

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

N755241107

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|--|-------------------------------|---------------------------|
| FACILITY: GENESEE CREMATION CENTER INC | | SRN / ID: N7552 |
| LOCATION: 10510 N HOLLY RD, HOLLY | | DISTRICT: Lansing |
| CITY: HOLLY | | COUNTY: GENESEE |
| CONTACT: Dustin Rice , Operations Manager | | ACTIVITY DATE: 08/16/2017 |
| STAFF: Daniel McGeen | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Unannounced, scheduled inspection of the newly installed EUCREMATORY3 and the previously existing two crematory incinerators. | | |
| RESOLVED COMPLAINTS: | | |

On 8/16/2017, the Michigan Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an unannounced, scheduled inspection of Genesee Cremation Center Inc.

Environmental contact:

Dustin Rice; Operations Manager; 810-695-5166

Purpose:

The purpose of the inspection was to check compliance with air use permits and the Michigan Air Pollution Control Rules, as well as to observe operations of their newest crematory incinerator, which was permitted on 3/6/2017.

Emission units:

| Emission unit* | Emission unit description | Permit to Install (PTI) or exemption Rule | Compliance status |
|----------------------|--|---|---|
| EUCREMATORY | Matthews Cremation Power-Pak II Ultra natural gas fired crematory, 150 lbs/hr maximum design capacity | PTI No. 301-05 | Compliance |
| EUCREMATORY2 | Matthews Cremation Power-Pak II Ultra natural gas fired crematory, 150 lbs/hr maximum design capacity | PTI No. 134-09 | Compliance |
| EUCREMATORY3 | Matthews Cremation Power-Pak I natural gas fired crematory, 150 lbs/hr maximum design capacity | PTI No. 11-17 | Compliance |
| Spray paint cans | Commercially available cans of spray paint, done in paint booth | Rule 287(2)(b) | Compliance |
| Paint booth | Coating booth with 5 gallon pails of acrylic paint which are rolled on to plaques for vaults | Rule 287(2)(c) | Pending upon installation of a particulate filter |
| Concrete batch plant | Concrete batch plant in adjacent building; used by Genesee Valley Vault Inc. to mix concrete, which is poured into molds to make burial vaults | Rule 289(d) | Compliance |

*An *emission unit* is any part of a stationary source which emits or has the potential to emit an air contaminant.

Regulatory overview:

This facility is considered to be a true minor source, rather than a major source of air emissions. A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. It is also considered a minor or *area source* for Hazardous Air Pollutants (HAPs), because it is not known to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

As explained in the Eval Form Memo Fields for PTI No. 11-17, federal New Source Performance Standards (NSPS) applicability is based upon equipment type. Pathological waste incinerators are considered exempt from the federal NSPS for incinerators of any type, as long as the incinerators are burning 90% or more of pathological waste. Pathological waste is closest to medical/infectious waste, so there is a condition requiring the company to keep track of periods of time when only pathological waste is burned in the incinerator so that they can comply with the exemption from the hospital/medical/infectious waste incinerator regulations.

40 CFR Part 63 Subpart EEE is the *National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors*. The crematory incinerators are not permitted to burn hazardous waste, so they are not subject to this subpart.

The crematory incinerators are not subject to other NESHAP regulations for incinerators because this facility is an area source rather than a major source of HAP emissions.

Fee status:

This facility is not considered fee-subject. It is not a Category I fee subject source, because it is not a major source for criteria pollutants. It is not a Category II fee-subject source because it is not a major source for Hazardous Air Pollutants (HAPs), nor is it subject to federal New Source Performance Standards. Additionally, it is not Category III fee-subject, because it is not subject to federal Maximum Achievable Control Technology standards. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is located in a predominantly rural area, at the south end of an industrial park. However, there is a residence to the immediate east, on the opposite side of Holly Road, and a residence to the immediate south, on the opposite side of Ray Road. The residences appear to be about 200-300 feet from the building housing the crematory incinerators.

History:

It is my understanding that this facility began operating in 2006, and that Genesee Valley Vault Inc., which is the management company for the facility, began operating in 1984. AQD has never received a complaint regarding this facility.

Arrival:

I could not detect any odors while driving south on Holly Road, east of the facility, at 10:12 AM, nor while driving west on Ray Road, south of the facility. As I drove back north on Holly Road, I detected an odor so faint that I could not identify any characteristics of the odor. It is not known if this odor came from Genesee Cremation Center. Weather conditions were sunny, humid, and hazy, and 75 degrees F, with winds out of the southeast or south southeast at 5-10 miles per hour (mph).

