

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

P068855809

FACILITY: Eastern Upper Peninsula Crematory		SRN / ID: P0688
LOCATION: 24549 S. M-129, Unit C, PICKFORD		DISTRICT: Marquette
CITY: PICKFORD		COUNTY: CHIPPEWA
CONTACT: Patsy Galer, CEO		ACTIVITY DATE: 10/05/2020
STAFF: Michael Conklin	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Targeted inspection for FY 21.		
RESOLVED COMPLAINTS:		

Facility: Eastern Upper Peninsula Crematory (P0688)  
Location: 24549 South M-129, Pickford, Michigan  
Contact(s): Patsy Galer, CEO, 906-647-9301

#### Regulatory Authority

*Under the Authority of Section 5526 of Part 55 of NREPA, the Department of Environment, Great Lakes, and Energy may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.*

#### Facility Description

Eastern Upper Peninsula Crematory (EUPC) is a human crematory facility located in Pickford, Chippewa County, Michigan. The facility was permitted in 2016 for a B&L Cremation Systems Model N-20AA incinerator. The incinerator has a maximum charge capacity of 600 lbs, fires propane gas, and has a burn rate of 150 lb/hr. The unit was installed on 05/10/2017 and began trial operations on 05/11/2017. The incinerator is only allowed to burn human pathological waste.

#### Process Description

Human charge is placed into the primary chamber of the crematory. An auxiliary burner preheats the afterburner chamber to 1,750 degrees Fahrenheit. Initial and supplementary combustion is provided by a burner located in the primary chamber. The rate of combustion is controlled by the primary burner by limiting the amount of air and fuel into the primary chamber. The combustible gas mixture flows into the secondary chamber where more air is admitted to further oxidize the gases. The auxiliary burner in the secondary chamber provides complete combustion of all gaseous materials. Once the cremation process is complete, the remains are removed from the primary chamber.

#### Emissions

Pollutants emitted from crematories include NO<sub>x</sub>, CO, PM, VOC, SO<sub>x</sub>, and toxic air contaminants. Emissions are dependent on operating conditions of the air-to-fuel ratios, residence time, and temperature of combustion. The equipment type, fuel, and control device also play a role in quantities of pollutants emitted.

#### Emissions Reporting

EUPC is not a MAERS subject source and does not have to reports its annual emissions.

#### Regulatory Analysis

EUPC is subject to PTI No. 23-16 for a human crematory.

#### Compliance History

The source was last inspected in 2016 and found to be in compliance. No violations have been issued since the last inspection date.

#### Inspection

On 10/05/2020, I (Michael Conklin) conducted a targeted inspection on EUPC to determine compliance with PTI No. 23-16 and all other applicable air pollution control rules and regulations. At the time of the inspection, Ms. Galer was not on-site and office personnel introduced me to the crematory operator. The crematory was not operating during the time of the inspection.

The crematory is a B&L Cremation Systems Model N-20AA incinerator that is used only for human

pathological waste (SC II.1). Fuel lines from a propane tank were observed going to the crematory. No other types of fuel are burned (SC II.3). An operational scale was observed during the inspection (SC IV.2). The charge is weighed before being placed into the primary chamber of the crematory.

The crematory is not allowed to combust charge until the secondary combustion chamber reaches a minimum temperature of 1600 degrees Fahrenheit and has a minimum retention time of 1.0 second in the secondary chamber. A type "K" thermocouple is placed in the secondary chamber that measures temperature and relays it to the main control panel (SC IV.1 and VI.2). Gas input to the afterburner inlet gas assembly is controlled by the main control panel to maintain a steady temperature. The ignition/cremation burner is interlocked to the afterburner chamber temperature by the controller set point. Combustion does not start until the temperature set point is reached. During the inspection, the control panel showed the set point was set at 1750 degrees Fahrenheit (SC III.1).

The crematory appeared to be installed properly. Fuel lines were connected, stack duct work was intact, no soot was observed around the stack, and the main control panel appeared to be operating properly (SC III.2). The stack appeared to have a height of at least 18 feet off the ground and a maximum diameter of 18 inches (SC VIII.1). The unit is equipped with an opacity meter on the stack and is set at 10% opacity. If visible emissions occur, the alarm will sound and the primary burners will shut off. The excess air butterfly valve will open to add air to the secondary chamber to oxidize emissions. Overall, the crematory appeared to be properly maintained and operated in a satisfactory manner. No violations of PTI No. 23-16 were observed.

A follow-up email was sent on 10/07/2020 requesting records that are required to be maintained in PTI No. 23-16 for Special Conditions (SC) VI.3-6. Ms. Galer emailed the requested records on 10/27/2020. The records contain the date, name of deceased individual, weight, and secondary combustion temperature. Only one deceased individual is charged into the crematory at a time and the charge weight never approaches the 600 lbs per charge limit (SC II.2). The company does not burn pathological waste in the crematory (SC VI.4). EUPC is contracted with Stericycle, a company that handles any pathological waste.

