

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

M351167784

FACILITY: MACOMB COUNTY ANIMAL CONTROL		SRN / ID: M3511
LOCATION: 21417 DUNHAM, CLINTON TWP		DISTRICT: Warren
CITY: CLINTON TWP		COUNTY: MACOMB
CONTACT: Chief Randazzo , Chief Animal Control Officer		ACTIVITY DATE: 06/01/2023
STAFF: Marie Reid	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection.		
RESOLVED COMPLAINTS:		

On June 1, 2023, I (Marie Reid), and Adam Bondar conducted a scheduled on-site inspection of Macomb County Animal Control (MCAC) (SRN: M3511), located at 21417 Dunham Road, Clinton Township, Michigan 48036. 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 the conditions of Permit to Install (PTI) No. 533-94A.

MCAC's division services include pet adoptions, lost and found pets, animal cruelty investigations, dog licensing, animal bite reports, and rescue services for domestic animals and injured or sick wildlife. MCAC has achieved an animal survival rate of approximately 90%, which has allowed the facility to dismantle two of the three previously permitted cremation units. The remaining animal cremation unit operating under PTI No. 533-94A was manufactured by JAR Incinerator Service, Incorporated, which is now permanently shut down.

Permit Information

PTI No. 533-94A was approved December 1, 2021, for the operation of a J.A.R. M.C.P – Multiple Chamber controlled-air unit for animal remains (EUCREMATORY1). PTI No. 533-94 was modified to permit the incineration of confiscated drugs and pharmaceuticals. Per the permit to install application received October 27, 1994, the following is a list of the emission unit specifications:

Model:

- J.A.R. M.C.P. 350 – Multiple Chamber controlled-air unit.

Capacity:

- 300 lb./hr. per PTI application (350 lb./hr., per manufacturer specifications) Type 4 Waste.

Design:

- Three (3) burners in the primary combustion chamber. Each primary burner is rated at a heat input of 800,000 Btu/hr. but are set to operate at approximately 600,000 Btu/hr. for a total of approximately 2.4 MMBtu/hr.

- One (1) burner in the secondary combustion chamber. The secondary burner is rated at a heat input of 1.2 MMBtu/hr. but is set to operate at approximately 1.0 MMBtu/hr.

- 9" thick hearth floor with water-tight stainless-steel pan inside the regular steel housing.

- Front charging door.

- Rear clean-out door.

- Automatic combustion air modulation for both primary and secondary combustion chambers.

- Thermocouple temperature sensors in both primary and secondary combustion chambers.
- Charge Rate: Not to exceed 300 lbs. per hour per permit application.
- Recordkeeping: Start time of cremation and charge weight per permit application charge rate.

EMISSION LIMITS

SC I.1 PM limit of 0.20 lbs. per 1000 lbs. of exhaust gases on an hourly basis.

EUCREMATORY1 was not operating during inspection and no visible emissions were observed. No history of complaints against this source, therefore, an emissions test to verify compliance with the emission limit in SC I.1 has not been requested by the AQD.

MATERIAL LIMIT

SC II.1 "The permittee shall not burn any waste in EUCREMATORY1 other than pathological wastes & confiscated drugs and pharmaceuticals."

Chief Randazzo stated that they only burn animal pathological waste and confiscated drugs & pharmaceuticals. He stated that the only drugs burned in EUCREMATORY1 are the tranquilizers injected into the animals for euthanasia. This was confirmed by reviewing records that lists the drug and amounts injected into each animal.

SC II.2 Chief Randazzo provided handwritten logs of pathological waste burned, which includes the weight of each charge. These records confirm the permittee does not exceed the maximum charge of 300 lbs. per charge in EUCREMATORY1.

SC II.3 I confirmed the permittee burns a minimum of 90 percent pathological waste by weight in EUCREMATORY1 on a calendar basis by reviewing logs specifying both drug weight and pathological waste weight.

SC II.4 I confirmed with Chief Randazzo per phone conversation that they do not burn any hazardous materials in EUCREMATORY1.

SC II.5 I confirmed with Chief Randazzo that EUCREMATORY1 only burns natural gas.

PROCESS/OPERATIONAL RESTRICTIONS

SC III.1 "The permittee shall not combust waste in EUCREMATORY1 unless a minimum temperature of 1600°F and a minimum retention time of 0.95 seconds in the secondary combustion chamber are maintained."

A review of the circular temperature charts and handwritten logs indicate that the secondary combustion chamber temperature had almost never achieved nor maintained the required 1600° F while combusting waste. This constitutes a violation of PTI No. 533-94A, EUCREMATORY1, SC III.1.

Chief Randazzo stated that it is impossible for the secondary combustion chamber temperature to reach 1600° F before inserting a charge, as the unit was not built to operate at that temperature. According to the J.A.R Incinerator Service, Inc operating instructions, number 4 of "Daily Operating Procedure" states to, "Start unit. When secondary chamber warm-up temperature is attained primary burners will ignite waste." I asked Chief Randazzo what the secondary combustion chamber temperature is set to reach before the primary burners are ignited and he said that he did not know. It is important to note that the original

permit (PTI No. 533-94) for this incinerator was approved in 1994 when the unit was installed and did not have any special conditions pertaining to secondary combustion chamber temperature.

The temperature chart recorder at MCAC simultaneously records the primary and secondary combustion temperature. AQD staff previously advised MCAC to stop recording the primary combustion chamber temperature because it is not required per the permit and because, even though different colored pens are used, parallel temperature records are confusing for both MCAC employees and the AQD to read. It will also remove the chance for MCAC staff to mix up the primary and secondary temperatures in the handwritten logs.