At 10:19 AM, I arrived in the parking lot of the facility, whose sign identifies the name of the management company, Genesee Valley Vault, Inc. No odors were detectable. I met with Mr. Dustin Rice, Facility Operations Manager. I provided my identification/credentials, per AQD procedure. There were no visible emissions from the incinerator exhaust stacks. I was advised that Mr. Steven Prescott, who I did not meet today, is the main operator.

Inspection:

All 3 crematory incinerators were operating, at the time of the inspection. There was a light odor of human remains detectable in the room where the three incinerators and a freezer are located.

EUCREMATORY and EUCREMATORY2 are identical, and are both Power Pak II units. Incinerator 3 is a

Power Pak 1 unit. I was informed that it is virtually an identical unit, except for having a digital control system. I was informed that the insides of EUCREMATORY and EUCREMATORY2 were recently rebuilt by the manufacturer, in that refractory brick and other component parts were replaced, to make the units like new.

I asked how often the crematory incinerators run, and was told that the units are in use, the majority of the time.

At approximately 10:30 AM, incinerator temperatures, as shown instantaneously on the control panels for the 3 units, were as follows:

EUCREMATORY:

EUCREMATORY was cooling down when I collected the data below, I was advised, as it had just finished its cremation cycle. Secondary chamber temperatures were instantaneously:

- PV (Process Value): 1050 degrees F
- SP (Set Point): 1675 degrees F

The set point for secondary chamber temperature for this unit is 1,675 degrees F, as shown above. This is higher than the permit's required minimum secondary chamber temperature of 1,600 degrees F.

EUCREMATORY2:

EUCREMATORY2 secondary chamber temperature data was collected as follows:

- PV (Process value): 1681 degrees F
- SP (Set Point): 1675 degrees F

It is my understanding that the operational cycle for this unit was set for 4 hours today, instead of the usual 3 hours. It was explained that if a casket is cremated along with human remains, this results in the longer cycle time.

I was advised that there were about 10 minutes left in the cycle. Mr. Rice briefly opened the charging door a few inches, to check the progress of the cremation. It could be seen that obviously human remains were being cremated, indicating compliance with the requirement in PTI No. 134-09 to incinerate only human pathological remains.

The set point for secondary chamber temperature for this unit is 1,675 degrees F, as shown above. This is higher than the permit's required minimum secondary chamber temperature of 1,450 degrees F for this unit.

EUCREMATORY3:

At 10:30 AM, EUCREMATORY3 secondary chamber temperature data on the digital control panel was as follows:

- Master timer: 1:30 (meaning 1 hour and 30 minutes remaining to the cremation cycle)
- A/C temp.: 1677 degrees F
- Pollution system: OK
- Door: closed

I was informed that the set point for secondary chamber temperature for this unit is 1,675 degrees F. This is higher than the permit's required minimum temperature of 1,600 degrees F.

Throughout the inspection, I periodically checked for visible emissions from the incinerator stacks, and

saw none. Only heat waves were visible. Weather conditions were mostly sunny, humid, and hazy, and 75-80 degrees F, with winds out of the southeast or south southeast at 5-10 mph.

Compliance with the PTIs was checked, as follows:

EUCREMATORY; PTI No. 301-05:

Mathews Cremation Power-Pak II Ultra natural gas fired crematory, 150 lbs/hr maximum design capacity.

Note: I was advised that their crematory incinerators typically operate at a rate of about 100 lbs/hr, below the maximum design capacity of 150 lbs/hr.

Compliance with Special Conditions of PTI No. 301-05:

Emission Limits:

Special Condition (SC) No. 1.1 sets a particulate matter limit of 0.20 lbs per 1,000 lbs of exhaust gas, corrected to 50% excess air; based on Michigan Air Pollution Control Rule 331. The only way to verify compliance would be with a stack test; however, based upon the incinerator operating with 0% opacity, it is expected that particulate emissions would be well below the limit.

Material Usage Limits:

SC No. 1.2 states that only pathological wastes shall be burned in EUCREMATORY. The condition includes the definition of pathological wastes from 40 CFR 60.51c. This condition, as written, does not prohibit animal remains, but I was advised they only cremate human remains here. Observation of the adjacent EUCREMATORY2, discussed elsewhere in this report, showed that human remains were indeed being cremated at this facility.

