

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

P093258893

FACILITY: Southern Michigan Cremation Services R.O. Inc.		SRN / ID: P0932
LOCATION: 4839 Fernlee Avenue, ROYAL OAK		DISTRICT: Warren
CITY: ROYAL OAK		COUNTY: OAKLAND
CONTACT: Jmaes Santeiu , Owner		ACTIVITY DATE: 06/08/2021
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Conducted an onsite scheduled inspection to determine the company's compliance with the requirements of the conditions of Permit to Install (PTI) No. 113-18A for the human crematory.		
RESOLVED COMPLAINTS:		

On June 8, 2021, Michigan Department of Environment, Great Lakes and Energy (EGLE) -Air Quality Division (AQD) staff, I (Shamim Ahammod) conducted an onsite scheduled inspection of Southern Michigan (SM) Cremation Services R.O, Inc. (SRN: P0932) located at 4839 Fernlee Avenue, Royal Oak, Michigan. The purpose of the inspection was to determine the company's compliance with the 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); the Air Pollution Control Rules; and the conditions of Permit to Install (PTI) No. 113-18A for the human crematory.

Permit History

On August 10, 2018, PTI No. 113-18 was issued to SM Cremation Services for the installation and operation of EU-CREMATORY3 and EU-CREMATORY4 and this permit was voided on 4/1/2021.

On April 1, 2021, PTI No. 113-18A was issued to Southern Michigan Cremation Services RO, Inc to operate the EU-CREMATORY3, EU-CREMATORY4, EU-CREMATORY5, and EU-CREMATORY6.

Source Description

The facility provides human cremation services. The facility is currently operating EU-CREMATORY3 and EU-CREMATORY4. According to Mr. Santeiu, EU-CREMATORY5, and EU-CREMATORY6 have not been installed yet.

Emission Units are described below:

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG750	Two Matthews Cremation Power Pak II Plus crematories with a maximum charge rate of 750 pounds.	EU-CREMATORY3 EU-CREMATORY4
FG1200	Two Keller Manufacturing KMH 1125-400 crematories with a maximum charge rate of 1,200 pounds.	EU-CREMATORY5 EU-CREMATORY6

Inspection Arrangement

Due to the COVID-19 pandemic, I prearranged this announced inspection for June 8, 2021.

Onsite Inspection

On June 8, 2021, at 11.00 AM, I arrived at the facility and was greeted by Mr. Frank Leto, Crematory Operator, and Mr. Tom Perini, Crematory Operator of Southern Michigan Cremation Services R.O, Inc. I introduced myself, provided credentials, and stated the purpose of the inspection.

Mr. Leto and I toured the facility. At the time of inspection, EU-CREMATORY3 and EU-CREMATORY4 were operating.

After the onsite inspection, I called Mr. James Santeiu, the owner of SM Cremation Services. He confirmed to me that EU-CREMATORY5 and EU-CREMATORY6 have not been installed yet.

Emission units were not labeled properly. I advised Mr. Santeiu to label the emission units properly. I did not observe any emissions from both stacks.

REGULATORY ANALYSIS

The following conditions apply to:

FG750

Two Matthews Cremation Power Pak II Plus crematories with a maximum charge of 750 pounds.

Emission unit: EU-CREMATORY3, EU-CREMATORY4

Pollution Control Equipment

Secondary combustion chamber with afterburner

Emission Limits

Pollutant	Limit	Time Period / Operating Scenario	Equipment
1. PM	0.20 lb/1000 lbs of gas ^a	Hourly	EU-CREMATORY3 EU-CREMATORY4

Per SC V.1, The permittee shall, upon request of the AQD District Supervisor, verify PM emission rates from each crematory in FG750 by testing at the owner's expense, in accordance with Department requirements. AQD hasn't requested the facility for the PM emission test yet.

Material Limits

Per SC II.1, the permittee does not burn any waste in FG750 other than pathological wastes, according to Mr. Perini.

Per SC II.2, The permittee shall not charge more than 750 pounds per charge in any crematory in FG750. Per SC VI.3, the permittee shall keep, satisfactorily, daily records of the time (duration of burn), description and weight of charge combusted in each crematory in FG750, as required by SC VI.2. At the time of my inspection, I reviewed the cremation log that specifies the daily records of the time (duration of burn), description, and weight of charge combusted in each crematory in FG750. It appears the permittee does not charge more than 750 pounds per charge in any crematory in FG750.

Per SC II.3, the permittee burns only pipeline natural gas in any crematory in FG750 according to Mr. Perini.

Process/Operational Restrictions

Per SC III.1, The permittee shall not combust waste in any crematory in FG750 unless a minimum the temperature of 1600°F and a minimum retention time of 1.0 seconds in the secondary combustion chamber is maintained. Per SC VI.2, the permittee shall monitor and record the temperature in the secondary combustion chamber of each crematory in FG750 continuously. I reviewed the daily continuous secondary combustion temperature records during the inspection. I reviewed the cremation log, and it appears the minimum temperature of 1600°F in the secondary combustion the chamber was maintained.

