

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

N833970856

<b>FACILITY:</b> Great Lakes Cremation, Inc.		<b>SRN / ID:</b> N8339
<b>LOCATION:</b> 29547 Costello Dr, NEW HUDSON		<b>DISTRICT:</b> Warren
<b>CITY:</b> NEW HUDSON		<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Gil Pietrandrea , Facility Manager		<b>ACTIVITY DATE:</b> 02/06/2024
<b>STAFF:</b> Adam Bognar	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On Tuesday, February 6, 2024, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar, conducted an unannounced inspection of Great Lakes Cremation, Inc. (the "Facility") located at 29547 Costello Drive, New Hudson, MI 48165. 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; Permit to Install No. 124-23; and the conditions of Consent Order No. 2023-17.

I arrived at the facility at 9:30 am. I met with Danielle Hall, Supervisor, and Gil Pietrandrea, President. I identified myself and stated the purpose of the inspection. I sat down in the main lobby with Danielle and Gil and we looked at records, checked CCTV footage, and discussed current operations.

Great Lakes Cremation provides cremation services to both humans and animals. The human side of the business is much larger than the animal side. The facility currently operates 5 crematory furnaces. There are four employees operating this facility Monday through Friday from 6 am to 4 pm.

### **Consent Order No. 2023-17**

Consent Order No. 2023-17 became effective on August 9, 2023. AQD and Great Lakes Cremation entered into this agreement to settle multiple violations that occurred from September 2020 through December 2022. The violations were issued for improper operation of the secondary combustion chamber, failing to keep records of secondary combustion chamber temperature, failing to provide maintenance/service records for the furnaces, and causing smoke/odors at a sufficient intensity, frequency, and duration to constitute a Rule 901 violation.

### **Permit to Install No. 124-23**

As a condition of Consent Order 2023-17, Great Lakes Cremation agreed to submit a PTI application to include the modifications required under the consent order and combine all emission units from the previous PTI's into a single PTI. Great Lakes Cremation submitted this permit application and PTI No. 124-23 was issued in October 2023. This permit covers all 5 cremation furnaces that operate at this location. The conditions in this permit are essentially identical for all 5 furnaces. EUCREMATORY1, EUCREMATORY2, EUCREMATORY4, and EUCREMATORY 5 are human crematory furnaces with a maximum charge weight of 750 lbs. EUCREMATORY3 is permitted to cremate pets only and has a maximum charge weight of 300 lbs.

**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 pathological waste and associated materials. No other waste is permitted to be burned. Danielle stated that only humans and animals are burned. The records I reviewed showed only humans and animals.

Each furnace has an associated maximum charge that dictates how heavy of an animal can be put into the furnace. The four human furnaces have a maximum charge weight of 750 lbs and the animal furnace has a maximum charge weight of 300 lbs. The animal furnace (Unit 3) is located towards the back of the building and is smaller than the human furnaces. I reviewed records of the weights charged to each furnace and did not see any exceedances of these maximum charge weights. The facility has two scales used to weigh each charge.

Each furnace has a requirement that only natural gas is burned at the facility. Gil 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. Gil showed me records of total natural gas usage while on-site.

**Process/Operational Restrictions**

According to PTI 124-23, 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. Three of the five furnaces were pre-heating when I arrived at the facility. Charges were inserted into each of these three furnaces during my inspection. I observed the temperature of the secondary combustion chamber when the charge was inserted. 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 - Off

EU-CREMATORY 2 - 1615°F

EU-CREMATORY 3 - Off

EU-CREMATORY 4 - 1624°F

EU-CREMATORY 5 - 1702°F

After my inspection, and shortly after the charges were inserted into the furnaces, I observed that there was no opacity coming from the stacks.

The facility must monitor and record the temperature of the secondary combustion chamber of each crematory furnace on a continuous basis. I verified that these records are kept. I reviewed continuous secondary combustion chamber records for all five furnaces from 2/1/2024 through 2/5/2024, and from 11/1/2023 through 11/8/2023. I did not notice any instances of temperature falling below 1600°F during a cremation in the records I reviewed.

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.

- Gil stated that all four staff at the facility are 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.
- Danielle stated that operators are trained to not combust waste unless the secondary combustion chamber temperature is greater than 1600°F.
- Gil stated that each charge is weighed, and that weight is recorded prior to cremating each charge.
- Gil stated that the opening of charge doors is done as infrequently as possible.
- Gil stated that only humans and animals are burned at this facility. No other types of waste are burned.
- 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 main office and near the furnaces that display the stacks. Danielle stated that these are checked frequently.
- A copy of the manufacturer's manual is located in the main office – which is around 20 feet from the furnaces.
- Gil said he 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.