Process/Operational Limits:

SC No. 1.3 prohibits combusting waste (pathological waste) in EUCREMATORY unless a minimum temperature of 1600 degrees F and a minimum retention time of 1.0 seconds in the secondary combustion chamber are maintained. Instantaneous observation of the temperature gauge for EUCREMATORY at roughly 10:30 AM showed that the actual process value was 1050 degrees F and decreasing, but it was explained to me that the unit was cooling down after completion of its cremation cycle. The set point for the secondary chamber was 1675 degrees F, above the required minimum temperature. The retention time is 1.63 seconds, from the permit application. They appear to be in compliance with SC No. 1.3.

SC No. 1.4 states that the incinerator shall be installed, maintained, and operated in a satisfactory manner to control emissions. EUCREMATORY appeared to be in compliance with this condition. A list of recommended operating and maintenance procedures is specified in Appendix A, below.

APPENDIX A

Incinerator Operation and Maintenance Guidelines

1. Designate a trained operator for the unit and make that person responsible for compliance with the air pollution control requirements. *It is my understanding that they have trained operators. Steven Prescott is their main operator, I was told.*
2. Clean grates before each day's operation (more often if necessary), and dispose of the ashes properly. *I was informed that the cremains are swept out after every cremation.*
3. Do not combust waste until the secondary combustion chamber (afterburner) is at or above the minimum

required temperature. Preheat the unit with the burners (not with waste) for at least 15 minutes. *I was advised that they do not combust waste until the temperature of the secondary combustion chamber is above the minimum required 1,600 degrees F.*

4. Do not overload the incinerator. Stay within the loading rates and follow the manufacturer's instructions. *I was told that they stay below the maximum allowable charge weight, and below the maximum burn rate capacity.*
5. Schedule charges to minimize opening the charging door as infrequently as possible. Opening the charging door lets cold air in and quenches the fire causing smoke. *I was shown, on the adjacent EUCREMATORY2, how they briefly open the charging door a short distance to check when the cremation cycle is nearing completion.*
6. Burn only the type of wastes that the incinerator has been approved to burn. Follow the manufacturer's instructions to maximize the efficiency of the unit, and to properly burn the waste(s). *I was told that they only burn the remains of deceased people, and did not see anything that contradicted this. The crematory incinerators appeared to be efficiently combusting.*
7. Keep the combustion air adjusted, according to the manufacturer's instructions. *I was informed that the unit adjusts its own combustion air automatically.*
8. Observe the stack frequently and adjust the operation as necessary to eliminate smoke and fly ash. *I was told they watch the stack frequently, and that the unit self regulates, with its own opacity monitor, set to adjust operations if opacity reaches 15%. I was told that if 15% is reached, air is routed to the secondary chamber, and the primary burner shuts off, while the secondary burner keeps going.*
9. Post a copy of the manufacturer's manual and this Guideline near the incinerator. *A hard copy and a CD manual were located at a desk, in the nearby office, which is located in the same building as the incinerators.*
10. Make quarterly inspections to check and service all of the equipment. If a qualified person is not available for proper inspections, a service contract with a reputable manufacturer is advisable. *I was informed that they do certain quarterly maintenance activities, and they have a contract with a company to perform other maintenance on the unit. Mr. Rice provided a copy of 7/26/2016 inspection forms for EUCREMATORY AND EUCREMATORY2, which are attached to this activity report for reference. The inspections were performed by Matthews Cremation Division, the builder of these crematory incinerators.*
11. Follow manufacturer's operation and maintenance guidelines. *It is my understanding that they are doing this.*

Monitoring:

SC No. 1.5 requires the permittee to install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY on a continuous basis. I observed a circular chart recorder on the side of the unit.

Recordkeeping/Reporting Notification

SC No. 1.6 requires the permittee to keep daily records of the time, description, and weight of the waste combusted in EUCREMATORY. I was shown that the circular chart recordings document the start and also the end time of the cremation cycle, while they have records onsite for each set of human remains, that include the name of the deceased, and an ID number for the human remains, as well as an ID number for the cremation. The cremation ID number represents the number of cremations so far this year. The weight of the human remains is written down on the circular temperature chart for each cremation, along with the ID number and the date of the cremation, Mr. Rice showed me. They appear to be satisfying this permit requirement.

Examples of ID numbers from their recordkeeping:

- 17-228-A1 (with A1 identifying which incinerator was used), for cremation #1101 of 2017
- 17-228-B2 (with B2 identifying which incinerator was used), for cremation #1102 of 2017
- 17-228-C3 (with C3 identifying which incinerator was used), for cremation #1103 of 2017

SC No. 1.7 requires the keeping, in a satisfactory manner, of secondary combustion chamber temperature records for EUCREMATORY, and they appeared to be meeting this.

