

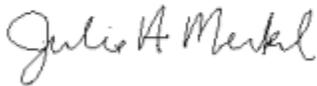
December 6, 2019

Adam Mills
Johnson-Gloschat Funeral Home and Crematory
525 S. Main Street
Kalispell, MT 59901

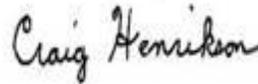
Dear Mr. Mills:

Montana Air Quality Permit #2929-03 is deemed final as of December 5, 2019, by the Department of Environmental Quality (Department). All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,



Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626



Craig Henrikson P.E.
Environmental Engineer
Air Quality Bureau
(406) 444-6711

JM:CH
Enclosures

Montana Department of Environmental Quality
Air, Energy & Mining Division

Montana Air Quality Permit #2929-03

Johnson-Gloschat Funeral Home and Crematory
525 S. Main Street
Kalispell, MT 59901

December 5, 2019



MONTANA AIR QUALITY PERMIT

Issued To: Johnson-Gloschat Funeral Home
and Crematory
525 S. Main Street
Kalispell, MT 59901

MAQP: #2929-03
Application Complete: 9/27/2019
Preliminary Determination Issued: 10/18/2019
Department's Decision Issued: 11/19/2019
Permit Final: 12/5/2019

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Johnson - Gloschat Funeral Home and Crematory (JG Funeral Home), pursuant to Sections 75-2-204, 211, and 215 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740 *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

JG Funeral Home operates a human crematorium located at 525 Main Street in Kalispell, Montana. The legal description is the NE¹/₄ of the NE¹/₄ of Section 18, Township 28 North, Range 21 West, in Flathead County, Montana. The list of permitted equipment can be found in Section I of the permit analysis.

B. Current Permit Action

On September 3, 2019, the Montana Department of Environmental Quality - Air Quality Bureau (Department) received a permit modification to add a second incinerator to MAQP 2929-02. The incinerator being added was previously permitted and located at a different site, and was relocated to the site without the appropriate modification to the MAQP. This permit modification adds the previously permitted second incinerator and updates the permit to reflect current language and rule references used by the Department. The original incinerator permitted at this site, will be identified as #1 incinerator, and the relocated incinerator will be identified as #2 incinerator.

SECTION II: Conditions and Limitations

A. Operational Requirements

1. JG Funeral Home shall operate the Industrial Equipment & Engineering Company incinerator #1 as specified in their application for MAQP #2929-00 and all supporting documentation (ARM 17.8.749).
2. JG Funeral Home shall not incinerate/cremate any material in incinerator #1 or incinerator #2 other than human remains and the corresponding container (ARM 17.8.749).
3. The secondary chamber operating temperature for incinerator #1 shall be maintained above 1400 degrees Fahrenheit (°F) for any one-hour averaging

period. The operating temperature shall be maintained during operation and for the one-half hour after the feed has stopped (ARM 17.8.752).

4. The secondary chamber operating temperature for incinerator #2 shall be maintained above 1500 °F for any one-hour averaging period. The operating temperature shall be maintained during operation and for the one-half hour after the feed has stopped (ARM 17.8.752).
5. JG Funeral Home shall develop incinerator operation procedures, document those procedures in an operation procedures manual and require all personnel who operate the incinerator to familiarize themselves with the operating procedures. A copy of this manual shall be supplied to the Department upon request (ARM 17.8.749).

B. Emission Limitations

JG Funeral Home shall not cause or authorize to be discharged into the atmosphere from incinerator #1 and incinerator #2:

1. Visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.752); and
2. Any particulate emissions in excess of 0.10 grains per dry standard cubic foot (gr/dscf) corrected to 12% carbon dioxide (CO₂) (ARM 17.8.752).

C. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require testing (ARM 17.8.105).

D. Monitoring Requirements

JG Funeral Home shall install, calibrate, maintain and operate continuous monitoring and recording equipment to measure the secondary chamber exit temperature on both incinerator #1 and incinerator #2. JG Funeral Home shall also record the daily quantity of material incinerated/cremated and daily hours of operation of each incinerator (ARM 17.8.749).

