

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

N621171006

FACILITY: AUTUMN VALLEY CREMATORY		SRN / ID: N6211
LOCATION: 1670 O ROURKE BLVD, GAYLORD		DISTRICT: Gaylord
CITY: GAYLORD		COUNTY: OTSEGO
CONTACT: Chris Wright ,		ACTIVITY DATE: 03/06/2024
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Onsite inspection and records review for FY2024. sgl		
RESOLVED COMPLAINTS:		

INTRODUCTION

On March 6, 2024, AQD District Staff conducted an unannounced, scheduled site inspection of the Autumn Valley Crematory Facility located at 1670 O'Rourke Blvd, Gaylord, Michigan (N6211). The sign at the front of the building is for "American Vault". One Permit to Install (PTIs) is associated with the Facility (12-97). Mr. Chris Wright provided a site tour and answered questions regarding the Facility operations.

The previous site inspection was conducted on April 4, 2019.

FACILITY

Located in an industrial park just off of Dickerson Road, and bounded to the north and west by the Otsego County Airport. The property consists of one building on Otsego County Property Appraiser Parcel No. 000-920-00. At the time of the inspection, the Facility is of record as being owned by Chris Wright. A review of aerial photographs indicated that the Facility was constructed sometime after May 1994.

The Facility contains a front office area, as well as the incinerator room, all of which take up no more than half of the building space. The remainder of the building is dedicated to concrete vaults for burial.

Weather conditions at the time of the site inspection consisted of partly cloudy skies, temperatures of apx. 33 degrees, and little to no winds. The Facility was operating at the time of the site visit, no visible emissions were noted from the single stack for the Facility.

PERMITTING

A review of District files and AQD Databases indicated that one permit was of record for the Facility under Autumn Valley Crematory. The referenced permit is summarized below:

Permit No.	Application Date	Issuance Date
12-97	December 1, 1996	March 7, 1997

In addition, permit 12-86I was issued to American Vault Services, location unknown in Gaylord, Michigan. This permit was voided in 2017, due to historical information for the area that indicated that the business was demolished during road expansion work along Dickerson road.

REGULATORY

A review of Permit application review and engineer notes indicated that the facility was evaluated for PM10 emissions. Classifications based on Potential to Emit (PTE) and other significant comments:

PARAMETER	CLASSIFICATION	COMMENT
NOx	Minor	emissions identified by applicant
SO2	Minor	emissions identified by applicant
CO	Minor	emissions identified by applicant
Pb	Minor	not identified for source
PM	Minor	emissions identified by applicant, only pollutant identified in engineer notes at time of permitting
VOC	Minor	
HAPs	Area	

Applicable Federal Requirements:

EMISSION UNIT	40 CFR SUBPART	TITLE
Source	Part 70	State Operating Permit Program

Pathologic incinerators are exempt from National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR, Part 63, subpart EEE, Hazardous Waste Incinerators since they are not permitted to burn hazardous waste.

Discussions with permitting staff indicated that pathologic Incinerators (Human or pet crematories) if they are burning 90% pathological waste on a quarterly basis are exempt from New Source Performance Standards (NSPS). Subparts associated with 40 CFR Part 60, Subparts include:

- Subpart Ce – Existing Hospital/Medical/Infections Waste Incinerator constructed on or before June 20, 1996

- Subpart Ec – New Hospital/Medical/Infectious Waste Incinerators (constructed after June 20, 1996)
- Subpart AAAA – Small Municipal Waste Combustors
- Subpart CCCC – Commercial, Industrial Solid Waste Incinerators
- Subpart DDDD - Commercial and Industrial Solid Waste Incinerator Units for Existing Sources. Part 60
- Subpart EEEE - Solid Waste Incinerator Units with construction after December 9, 2004 (or modifications and reconstruction commenced after June 16, 2006, and
- Subpart FFFF - Solid Waste incinerator Units constructed on or before December 9, 2004,

EQUIPMENT

Permitted equipment as described by the permit applications and engineer notes is summarized below:

Permit No.	12-97
Make	Power-Pak II
Model	IE43-PPII
Class	VI
Rated Capacity	100 lb/hr
Estimated usage	1000 cremations/yr
	2500 hr/yr
	80 TPY Type 4 waste
	12 TPY Type 0 waste
Type of Waste	0 and IV
Max temperature (secondary chamber)	1600 degrees
Hold time in secondary	1 second
Control device	no add on control device

Fuel**Natural Gas**

The Facility reports that in comparison to the 1000 cremations for year applied for in the permit application, that the Facility averages 1-2 cremation a week at that location. Making the number 60-70 annually.

COMPLIANCE

Since the April 4, 2019, site inspection, no complaints have been received for the Facility. In addition, the Facility is not required to submit annual emissions reporting, nor has it been involved in any enforcement activities. Compliance status for the facility has been based on information provided during the March 6, 2024, site inspection.

PTI 12-97 – The referenced permit was issued for 150 lb/hour incinerator installed in 1986, though as previously indicated arials for the area indicated that the site was not constructed until sometime after May 1994. Special conditions associated with the equipment include primarily operational and material limits. Facility Staff indicated that the 150 lb/hr reflects the operational load rate and reports that they use it more for determination of operational periods. With inclusion of the preheating time the unit operation is reported to average 2-3 hours per person.