Stack/vent restriction:

SC No. 1.8 states that stack height must be 18 feet above ground level, and maximum exhaust diameter must be 20 inches or less. The stack for EUCREMATORY appeared to be meeting this requirement.

EUCREMATORY2; PTI No. 134-09:

Matthews Cremation Power-Pak II Ultra natural gas fired crematory, 150 lbs/hr maximum design capacity.

Note: I was advised that their crematory incinerators typically operate at a rate of about 100 lbs/hr, below the maximum design capacity of 150 lbs/hr.

Compliance with Special Conditions of PTI No. 134-09:

*Note: the formatting of PTI No. 134-09 is different than that of the previously discussed PTI, No. 301-05.

I. EMISSION LIMITS:

Special Condition (SC) No. I.1 sets a particulate matter limit of 0.20 lbs per 1,000 lbs of exhaust gas, corrected to 50% excess air; based on Michigan Air Pollution Control Rule 331. The only way to verify compliance would be with a stack test; however, based upon the incinerator operating with 0% opacity, it is expected that particulate emissions would be well below the limit.

II. MATERIAL LIMITS:

SC No. II. 1 states that only pathological waste be incinerated in the unit, and emphasizes that only human pathological waste and associated materials shall be burned. This is more specific than the material limit condition in PTI No. 301-05, which stated that only pathological waste could be burned.

As previously mentioned in this activity report, Mr. Rice briefly opened the charging door of the adjacent EUCREMATORY2 a few inches, to check the progress of the cremation. It could be seen that obviously human remains were being cremated, and were almost finished.

SC No. II. 2 states that the permittee shall not charge more than 750 lbs per charge in EUCREMATORY2. I was informed that they have never had a charge weight reach or exceed 750 lbs, and that 150-250 lbs is a normal charge weight.

SC No. II. 3 prohibits burning any fuel other than natural gas. I was informed that they burn only natural gas as fuel in EUCREMATORY2.

III. PROCESS/OPERATIONAL LIMITS:

SC No. III. 1 prohibits combusting waste (pathological waste) in EUCREMATORY2 unless a minimum temperature of 1450 degrees F and a minimum retention time of 1.0 seconds in the secondary combustion chamber are maintained. Instantaneous observation of the temperature gauge for EUCREMATORY2 at roughly 10:30 AM showed that the actual process value was 1681 degrees F. The set point for the secondary chamber was 1675 degrees F, above the required minimum temperature. The retention time is 2.2 seconds, from the permit application.

SC No. III.2 states that the incinerator shall be installed, maintained, and operated in a satisfactory

manner to control emissions. EUCREMATORY2 appeared to be in compliance with this condition. A list of recommended operating and maintenance procedures is specified in Appendix A, below.

APPENDIX A

Incinerator Operation and Maintenance Guidelines

1. Designate a trained operator for the unit and make that person responsible for compliance with the air pollution control requirements. *It is my understanding that they have trained operators. Steven Prescott is their main operator, I was told.*
2. Clean grates before each day's operation (more often if necessary), and dispose of the ashes properly. *I was informed that the cremains are swept out after every cremation.*
3. Preheat the unit with burners (not with waste) for at least 15 minutes. *I was advised that they do not combust waste until the temperature of the secondary combustion chamber is above the minimum required 1,600 degrees F.*
4. Do not overload the incinerator. Stay within the loading rates and follow the manufacturer's instructions. *I was told that they stay below the maximum allowable charge weight.*
5. Schedule charges to minimize opening the charging door as infrequently as possible. Opening the charging door lets cold air in and quenches the fire causing smoke. *I was shown how they briefly open the charging door a short distance to check when the cremation cycle is nearing completion..*
6. Burn only the type of wastes that the incinerator has been approved to burn. Follow the manufacturer's instructions to maximize the efficiency of the unit, and to properly burn the waste(s). *I was told that they burn the remains of deceased people, and did not see anything that contradicted this. I observed human remains nearing the end of the cremation process in EUCREMATORY2. EUCREMATORY2, and the other two crematory incinerators appeared to be efficiently combusting.*
7. Keep the combustion air adjusted, according to the manufacturer's instructions. *I was informed that the unit adjusts its own combustion air automatically.*
8. Observe the stack frequently and adjust the operation as necessary to eliminate smoke and fly ash. *I was told they watch the stack frequently, and that the unit self regulates, with its own opacity monitor, set to adjust operations if opacity reaches 15%.*
9. Post a copy of the manufacturer's manual and this Guideline near the incinerator. *A hard copy and a CD manual were located at a desk, in the nearby office, which is located in the same building as the incinerators.*
10. Make quarterly inspections to check and service all of the equipment. If a qualified person is not available for proper inspections, a service contract with a reputable manufacturer is advisable. *I was informed that they do certain quarterly maintenance activities, and they have a contract with a company to perform other maintenance on the unit. Mr. Rice provided a copy of 7/26/2016 inspection forms for EUCREMATORY AND EUCREMATORY2, which are attached to this activity report for reference. The inspections were performed by Matthews Cremation Division, the builder of these crematory incinerators.*
11. Follow manufacturer's operation and maintenance guidelines. *It is my understanding that they are doing this.*