E. Operational Reporting Requirement

1. JG Funeral Home shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in units as required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

JG Funeral Home shall submit the following information annually to the Department by March 1st of each year; the information may be submitted with the annual emission inventory (ARM 17.8.505):

- a. Amount of material incinerated/cremated (pounds per year); and
 - b. Annual hours of operation of each incinerator.
2. JG Funeral Home shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include the addition of a new emission unit, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
 3. All records compiled in accordance with this permit must be maintained by JG Funeral Home as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection - JG Funeral Home shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if JG Funeral Home fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving JG Funeral Home of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401 *et seq.*, MCA.
- E. Appeals - Any person or persons who are jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and the issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department at the location of the source.
- G. Permit Fee - Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by JG Funeral Home may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit - Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
Johnson - Gloschat Funeral Home and Crematorium
MAQP #2929-03

I. Introduction/Process Description

Johnson - Gloschat Funeral Home and Crematory (JG Funeral Home) owns and operates a human crematorium with two incinerators. The facility is located at 525 Main Street in Kalispell, Montana. The legal description is the NE¹/₄, of the NE¹/₄, of Section 18, Township 28 North, Range 21 West, Flathead County, Montana. 48.19281 latitude, -114.31097 longitude.

A. Permitted Equipment

JG Funeral Home operates a 1996 Industrial Equipment and Engineering Company (I.E.&E.) pathological incinerator (#1 incinerator), used as a human crematorium. A second Industrial Equipment incinerator (incinerator #2) was added under MAQP #2929-03, and is reportedly the same model but has a newer manufacturing date.

B. Source Description

The incinerator #1 is fired on natural gas and has a maximum rated design capacity of 100 pounds per hour (lbs/hr) of human remains. Incinerator #2 is also fired on natural gas and has a maximum design capacity of 150 lb/hr of human remains.

C. Permit History

On April 1, 1996, Johnson Mortuary and Crematory (Johnson Mortuary) submitted an application for a Montana Air Quality Permit (MAQP) to install and operate an I.E.&E. incinerator/crematorium at their existing funeral home located at 525 Main Street in Kalispell, Montana. **MAQP #2929-00** was issued to Johnson Mortuary on May 25, 1996. A modification of permit #2929-00 took place in 1999. The U.S. Environmental Protection Agency (EPA) informed the Montana Department of Environmental Quality (Department) that any condition in a MAQP would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding a MAQP that they could request deletion of those conditions based on Administrative Rule of Montana (ARM) 17.8.717 and 17.8.315. Removing either of these conditions did not relieve the facility from complying with the rule upon which the permit condition was based; removal only ensured that enforcement of that condition remains solely with the Department. This permit action removed the condition based on ARM 17.8.315 from Johnson Mortuary's permit and updated the rule references. On July 28, 2000, **MAQP #2929-01** replaced MAQP #2929-00.

On March 10, 2009, the Montana Department of Environmental Quality - Air Resources Management Bureau received a name change request from Johnson Mortuary and Crematory (Johnson Mortuary) to change the name on MAQP #2929-01 from Johnson Mortuary to JG Funeral Home. The permit action changed the permitted facility name and updated the permit to reflect the current language and rule references used by the Department. **MAQP #2929-02** replaced MAQP #2929-01.

D. Current Permit Action

On September 3, 2019, the Montana Department of Environmental Quality - Air Quality Bureau (Department) received a permit modification to add an incinerator to MAQP 2929-02. The incinerator being added was previously permitted and located at a different site, and was relocated to the site without the appropriate update to the MAQP. This permit modification adds the second incinerator and updates the permit to reflect current language and rule references used by the Department. **MAQP #2929-03** replaces MAQP #2929-02.

E. Response to Public Comments (None Received)

F. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

JG Funeral Home shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
 5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.
- B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:
1. ARM 17.8.204 Ambient Air Monitoring
 2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
 3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
 4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
 5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
 6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
 7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
 8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
 9. ARM 17.8.222 Ambient Air Quality Standard for Lead
 10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

JG Funeral Home must not cause or contribute to a violation of any ambient air quality standard.

- C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:
1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
 2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, JG Funeral Home shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
 3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.316 Incinerators. This rule requires that no person may cause or authorize to be discharged into the outdoor atmosphere from any incinerator, particulate matter in excess of 0.10 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide (CO₂) and calculated as if no auxiliary fuel had been used. Further, no person shall cause or authorize to be discharged into the outdoor atmosphere from any incinerator emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. While JG Funeral Home is required to comply with the Emission Limitations specified in Section II.B of MAQP #2929-03, this rule does not apply to the incinerators because JG Funeral Home has applied for and received an air quality permit in accordance with ARM 17.8.770 and MCA 75-2-215 for this unit.
6. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
7. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
8. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). The JG Funeral Home incinerator is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.
9. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate. The Department is not aware of any subpart of 40 CFR 61 currently applicable to this facility.
10. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, Emission Standards for Hazardous Air Pollutants.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is

incomplete until the proper application fee is paid to the Department. JG Funeral Home submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. JG Funeral Home does not have the PTE greater than 25 TPY of any pollutant; however, in accordance with the MCA 75-2-215, an air quality permit must be obtained prior to the construction and operation of any incinerator, regardless of potential incinerator emissions. Because JG Funeral Home obtained an air quality permit, all normally applicable requirements apply in this case.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. JG Funeral Home submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal

publication in a newspaper of general circulation in the area affected by the application for a permit. JG Funeral Home submitted an affidavit of publication of public notice for the September 27, 2019 issue of the *Kalispell Daily Interlake*, a newspaper of general circulation in the Town of Kalispell in Flathead County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving JG Funeral Home of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
15. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215, Montana Code Annotated.