EUPC provided records for four dates of cremations. These dates were 12/11/2019, 4/30/2019, 6/22/2020, and 9/11/2020. The records show the secondary combustion chamber temperature is continuously monitored by recording the temperature every minute of the cremation process (SC VI.2 and 5). The records indicate that the secondary combustion chamber takes between 6-8 minutes to reach over 1600 degrees Fahrenheit. Also recorded is the secondary combustion temperature setpoint. All the cremation records indicate the secondary combustion temperature is set to 1750 degrees Fahrenheit. The daily records of cremations provide the date, duration of the burn in minutes, the name of the deceased individual, and the weight of charge (SC VI.3).

EUPC is also required to keep records of all service, maintenance, and inspections performed on the crematory. A service record of a tune-up was provided that was performed by B&L Cremation Systems on 10/15/2020. The service record notes a technician inspected the secondary combustion chamber, changed the secondary combustion chamber thermocouple, changed the igniters, cleaned and calibrated the opacity monitor, and noted the machine appeared to be running fine during the time of inspection (SC VI.6).

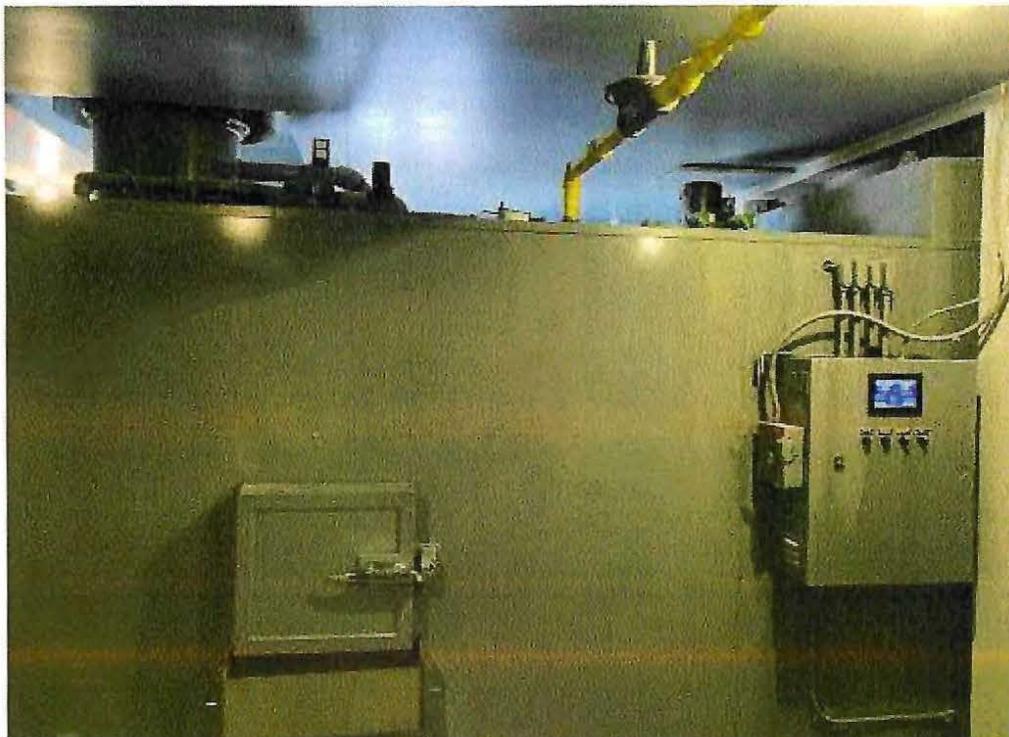
Records reviewed can be found here: [\\Gwn084m1oapf502\deq\GWN\SHARED\Air Quality Division\CONKLIN\Inspections and Sources\Eastern Upper Peninsula Crematory \(P0688\)\Eucremaotry Information for Conklin Air Quality Engineer \(002\).pdf](\\Gwn084m1oapf502\deq\GWN\SHARED\Air Quality Division\CONKLIN\Inspections and Sources\Eastern Upper Peninsula Crematory (P0688)\Eucremaotry Information for Conklin Air Quality Engineer (002).pdf).

#### Compliance

Based on the inspection and records review, Eastern Upper Peninsula Crematory appears to be in compliance with PTI No. 23-16 and all other air pollution control rules and federal regulations.



**Image 1(Main Control Panel)** : Main control panel displaying the secondary combustion chamber temperature, setpoint temperature, and stack opacity.



Image



stack.



**Image 3(Scale)** : Scale used to weigh charge before being placed into the crematory.

NAME Michael Molin

DATE 10/29/2020

SUPERVISOR [Signature]