IV. DESIGN/EQUIPMENT PARAMETERS:

SC No. IV.1 states that the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY2 on a continuous basis. I observed a circular chart recorder on the side of the unit. They appear to be satisfying this permit condition.

V. TESTING/SAMPLING:

Nonapplicable (NA).

VI. MONITORING/RECORDKEEPING:

SC No. VI. 1 requires the permittee to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY2 on a continuous basis. It appears that this is being done.

SC No. VI.2 requires the permittee to keep daily records of the time, description, and weight of waste combusted in EUCREMATORY2. I was shown that the circular chart recordings document the start and also the end time of the cremation cycle, while they have records onsite for each set of human remains, that include the name of the deceased, and an ID number for the human remains, as well as an ID number for the cremation. The cremation ID number represents the number of cremations so far this year. The weight of the human remains is written down on the circular chart for each cremation, along with the ID number and the date of the cremation, Mr. Rice showed me.

SC No. VI.3 requires the permittee to keep secondary combustion chamber temperature records for EUCREMATORY2. It is my understanding that they are doing this. Mr. Rice and I reviewed a circular chart record for the nearby EUCREMATORY3, which is done in the same manner as recordkeeping for the two older incinerators, I was told.

VII. REPORTING:

NA.

VIII. STACK/VENT RESTRICTIONS

SC No. VIII.1 requires a stack height of 20 feet above ground level, with a maximum exhaust diameter of 20 inches. Mr. Rice advised me that all their exhaust stacks are 22 to 23 feet tall. They appeared to be meeting this condition.

IX. OTHER REQUIREMENTS:

NA.

EUCREMATORY3; PTI No. 11-17:

Mathews Cremation Power-Pak I natural gas fired crematory, 150 lbs/hr maximum design capacity.

Note: I was advised that their crematory incinerators typically operate at a rate of about 100 lbs/hr, below the maximum design capacity of 150 lbs/hr.

Compliance with Special Conditions of PTI No. 11-17:

Note: the formatting of PTI No. 11-17 is different than that of the previously discussed PTIs, Nos. 301-05 and 134-09.

I. EMISSION LIMITS:

SC No. I. 1 sets a particulate matter limit of 0.20 lbs per 1,000 lbs of exhaust gas, corrected to 50% excess air; based on Michigan Air Pollution Control Rule 331. The only way to verify compliance would be with a stack test; however, based upon the incinerator operating with 0% opacity, it is expected that particulate emissions would be well below the limit.

II. MATERIAL LIMITS:

SC No. II. 1: states that only pathological waste be incinerated in the unit, and emphasizes that only human pathological waste and associated materials shall be burned. This is more specific than the material limit condition in PTI No. 301-05, which stated that only pathological waste could be burned. I was told that they only burn human pathological remains. Observation of the adjacent EUCREMATORY2, discussed elsewhere in this report, showed that human remains were indeed being cremated at this facility.

SC No. II. 2 states that the permittee shall not charge more than 750 lbs per charge in EUCREMATORY3. I was informed that they have never had a charge weight reach or exceed 750 lbs, and that 150-250 lbs is a normal charge weight.

SC No. II.3 prohibits burning any fuel other than natural gas. I was informed that they burn only natural gas as fuel in EUCREMATORY3.