SC III.2 "The incinerator shall be installed, maintained, and operated in a satisfactory manner to control emissions from EUCREMATORY1. A list of recommended operating and maintenance procedures is specified in Appendix A."

A review of the handwritten logs indicate that some charges were inserted into the furnace while the unit was off. In these instances, the word "OFF" was written in place of the primary and secondary combustion chamber temperatures. Chief Randazzo informed us that sometimes MCAC employees will insert smaller charges at the end of the night or early in the morning when the incinerator is off but still hot enough to combust waste. When charges are burned while the incinerator is off, the incinerator is not operating in a satisfactory manner to control emissions from EUCREMATORY1. We told Chief Randazzo the importance of only loading charges into the incinerator while the unit is on and were assured employees will be talked to about only loading charges when the incinerator is on. This constitutes a violation of PTI No. 533-94A, EUCREMATORY1, S.C III.2.

Chief Randazzo said that 15 employees operate EUCREMATORY1. I noted that with this number of employees operating the unit, it is more likely for mistakes and violations of this permit to occur. Chief Randazzo assured me that he will run a refresher training for all the staff on how to properly operate EUCREMATORY1 along with all the air requirements of this permit.

SC III.3 "The permittee shall not operate EUCREMATORY1 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for cremation of non-pathological waste, has been submitted within 45 days of permit issuance, and is implemented and maintained."

I could not locate a Malfunction Abatement Plan (MAP) for MCAC in MACES or in AQD's physical files. During the inspection, I asked Chief Randazzo if they had submitted a MAP and he informed me that they had not. This constitutes a violation of PTI No. 533-94A, EUCREMATORY1, SC III.3.

DESIGN/EQUIPMENT PARAMETERS

SC IV.1 "The permittee shall not operate EUCREMATORY1 unless the secondary combustion chamber with afterburner is installed, maintained, and operated in a manner satisfactory to the AQD District Supervisor."

The secondary combustion chamber is not maintained and operated in a manner satisfactory to the AQD. Waste is combusted in EUCREMATORY1 when the secondary combustion chamber temperature is below the minimum required temperature of 1600°F. This constitutes a violation of PTI No. 533-94A, EUCREMATORY1, SC IV.1.

SC IV.2 "Before June 1, 2022, the permittee shall install, calibrate, maintain, and operate in a manner satisfactory to the AQD District Supervisor, a device to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY1 on a continuous basis."

I observed that the secondary combustion chamber temperature recorder is installed and monitors and records temperature in EUCREMATORY1 on a continuous basis.

SC IV.3 "The permittee shall maintain equipment at the facility to verify compliance with the charge weight as required by SC II.2 by utilizing a scale at the facility or in an alternate manner approved by the AQD District Supervisor."

I confirmed with an image sent from Chief Randazzo that the permittee maintains a scale to verify compliance with charge weight.

MONITORING/RECORDKEEPING

SC VI.2 "The permittee shall monitor and record, in a manner satisfactory to the AQD District Supervisor, the temperature in the secondary combustion chamber of EUCREMATORY1 on a continuous basis by the date specified in SC IV.2."

I confirmed with circular temperature charts provided by Chief Randazzo that temperature in the secondary combustion chamber of EUCREMATORY1 is monitored and recorded on a continuous basis.

SC VI.3 "The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, daily records of the description and weight of waste burned in EUCREMATORY1, as required by SC II.1, II.2, and II.3. The permittee shall keep all records on file and make them available to the Department upon request."

I confirmed with handwritten logs provided by Chief Randazzo that the permittee records, daily, the description and weight of waste burned in EUCREMATORY1.

SC VI.4 "The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, secondary combustion chamber temperature records for EUCREMATORY1, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request."

I noticed that occasionally, the time of burn (duration) that was recorded in the handwritten logs did not match the duration recorded in the circular temperature charts. I also noticed that there are periods on the chart from 8/29/2022 where the temperature reading went off the chart and recorded two different sets of recordings for the same time and day. This indicates that the circular temperature chart papers were not loaded properly. I was unable to determine when a load was started and what the secondary combustion chamber temperatures were while the unit was being operated. This constitutes a violation of PTI No. 533-94A, EUCREMATORY1, SC VI.4.

SC VI.5 "The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, 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)."

I confirmed with handwritten logs provided by Chief Randazzo that contains periods of times when only pathological waste is burned in EUCREMATORY1.

SC VI.6 "The permittee shall keep, in a satisfactory manner, a record of all service, maintenance and equipment inspections for EUCREMATORY1. The record shall include the description, reason, date and time of the service, maintenance or inspection."

I confirmed with Chief Randazzo that all service, maintenance, and equipment inspections for EUCREMATORY1 are kept on file.

CONCLUSION

At the time of this inspection, Macomb County Animal Control (MCAC) appears to be in violation of PTI No. 533-94A, Special Conditions III.1, III.2, III.3, IV.1, & VI.4. This non-compliance shall be cited in a violation notice. The compliance issues at Macomb County Animal Control are summarized below:

SC III.1 & IV.1 - MCAC combusted waste before the secondary combustion chamber reached a minimum temperature of 1600°F.

SC III.2 - MCAC charged waste into the incinerator while the unit was off.

SC III.3 - A review of the AQD files indicate that the permittee never submitted a malfunction abatement plan (MAP).

SC VI.4 - The time of burn (duration) that was recorded in the handwritten logs provided during inspection on June 1, 2023, did not match the duration recorded in the circular temperature charts for the same period. There are also periods on the chart from 8/29/2022 where the temperature reading went off the chart and recorded two different sets of recordings for the same time and day. This indicates that the circular temperature chart papers were not loaded properly.

NAME Marie Reid

DATE 6/28/2023

SUPERVISOR K. Kelly