

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

N170329106

FACILITY: Superior Vault Company		SRN / ID: N1703
LOCATION: 345 East Mahoney Street, MERRILL		DISTRICT: Saginaw Bay
CITY: MERRILL		COUNTY: SAGINAW
CONTACT: Howard Crevia , Owner		ACTIVITY DATE: 04/08/2015
STAFF: Gina McCann	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection of 2 permitted (263-05 and 244-02) human crematories. glm		
RESOLVED COMPLAINTS:		

I (glm) made an unannounced inspection at Superior Vault Company and Cremation Services. The facility operates two human crematories, a B&L model N-20 and a B&L Phoenix model II-1, PTI # 244-02 and 263-05 respectively. The facility was not in compliance with PTI 263-05. A violation notice is being sent for violating R336.1301 and R336.1910.

As I approached the facility from the East on M-46 I could see a plume of black smoke drifting through the residential area. Weather conditions are noted on the observation sheet. I parked and performed a Method 9 observation, see *attached*. The highest 6-minute average was 87% opacity, see *attached*. A violation is being sent citing R336.1301.

I was met in the parking lot by Mr. Howard Crevia III. Mr. Crevia had stepped outside to observe the opacity. They were aware of the upset. When I entered the building there was a charred smell. We observed Unit #2, the continuous temperature chart recorder. Small amounts of black smoke could be seen exiting the charging door and then being sucked back in. The unit had been loaded at 9:23 AM, prior to my arrival. The remains weighed 275-300 pounds and were in a cardboard container. The facility does not have a scale and relies on the deliverer to specify the weight. The cost for lifts with scales is approximately \$7000 and the reason the Crematorium has not made the investment. Mr. Crevia said that the weight is approximated prior to arrival and that Superior charges more to process remains over 350 pounds. The facility has received remains stating they are 345 pounds and suspected the difference in price caused an underestimation of weight.

Both units have a set point of 1750F. If either unit reaches this temperature they will shutdown. The unit is designed as such to assist in controlling the combustion. The actual temperature on Unit #2 was 1772F during the excess opacity.

Technician error was the suspected cause of the opacity. Per the manufacturer's recommendation, larger remains should be loaded anterior end first. The burner used to ignite the container and the remains is near the charge door. Positioning the remains posterior end closest to the burner assists in controlling the process. The technician had not placed the remains anterior end first and also had the hearth, or primary chamber, air open. The excess hearth air was feeding the process faster than the permitted retention time in the secondary chamber, or afterburner, therefore adding to the excess opacity. A violation for R336.1910 will also be sent for improper operation of the control device.

I observed the charging of Unit #1 with remains in a cardboard container with a wooden bottom. The technician allowed the incinerator to cool down to a temperature of 889F. I did not observe any opacity for this charge.

I viewed continuous temperature records for both units and it appeared that the minimum temperature of 1600F was being maintained during cremation.. Daily records of the time, description and weight of waste combusted in both units was being recorded and met the requirements in the permit. Mr. Crevia also provided documentation of annual inspections for both units performed by Universal Cremation Systems, Rosscommon, MI. The annual inspection was sufficient.

The violation notice will be sent citing R301 and R910. An adequate response should include prevention of the violations reoccurring.



Image 1(View from McBride) : Overview of opacity from McBride Street which is East of the facility. The furthest stack or Unit #2 was the stack exhibiting opacity. glm



Image 2(Looking West) : Opacity from Unit #2. Observer standing East of the facility. Time taken 10:06. glm



Image 3(Looking West 2) : Additional picture of opacity on Unit #2, looking West towards the facility. Time taken 10:06. glm

NAME Maria L. McLean

DATE 4/9/15

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