III. PROCESS/OPERATIONAL RESTRICTIONS:

SC No. III. 1 prohibits combusting waste (pathological waste) in EUCREMATORY2 unless a minimum temperature of 1450 degrees F and a minimum retention time of 1.0 seconds in the secondary combustion chamber are maintained. Instantaneous observation of the temperature gauge for EUCREMATORY3 at roughly 10:30 AM showed that the actual process value was 1677 degrees F. I was told that the set point for the secondary chamber is 1675 degrees F, above the required minimum temperature. The retention time is 1.83 seconds, from the permit application. They appear to be in compliance with SC No. 1.3.

SC No. III. 2 states that the incinerator shall be installed, maintained, and operated in a satisfactory manner to control emissions. EUCREMATORY2 appeared to be in compliance with this condition. A list of recommended operating and maintenance procedures is specified in Appendix A, below

APPENDIX A

Incinerator Operation and Maintenance Guidelines

1. Designate a trained operator for the unit and make that person responsible for compliance with the air pollution control requirements. *It is my understanding that they have trained operators. Steven Prescott is their main operator, I was told.*
2. Clean grates before each day's operation (more often if necessary), and dispose of the ashes properly. *I was informed that the cremains are swept out after every cremation.*
3. Do not combust waste until the secondary combustion chamber (afterburner) is at or above the minimum required temperature. This temperature must be maintained for the duration of the burn cycle. *I was advised that they do not combust waste until the temperature of the secondary combustion chamber is above the minimum required 1,600 degrees F.*
4. Do not overload the incinerator. Stay within the loading rates and follow the manufacturer's instructions. *I was told that they stay below the maximum allowable charge weight.*
5. Schedule charges to minimize opening the charging door as infrequently as possible. Opening the charging door lets cold air in and quenches the fire causing smoke. *I was shown on the adjacent EUCREMATORY2 how they briefly open the charging door a short distance to check when the cremation cycle is nearing completion. Temperature records for EUCREMATORY3 for each cremation cycle usually showed a short, slight decrease and frequently an associated short, slight increase in temperature. I asked about these changes, and was told that they were associated with opening the charging door to check the status of a cremation. I checked to see if temperature in the secondary chamber fell below 1600 degrees F at these times, but the temperature appeared to always stay above this minimum temperature requirement on the circular chart I examined.*
6. Burn only the type of wastes that the incinerator has been approved to burn. Follow the manufacturer's instructions to maximize the efficiency of the unit, and to properly burn the waste(s). *I was told that they burn the remains of deceased people, and did not see anything that contradicted this. I observed human remains nearing the end of the cremation process in the adjacent EUCREMATORY2. EUCREMATORY3, and the other two crematory incinerators appeared to be efficiently combusting.*
7. Keep the combustion air adjusted, according to the manufacturer's instructions. *I was informed that the unit adjusts its own combustion air automatically.*
8. Observe the stack frequently and adjust the operation as necessary to eliminate smoke and fly ash. *I was told they watch the stack frequently, and that the unit self regulates, with its own opacity monitor, set to adjust operations if opacity reaches 15%.*
9. Post a copy of the manufacturer's manual and this Guideline near the incinerator. *A hard copy and a CD manual were located at a desk, in the nearby office, which is located in the same building as the incinerators.*
10. Make quarterly inspections to check and service all of the equipment. If a qualified person is not available

for proper inspections, a service contract with a reputable manufacturer is advisable. *I was informed that they do certain quarterly maintenance activities, and they have a contract with a company to perform other maintenance on the unit. Mr. Rice provided a copy of 7/26/2016 inspection forms for EUCREMATORY AND EUCREMATORY2, which are attached to this activity report for reference. The inspections were performed by Matthews Cremation Division, the builder of these crematory incinerators.*

11. Follow manufacturer's operation and maintenance guidelines. *It is my understanding that they are doing this.*

IV. DESIGN/EQUIPMENT PARAMETERS:

SC No. IV. 1 states that the permittee shall not operate EUCREMATORY3 unless the secondary combustion chamber with afterburner is installed, maintained, and operated in a manner satisfactory to the AQD District Supervisor. based upon temperature data seen instantaneously and on the circular recording chart, and on the 0% opacity from the exhaust stack, it appeared that this permit condition is being met.

SC No. IV. 2 requires the permittee to install, calibrate, maintain, and operate, a device to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY3 on a continuous basis. I observed a circular chart recorder on the side of the unit, which records the secondary chamber temperature. Mr. Rice reviewed the current circular chart with me. This permit condition appears to be met.

SC No. IV. 3 requires that the permittee maintain a scale at the facility for the purpose of verifying the charge weight. I asked about this, and was informed that they do maintain a scale at the site.