SC III.2, Each incinerator shall be installed, maintained, and operated in a satisfactory manner to control emissions from FG750. Per SC VI.6, the permittee shall keep, in a satisfactory manner, a record of all service, maintenance, and equipment inspections for each crematory in FG750. The record shall include the description, reason, date, and time of the service, maintenance, or inspection.

EU-CREMATORY3

On May 18, 2020, the permittee has performed a preventative maintenance inspection on 1996 IEE Power Pak II, serial number 0140296 (EU_CREMATORY3) by IR Environmental Services LLC. Executive summary of the "Preventive Maintenance Inspection Report" for the 1996 IEE Power Pak II, serial number 0140296 (EU_CREMATORY3):

- The Baffle is in poor condition and needs repair or replacement. The Crematory Left Side Clearance is not at a safe minimum distance from combustible materials.

According to Mr. Jarrod Gogel, Inspector of IR Environmental Services LLC, though the baffle is in poor condition, it is hard to only replace the baffle. Therefore, the permittee is going to replace or rebuild, or retired the entire EU_CREMATORY3 as soon as possible. No work was done in EU_CREMATORY3, according to Mr. Gogel.

The main function of the baffle is slowing down the exhaust gas before entering the stack. As a result, fly ash, if any, could be down to the secondary combustion chamber. According to Mr. Gogel, the baffle is still in working condition.

EU-CREMATORY4

On May 18, 2020, the permittee has performed a preventative maintenance inspection on the 1996 IEE Power Pak II, serial number 0130296 (EU_CREMATORY4) by IR Environmental Services LLC. Executive summary of the "Preventive Maintenance Inspection Report" for the 1996 IEE Power Pak II, serial number 0130296 (EU_CREMATORY4).

- The Gas Shutoff needs clear marking to prevent future risks to safety & health.
- The Cremator right side clearance is not at a safe minimum distance from any combustible materials.

- Conversion of afterburner from top of the machine to rear move throat air assembly to the back of throat area Replace stack and gas train.
- Replace burners and send old burners back to the shop.

According to Mr. Gogel, they have clearly leveled and identified the gas shut off and completely rebuilt the EU-CREMATORY4. I have received and reviewed work order no. 2296, created: December 30, 2020, and invoice # 20-1036, dated 2/1/2021. I found that the permittee has replaced the following items in EU-CREMATORY4:

- Cremation Chamber floor, Roof, Left sidewall. Right sidewall, Backwall, Lintel, loading door; The After Chamber Throat Area Left Sidewall, Backwall, Right Sidewall, Roof, Divider Wall, Underside of Floor, Hot Pass Wall, Cold Pass wall, Hot Pass Lintel, Cold Pass Lintel, The Perimeter Walls under the Stack, After Chamber Access Doors, Hot pass Access Door, Cold Pass Access Door, The Baffle.
- Completely replaced the existing stack, 26" Diameter, 3" Refractory Lined Stack,
- Rain Collar & Stack Plate will be installed.

According to Mr. Gogel, they have added a new cremation Burner & Afterburner to Thermjet Burners, and Burner Control.

Per SC IV.1, the permittee has installed a secondary combustion chamber with an afterburner and maintained a proper temperature of 1600 degrees or above in the secondary combustion chamber. The permittee has posted a copy of the manufacturer's manual and guidelines near to the incinerators.

Per SC IV.2, the permittee shall install, calibrate, maintain, and operate satisfactorily a device to monitor and record the temperature in the secondary combustion chamber of any crematory in FG750 continuously. At the time of inspection, I saw the secondary combustion chamber temperature monitoring device. I noted the secondary combustion chamber temperature of EU-CREMATORY3, and EU-CREMATORY4 were 1742-degree Fahrenheit and 1727-degree Fahrenheit, respectively. At the time of my inspection, I reviewed the daily continuous temperature log data and found the permittee maintained a proper temperature of 1600 degrees or above in the secondary combustion chamber.

Per SC IV.3, during my inspection, I observed the permittee maintains a scale at the facility to verify the charge weight as required by SC II.2. Per SC IV.4, the permittee has equipped and maintained each crematory in FG750 with its natural gas regulator.

Testing/sampling

Per SC V.1, The permittee shall, upon request of the AQD District Supervisor, verify PM emission rates from each crematory in FG750 by testing at the owner's expense, per Department requirements. AQD has not requested the facility for the PM emission test yet.

Monitoring/Recordkeeping

The permittee has provided the required record-keeping information per SC VI.1 through SC VI.6. The compliance status of the record-keeping requirements has been evaluated in Sections I through IV.

Stack/Vent Restrictions

Per SC VIII.1, at the time of inspection, the exhaust stacks appeared vertical and unobstructed. SV-CREMATORY3 and SV-CREMATORY4 stack appeared to be at least 26 feet above ground in height.

Other Requirements

Per SC IX.1, the permittee shall label all the crematories in FG750 with the emission unit ID and flexible group ID. At the time of inspection, I observed EU-CREMATORY3 and EU-CREMATORY4 were not labeled with the emission unit ID and name. I advised the facility to label the emission units accordingly.

Conclusion

Based on the on-site inspection, it appears Southern Michigan Cremation Services R.O., Inc. complies with the requirements of PTI No. 113-18A.

NAME DATE 07/14/2021SUPERVISOR 