OPERATION LIMITS - The permittee shall not operate the incinerator unless all provisions of Rule 301 are met. (SC 17) The referenced rule limits the density of Particulate Matter (PM) emissions and is often evaluated by opacity of the emissions from the stack. In the case of the Facility and PTI 12-97, SC 14, sets a VE limit of 20% based on a 6-minute average. District Staff observed the stack associated with the incinerator, and no visible emissions were noted either during the preheating of the secondary combustion chamber or after firing of the primary combustion chamber.

Other operational conditions, include:

- The permittee shall not operate the incinerator unless the secondary combustion chamber is preheated for not less than 30 minutes prior to firing of the primary combustion chamber (SC 19)
- Incinerator shall not be operated unless the secondary combustion chamber is operating at a minimum of 1600 degrees Fahrenheit and a minimum retention time of 1.0 seconds. (SC 18)

The Facility reports that operating conditions are preset, with respect to the operational chamber temperatures and retention times. In addition, the incinerator has a preset for 30 minutes of preheating, prior to firing of the primary combustion chamber in compliance with permit conditions. This was confirmed during the March 6, 2024, site inspection in which operations from loading through preheat and firing of the chambers was observed.

MATERIAL LIMITS -- PTI 12-97 requires that the collected ash is disposed of in a manner that minimizes the introduction of air contaminants to the outer air. (SC17) The Facility reports that ash inside the incinerator's primary combustion chamber and grates are swept forward to a collection chute, and drops into a collection pan in the collection area. Staff report that the incinerator fan draws any dust/ash up and into the secondary combustion chamber during the

dust collection activities, preventing introduction into outer air. Materials collected in the collection pan, are taken to a packing area with hood, where they are encapsulated in plastic, and then boxed for return to the client.

Materials that may be burned in the incinerator are limited to Type 0 and Type IV waste (SC 21), which includes:

- Trash, a mixture of combustible waste such as paper, cardboard, wood boxes and combustible floor sweepings from commercial and industrial activities. It may contain up to 10% by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags and plastic or rubber scraps.
- Human and animal remains, consisting of carcasses, organs and solid organic wastes from hospitals, laboratories, abattoirs , animal pounds and similar sources.

The Facility reports that they only incinerate the later grouping (Type IV) of approved materials. The unit for disposal at the time of the March 6, 2024, site inspection consisted of human remains enclosed in a cardboard/paper coffin, setting on a wooden base for stability while loading/unloading.

EMISSION LIMITS – Limits associated with 12-97 include the following:

- Particulate emissions from the incinerator shall not exceed 0.20 lbs per 1,000 lbs of exhaust gases, corrected to 50% excess air. (SC 13)
- Visible emissions from the incinerator shall not exceed a 6-minute average of 20% opacity, except as specified in Rule 301(1)(a). (SC 14)

As previously indicated, no visible emissions were reported during observations conducted during pre-heating of the secondary combustion chamber and after firing of the primary combustion chamber.

- Exhaust gases from the incinerator shall be discharged unobstructed vertically upwards from a stack with a maximum diameter of 20-inches at exit point and no less than 18 ft above ground level (SC 20)

Based on estimates at the time of the site inspection, the stack is no less than 20 feet above ground level and appears to have less than an apx. 20-inch diameter.

TESTING ACTIVITIES – Verification of particulate emission rates from the incinerator by testing at owners expense may be required for operating approval (SC 15). However, District files do not contain copies of a request for testing, therefore the condition is not applicable at this time.

OTHER REQUIREMENTS- In addition to operational conditions listed, the Facility is required to conduct proper operation and adequate maintenance of the incinerator to control emissions (SC 16). Recommended activities are attached to the PTI 12-97. The Facility reports that what was yearly- service visits are being conducted every two years for maintenance purposes. The Facility reports that at their present level of activities onsite, that more frequent visits for maintenance has not been necessary, though if any work is noted to be required, it is done in a timely manner.

Recordkeeping requirements include monthly records of the number of cremations performed in each incinerator and the average temperature in the secondary chamber for each cremation. Records are required to be retained and made available for at least two years (SC 22). Records at this time are reported to be maintained at the Prudenville Facility, where staff will have easy access, should questions arise. The existing unit has a chart recorder, which has not been used. The Facility has indicated that they will start using the chart recorder, as it will provide documentation above what is required.

Summary

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Located in an industrial park just off of Dickerson Road, and bounded to the north and west by the Otsego County Airport. The property consists of one building on Otsego County Property Appraiser Parcel No. 000-920-00. At the time of the inspection, the Facility is of record as being owned by Chris Wright. A review of aerial photographs indicated that the Facility was constructed sometime after May 1994.

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Based on observations and information provided during the March 6, 2024, site inspection, the Facility appears to be in general compliance with permit conditions.

NAME Marion J. LeBlanc

DATE 5-9-24

SUPERVISOR Shane Nixon