V. TESTING/SAMPLING:

NA.

VI. MONITORING/RECORDKEEPING:

SC No. VI. 1 states that the permittee shall complete all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month for the previous calendar month. It is my understanding that the records are typically filled out on the day of cremation, and that the temperature is recorded during the cremation itself.

SC No. VI.2 requires the permittee to monitor and record the temperature in the secondary combustion chamber of EUCREMATORY3 on a continuous basis. I observed this being done on a circular chart recording.

SC No. VI.3 requires the permittee to keep daily records of the time, description, and weight of waste combusted in EUCREMATORY3. I was shown that the circular chart recordings document the start and also the end time of the cremation cycle, while they have records onsite for each set of human remains, that include the name of the deceased, and an ID number for the human remains, as well as an ID number for the cremation. The cremation ID number represents the number of cremations so far this year. The weight of the human remains is written down on the circular chart for each cremation, along with the ID number and the date of the cremation, Mr. Rice showed me.

SC No. VI. 4 requires that the permittee keep records on a calendar quarter basis of the periods of time when only pathological waste is burned. Daily records are kept, during each quarter of the year, of the waste they burn. It is my understanding that all of the waste they burn is pathological waste. Human remains are contained within boxes or sometimes caskets, but containers used to contain human remains appear to be included in the definition of pathological wastes found in 40 CFR 60.51c. They appear to be meeting this permit condition.

SC No. VI. 5 requires that the permittee keep secondary combustion chamber records for EUCREMATORY3. I observed the circular chart being recorded today for the operation of

EUCREMATORY3. It is my understanding that these records are stored onsite.

SC No. VI. 6 requires that the permittee keep a record of all service, maintenance, and equipment inspections for EUCREMATORY3. This unit has just recently been installed, therefore, there is not a history of previous equipment inspections and maintenance. I was shown inspection/maintenance records for the other two crematory incinerators, however, which are attached for reference. My understanding is that similar records will be kept for EUCREMATORY#, as it undergoes service, maintenance, and inspections.

VII. REPORTING:

NA.

VIII. STACK/VENT RESTRICTIONS

SC No. VIII. 1 requires an exhaust stack height of 22.8 feet above ground level, and a maximum exhaust diameter of 20 inches. Mr. Rice informed me that all of their exhaust stack heights are 22-23 feet. My visual assessment was that the stack height appeared to be appropriate for CREMATORY3.

IX. OTHER REQUIREMENTS:

NA.

Spray paint cans; Rule 287(2)(b):

There is a small coating booth onsite. It is my understanding that it is used for painting things such as plaques on burial vaults. Some of the painting is done with spray cans, I was told. A number of spray cans could be seen along the interior walls of the paint booth. The booth was not operating at the time of the inspection. The use of spray cans for coating application has for years been considered exempt under Rule 287(b). This rule was revised as Rule 287(2)(b) on 12/20/2016.

Rule 287(2)(b) exempts the following from the requirement to obtain a permit to install:

(b) A surface coating process that uses only hand-held aerosol spray cans, including the puncturing and disposing of the spray cans, or other coatings that are manually applied from containers not to exceed 8 ounces in size.

Note: Prior to 12/20/2016, there was no maximum size allowed for spray cans. I did not check the size of the spray cans in the spray booth today, but any spray cans over 8 ounces in size could be included in paint use under the Rule 287(2)(c) exemption, discussed below.

Coating booth; Rule 287(2)(c):

I was informed that paint is applied in the coating booth with either spray cans (discussed above) or by rolling on. The rolled on paint is acrylic, I was told. I observed a number of 5 gallon containers of paint along the interior wall of the paint booth. The lids all appeared to be closed.

The coating booth was not operating at the time of the inspection. There was an exhaust fan in the south facing wall, but no particulate filter. The Rule 287(2)(c) exemption requires that an exhaust system exclusively serving coating equipment must be equipped with a particulate control system. Mr. Rice agreed to have a particulate filter installed, in order to meet the exemption requirements, and wrote it down on a work order board, for their employees to follow up on. Compliance status for this emission

unit is listed as pending, contingent upon installation of a particulate filter. The rolling on of acrylic paint is not likely to cause particulate emissions, however, even before installation of a filter.

The Rule 287(2)(c) exemptions also requires that coating use rate be no more than 200 gallons as applied, minus water, per month; i.e. for a coating which is 50% water, 400 gallons of that coating could actually be used per month, with the water subtracted.