All cremation units require that a malfunction abatement plan (MAP) be submitted to AQD within 60 days of permit issuance and be implemented and maintained. Great Lakes Cremation and AQD created and agreed upon a MAP in June 2022. 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.

The permittee is required to install and maintain a closed-circuit television (CCTV) system as a condition of operating any of the five furnaces. I verified that this system is installed and operational. There are monitors near each of the furnaces and in the main office. Based on the CCTV records I reviewed, this system is operated continuously from before start-up in the morning and through shutdown at the end of the day. I observed that the cameras were positioned such that any smoke plume would be visible for at least 60 feet above the stack. Operation of the CCTV system is also detailed in the MAP. Permit conditions regarding the CCTV were added to PTI 124-23 as part of Consent Order 2023-17.

Gil stated that some of the cameras became obscured due to heavy snowfall in January. Gil stated that he has contacted the CCTV manufacturer and is in the process of installing cinderblocks to raise the height of the cameras such that they do not become covered in snow. I asked the facility to provide evidence that this issue is being taken care of. Danielle sent me a screenshot of a

conversation with the CCTV manufacturer. The CCTV manufacturer stated that he is going to come out on February 21, 2024 to install the cinderblocks.

If any of the furnaces are not functioning properly or awaiting service, the permittee is required to place a sign on the malfunctioning unit stating "Do Not Operate, Malfunctioning cremation unit awaiting service". While none of the furnaces were malfunctioning during this inspection, I verified that the facility maintains this signage. Danielle stated that EUCREMATORY5 recently had this signage until it was repaired on January 23, 2024.

### **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. Based on my inspection and review of continuous temperature records, the secondary combustion chambers have been operated properly.

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. I observed that there are two scales at the facility used for this purpose.

The permittee shall not operate the crematory furnaces unless an opacity monitor is installed, maintained, and properly operated. Proper operation includes calibration every 90 days. Danielle stated that she performs the calibration of the opacity meters per the manufacturer's guidelines. Danielle provided me with a document showing that the opacity monitor on each furnace has been calibrated every 90 days.

### **Testing/Sampling**

PTI No. 124-23 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 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 all five furnaces.

The facility must keep records of all service, maintenance, and equipment inspections. I verified that these records were kept. On August 29, 2023, the computer module on EUCREMATORY2 was replaced due to a malfunction. On September 21, 2023, the throat air on EUCREMATORY1 was adjusted. On December 18, 2023, the thermocouple on EUCREMATORY2 was replaced. On January 23, 2024, EUCREMATORY5 had a natural gas valve replaced.

On and after August 9, 2023, the facility must keep records of any opacity alarms for the five furnaces. Danielle stated that they have not had an opacity alarm sound since August 9, 2023.

Danielle stated that there have been no instances of flames coming from the stacks since the consent order was issued.

I verified that records of CCTV footage are kept. I asked to see footage from several dates ranging from October 2023 to present. Danielle was able to show me each of the dates I requested. I didn't notice any opacity in the videos I reviewed.

I requested that Danielle provide me with the login information so that I can view the live CCTV footage. Danielle was having troubles with getting the information from the app, but stated that she will get me access to this in the near future. Once I have access to the live CCTV footage, I will observe the first burns of the day on a few occasions.

### **Reporting**

The permittee is required to report each opacity event lasting >60 seconds and any flame event regardless of the duration. AQD has not received any such reports. Danielle stated that they have not had any reportable opacity or flame events. Danielle has been providing AQD with a bi-weekly update via email informing AQD whether or not there are any issues at the facility.

**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. Per Consent Order condition 9D.1, the facility sent a notification to AQD on September 8, 2023, stating that the stacks have all been raised to a minimum of 1.5 times the building height.

### **Secondary Processing**

There are two cremains processing areas where cremains are ground up into smaller bits that are more easily packaged. One of these units is exhausted outdoors after passing through a fabric filter, the other unit is exhausted to the general in-plant environment.

### **Compliance Determination**

Based on my inspection and record review, Great Lakes Cremation is operating in compliance with all 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; Permit to Install No. 124-23; and the conditions of Consent Order No. 2023-17.

NAME Adam Bognar

DATE 2/28/2024

SUPERVISOR K. Kelly