November 15, 2023, waste was inserted into the furnace while the secondary combustion chamber was slightly under 1500°F. On both occasions the temperature remained slightly under 1500°F for the entire duration of the burn. I explained to Tom that there should be no reason that a charge is inserted into the furnace while the secondary combustion chamber temperature is below 1600°F. I asked Tom to make sure operators know to check the secondary combustion chamber temperature before inserting a charge. A violation notice was sent to the facility for failing to operate the secondary combustion chamber in a satisfactory manner.

Each furnace is required to be installed, maintained, and operated in a manner satisfactory to the AQD to control emissions. Compliance with this condition is demonstrated through proper operation of the secondary combustion chamber and through following the recommended procedures in Appendix A. I went through the recommended procedures of Appendix A with the company. The facilities responses are below.

- There are several trained operators that are responsible for compliance with the air pollution control requirements.
- Grates (bottom area of furnace where ashes aggregate post incineration) are cleaned between each burn.
- Tom stated that operators are trained to not combust waste unless the secondary combustion chamber temperature is greater than 1600°F; however, based on the records I reviewed there were at least two occasions where waste was inserted into the furnace while the secondary combustion chamber temperature was below 1600°F. A violation notice was sent to the facility for this noncompliance.
- There is no scale used at the facility. Staff have been estimating the weight of each animal based on how heavy the cremation box feels. Tom stated that even the smallest furnace can handle up to 300 lbs/charge, and they do not burn animals that large. Tom stated that he has never seen a dog get that large. In EU-CREMATORY 11, multiple animals are cremated at the same time, which could make it harder to estimate the total weight of the charge. I told Tom he needs to get a scale on-site, weigh every animal before it is cremated, and record the weight for AQD review. A violation notice was sent to the facility for this non-compliance.
- Tom stated that the opening of charge doors is done as infrequently as possible.

- Tom stated that only animals are burned at this facility. No humans are burned at this facility.
- Combustion fuel/air ratio is adjusted by a technician as needed and is checked bi-annually by a certified technician.
- There are cameras pointing at all the stacks on top of the facility. There are monitors inside the facility that display the video feed of the stacks. Tom stated that these are checked frequently. There were several employees working in the area near the monitors. There are adjacent monitors used to track the location of Faithful Companion's vehicle fleet.
- A copy of the manufacturer's manual is located inside the control panel of each furnace.
- The facility has a certified technician out every 6 months at a minimum to inspect each furnace. Usually, there are technicians on-site more frequently than that.

A site plan for all furnaces was submitted to AQD as part of the permit application for PTI 19-22.

EUCREMATORY11 requires that a malfunction abatement plan (MAP) be submitted to AQD within 60 days of permit issuance and be implemented and maintained. Tom submitted this MAP to me after my inspection. I verified that the MAP contains the information and procedures required by AQD Rule 911. Based on my observations during my inspection and record review, the MAP is being followed for EUCREMATORY11. None of the other furnaces have a requirement for a MAP.

Design/Equipment Parameters

The permittee is required to install, maintain, and operate the secondary combustion chambers in all furnaces in a manner acceptable to the AQD district supervisor. The facility did not properly operate the secondary combustion chamber in EU-CREMATORY9 (see discussion under Process/Operational restrictions). A violation notice was sent to the facility for failing to operate the secondary combustion chamber in a satisfactory manner.

All other secondary combustion chambers were operated and maintained properly based on my inspection and the records I reviewed. I did not review continuous temperature records for furnaces 1, 6, 7, or 8.

As required by this PTI, each furnace is equipped with a device to continuously monitor the temperature in the secondary combustion chamber. A thermocouple in the secondary combustion chamber reports the temperature to circular chart recorders.

The permit requires that a scale be maintained at the facility for verifying the charge weight. There was no scale at the facility during my inspection. A violation notice was sent to the facility for failing to maintain a scale.

Testing/Sampling

PTI No. 19-22A requires stack testing for PM emissions if requested by the AQD district supervisor. No stack test has been conducted at this facility. AQD is not requesting stack testing at this time.

Monitoring/Recordkeeping

The facility must monitor and record the temperature of the secondary combustion chamber of each crematory furnace on a continuous basis. These records are kept. I reviewed secondary combustion chamber records for three of the seven furnaces, EU-CREMATORY5, EU-CREMATORY 11 (large unit), and EU-CREMATORY 9 (multi-chamber unit).

The facility must keep daily records of the time (duration of burn), description, and weight of waste combusted in each crematory furnace. I verified that these records are kept, and that they correspond to the description and time noted on the circular charts. I reviewed these records for three of the seven furnaces, EU-CREMATORY5, EU-CREMATORY 11 (large unit), and EU-CREMATORY 9 (multi-chamber unit).

The facility must keep records of all service, maintenance, and equipment inspections. These records are kept; however, there is not much detail noted on the inspection sheets. On April 26, 2023, some of the concrete under the furnaces was replaced, along with some other maintenance activities. The maintenance invoice says "Equipment move". On October 13, 2023, all units had a bi-annual PM check. The maintenance invoice says "Troubleshoot group unit, nozzle, chart recorders, door pump replacement". I asked Tom to get his maintenance contractor to include more details about what work was performed during their visits.

Stack/Vent Restrictions – I did not verify stack height/diameter during this inspection. Based on the stacks I could see on top of the facility, all stacks were exhausted vertically and unobstructed to the ambient air. I didn't notice any opacity.

Other Requirements – The facility is required to label each furnace in a manner acceptable to AQD. I verified that each furnace is labeled according to the names in PTI No. 19-22A.

Secondary Processing

There are two cremains processing areas where cremains are ground up into smaller bits that are more easily packaged. There is a filter system in this room that controls dust. These systems

exhaust to the general in plant environment. Based on my observations, these systems are exempt from AQD permitting requirements pursuant to Rule 285(2)(l)(vi)(B).

Laser Engraving

The facility operates two identical laser engravers. Only one is operated at a time. The second is there as a redundancy in-case one of the lasers malfunctions. Both units are Epilog Fusion Edge 12 40-watt laser systems. The operating unit is exhausted outdoors via a 350-400 CFM fan. These units are both operated without a permit to install. A violation notice was sent to Faithful Companion Memorials for operating the laser engraving process without a permit to install.

After the inspection, Tom provided me with documentation showing that the laser is exempt from the requirement to obtain a permit to install per Rule 290. The Rule 290 calculations show that around 6.65 lbs/year of particulates will be emitted from this process.

Compliance Determination

Faithful Companion Memorials, Inc. operated EU-CREMATORY 9 while the secondary combustion chamber temperature was below 1600°F (violation of EUCREMATORY9 Section III – Special Condition 1, Section IV – Special Condition 1, and AQD Rule 910). Additionally, the facility did not have a scale on-site to weigh each charge (violation of EUCREMATORY 1 Section IV – Special Condition 3, EUCREMATORY9 Section IV – Special Condition 3, EUCREMATORY11 Section IV – Special Condition 3, and FGIEB16 Section IV – Special Condition 3). Furthermore, the facility operated two laser engraving units without a permit to install (violation of Rule 201). A violation notice was issued to Faithful Companion Memorial, Inc. based on the violations noted above.

Based on my inspection and record review, Faithful Companion Memorials, Inc. is operating in compliance with all other requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules; and Permit to Install No. 19-22A.

NAME Adam Bognar

DATE 9/12/2024

SUPERVISOR K. Kelly