I did advise that they keep paint usage records for the acrylic paint that they roll on, instead of just paint purchase records, for the Rule 287(2)(c) exemption. Over the course of an entire year, I was told that they might purchase around 200 gallons of paint, so in no single month would they expect to use 200 gallons of paint.

The Rule 287(2)(c) exemption exempts the following:

(c) A surface coating line if all of the following conditions are met:

(i) The coating use rate is not more than 200 gallons, as applied, minus water, per month.

(ii) Any exhaust system that serves only coating spray equipment is supplied with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the owner or operator develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions.

(iii) Monthly coating use records are maintained on file for the most recent 2-year period and are made available to the department upon request.

I indicated that I would provide a copy of the latest edition of *The Permit to Install Handbook* (January 2017 edition), for their reference. On 8/18/2017, I attached a transmittal slip to a copy of the handbook, to be mailed to Mr. Rice.

Concrete batch plant at Genesee Valley Vault; Inc.; Rule 289(2)(d):

The concrete batch plant of Genesee Valley Vault, Inc., is located inside the adjacent building to the north. It is used to mix concrete which is then poured into large metal molds, to make burial vaults. I was told that they bought this building and the associated equipment from Mid-Michigan Concrete two years ago. Mid-Michigan Concrete does not appear in the AQD's MACES database, nor in AQD's Permit Cards database. There does not appear to be an air permit associated with this batch plant, but it appeared suitable to qualify for the Rule 289(2)(d) exemption for batch plants.

Rule 289(2)(d) exempts the following:

(d) A concrete batch plant that meets all of the following requirements:

(i) The plant shall produce not more than 200,000 cubic yards per year.

(ii) The plant shall use a fabric filter dust collector, a slurry mixer system, a drop chute, a mixer flap gate, or an enclosure for truck loading operations.

(iii) All cement handling operations, such as silo loading and cement weighing hoppers, shall either be enclosed by a building or equipped with a fabric filter dust control.

(iv) The owner or operator shall keep monthly records of the cubic yards of concrete produced.

(v) Before commencing operations, the owner or operator shall notify the appropriate district supervisor of the location where the concrete batch plant will be operating under this exemption.

(vi) The concrete batch plant shall be located not less than 250 feet from any residential or commercial establishment or place of public assembly unless all of the cement handling operations, excluding the cement silo storage and loading operations, are enclosed within at least a 3-sided structure.

(vii) The owner or operator shall implement the following fugitive dust plan:

- (A) The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve.
- (B) On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing, or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any sideboard, side panel, or tailgate. Otherwise, the truck shall be tarped.
- (C) All of the following provisions apply for site roadways and the plant yard:
- (1) The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride, or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet an opacity limit of 5%.
 - (2) All paved roadways and plant yards shall be swept as needed between applications.
 - (3) Any material spillage on roads shall be cleaned up immediately.
 - (4) A record of all applications of dust suppressants and roadway and plant yard sweepings shall be kept for the most recent 5-year period and be made available to the department upon request.
- (D) All of the following provisions apply for storage piles:
- (1) Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.
 - (2) Stockpiles shall be watered on an as-needed basis in order to meet an opacity limit of 5%. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day.
 - (3) A record of all watering shall be kept on file for the most recent 5-year period and be made available to the department upon request.
- (E) The provisions and procedures of this fugitive dust plan are subject to adjustment by written notification from the department if, following an inspection, the department determines the fugitive dust requirements or permitted opacity limits are not being met.

The batch plant was not operating at the time of the inspection. There is no particulate control device on the unit, other than the enclosure provided by the building which houses it. The Rule 289(2)(d) exemption for concrete batch plants considers enclosure to be an acceptable control option for concrete mixing and cement handling processes.

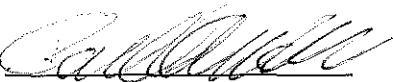
I asked Mr. Rice if the batch plant produces less than 200,000 cubic yards of concrete per year, which is the maximum throughput allowed under the exemption. He indicated that the unit produces considerably less than that. I was told that they operate the plant about 4 times per week, , and they use it for an hour at a time. The inside of the building appeared clean.

There were indoor and outdoor storage areas for aggregate materials, with the storage areas having three sides each. There was a very small, unpaved yard area, but the ground was wet from recent rains. There was a cement storage silo, located outdoors. There were no visible emissions of dust from the raw material storage.

Conclusion:

There were no instances of noncompliance. The crematory facility was very clean and neatly kept.

NAME



DATE

9/15/2017

SUPERVISOR