The Department conducted a Human Health Risk Assessment for this project. The results demonstrate that the emissions from the crematorium are expected to have negligible risk to human health, as defined by this rule. No individual pollutant concentration exceeds the Cancer Risk threshold of 1.00E-06, and the sum of all Cancer Risk concentrations do not exceed 1.00 E-05, and further, the sum of the Chronic Non-cancer Reference Exposure Level hazard quotients is less than 1.0. Contributions from natural gas combustion were included using emission factors from AP-42 Table 1.4-3.

NEGLECTIBLE RISK ASSESSMENT ⁽¹⁾		MAQP 2929-03-00						
HAP		Modeled	Cancer URF ⁽²⁾	Cancer	CNCREL ⁽⁶⁾	CNCREL	Notes	
Crematorium Process Emissions		HAP Concentration	(µg/m ³) ⁻¹	Risk ⁽³⁾	(µg/m ³)	Quotient ⁽⁷⁾		
Bromoform		5.47E-06 µg/m ³	1.10E-06	6.01E-12	ND	NA	(AFSSCC 5-02-005-05)	
Carbon Tetrachloride		1.08E-05 µg/m ³	6.00E-06	6.49E-11	1.00E+02	1.08E-07	(AFSSCC 5-02-005-05)	
Chloroform		1.03E-05 µg/m ³	ND	ND	9.80E+01	1.05E-07	(AFSSCC 5-02-005-05)	
1,2-Dichloropropane(4)		2.49E-04 µg/m ³	1.90E-05	4.73E-09	4.00E+00	6.22E-05	(AFSSCC 5-02-005-05)	
Ethyl Benzene		3.04E-04 µg/m ³	2.50E-06	7.59E-10	1.00E+03	3.04E-07	(AFSSCC 5-02-005-05)	
Naphthalene ⁸		2.19E-03 µg/m ³	3.40E-05	7.45E-08	3.00E+00	7.30E-04	(AFSSCC 5-02-005-05)	
Tetrachloroethylene(5)		7.60E-06 µg/m ³	5.90E-06	4.48E-11	2.70E+02	2.81E-08	(AFSSCC 5-02-005-05)	
1,1,2,2-Tetrachloroethane		2.07E-05 µg/m ³	5.80E-05	1.20E-09	ND	NA	(AFSSCC 5-02-005-05)	
Toluene ⁹		8.71E-04 µg/m ³	ND	ND	5.00E+03	1.74E-07	(AFSSCC 5-02-005-05)	
Vinylidene Chloride		1.34E-05 µg/m ³	ND	ND	2.00E+02	6.69E-08	(AFSSCC 5-02-005-05)	
Xylene		4.15E-04 µg/m ³	ND	ND	1.00E+02	4.15E-06	(AFSSCC 5-02-005-05)	
Natural Gas Emissions								
2-Methylnaphthalene		1.37E-07 µg/m ³	ND	ND	ND	ND	Table 1. Prioritized Chronic Dose-Response Values	
3-Methylchloranthrene		1.03E-08 µg/m ³	0.0063	6.48E-11	ND	ND	Same as above	
7,12-Dimethylbenz(a)anthracene		9.14E-08 µg/m ³	0.071	6.49E-09	ND	ND	Same as above	
Acenaphthene		1.03E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Acenaphthylene		1.03E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Anthracene		1.37E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Benzene		1.20E-05 µg/m ³	0.0000078	9.36E-11	3.00E+01	4.00E-07	Same as above	
Benzo(a)anthracene		1.03E-08 µg/m ³	0.00011	1.13E-12	ND	ND	Same as above	
Benzo(a)pyrene		6.86E-09 µg/m ³	0.0011	7.54E-12	ND	ND	Same as above	
Benzo(b)fluoranthene		1.03E-08 µg/m ³	0.00011	1.13E-12	ND	ND	Same as above	
Benzo(k)fluoranthene		1.03E-08 µg/m ³	0.00011	1.13E-12	ND	ND	Same as above	
Benzo(g,h,i)perylene		6.86E-09 µg/m ³	ND	ND	ND	ND	Same as above	
Chrysene		1.03E-08 µg/m ³	0.000011	1.13E-13	ND	ND	Same as above	
Dibenz(a,h)anthracene		6.86E-09 µg/m ³	0.0012	8.23E-12	ND	ND	Same as above	
1,4-Dichlorobenzene(p)		6.86E-06 µg/m ³	0.000011	7.54E-11	8.00E+02	8.57E-09	Same as above	
Fluoranthene		1.71E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Fluorene		1.60E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Formaldehyde		4.29E-04 µg/m ³	0.000013	5.57E-09	9.80E+00	4.37E-05	Same as above	
Hexane		1.03E-02 µg/m ³	ND	ND	7.00E+02	1.47E-05	Same as above	
Indeno(1,2,3,c,d)pyrene		1.03E-08 µg/m ³	0.00011	1.13E-12	ND	ND	Same as above	
Naphthalene		3.49E-06 µg/m ³	0.000034	1.19E-10	ND	ND	Same as above	
Phenanthrene		9.71E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Pyrene		2.86E-08 µg/m ³	ND	ND	ND	ND	Same as above	
Toluene		1.94E-05 µg/m ³	ND	ND	5.00E+03	3.89E-09	Same as above	
Arsenic		1.14E-06 µg/m ³	0.0043	4.91E-09	1.50E-02	7.62E-05	Same as above	
Beryllium		6.86E-08 µg/m ³	0.0024	1.65E-10	2.00E-02	3.43E-06	Same as above	
Cadmium		6.29E-06 µg/m ³	0.0018	1.13E-08	1.00E-02	6.29E-04	Same as above	
Chromium, total		8.00E-06 µg/m ³	0.012	9.60E-08	1.08E-01	7.41E-05	Same as above	
Cobalt		4.80E-07 µg/m ³	ND	ND	1.00E-01	4.80E-06	Same as above	
Lead		2.86E-06 µg/m ³	ND	ND	1.50E-01	1.90E-05	Same as above	
Manganese		2.17E-06 µg/m ³	ND	ND	5.00E-02	4.34E-05	Same as above	
Mercury		1.49E-06 µg/m ³	ND	ND	3.00E-01	4.95E-06	Same as above	
Nickel		1.20E-05 µg/m ³	ND	ND	9.00E-02	1.33E-04	Same as above	
Selenium		1.37E-07 µg/m ³	ND	ND	2.00E+01	6.86E-09	Same as above	
TOTAL RISK				2.06E-07		1.84E-03		

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2929-03 for JG Funeral Home, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.
 - e. This facility is not subject to any current NESHAP.
 - f. This source is not a Title IV affected source, or a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that JG Funeral Home will be a minor source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or modified source. JG Funeral Home shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

Since the relocated incinerator was previously permitted under MAQP #3144, design conditions for the incinerator were reviewed relative to conditions that represent BACT conditions for similar and recently permitted crematoriums. The Department reviewed the previous conditions included in MAQP #3144, as well as previous BACT determinations.

Emissions of products of incomplete combustion from incineration (carbon monoxide (CO), volatile organic compounds (VOC), particulate matter, and organic HAPs)) resulting from incinerator operations can be controlled by use of a properly designed and operated secondary combustion chamber.

In a secondary combustion chamber, auxiliary burner(s) (often referred to as 'afterburners') are utilized to further combust components vaporized or carried through (entrained) during primary combustion. Proper design includes good turbulence, high temperature and adequate residence time. Proper operation includes operating the secondary chamber at high temperatures, and ensuring that the secondary chamber is preheated to the required set-point prior to igniting the primary chamber.

Residence time is achieved by sizing the secondary combustion chamber to ensure the combustion gases are held at high temperatures long enough to provide complete destruction. Increased secondary chamber size results in increased residence time and increased destruction efficiency.

Additional control of acid gases created during incineration can be made by use of a wet scrubber. Acid gases can be expected when burning components which include chlorine, such as plastic. However, based on the limited amount of chlorine expected to be charged, additional wet scrubber control for human incinerator operations is not commonly found to represent BACT as the additional cost is not warranted compared to the amount of emissions created.

Control of most heavy metals can be accomplished by use of a fabric filter or wet scrubber. However, based on the limited amount of heavy metals and expected cremation throughput from this human incinerator, addition of a fabric filter for heavy metal control was determined beyond the requirements of BACT.

Natural gas combustion is inherently low in emissions of air pollutants due to characteristics of the fuel. The smaller fuel molecule sizes, lack of fuel bound nitrogen and other impurities, and the inherently low sulfur content of commercially available natural gas and propane lead to more complete combustion and therefore less emissions of PM, CO, VOC, NO_x, and SO₂ compared to other fuels.

A properly incinerator with a primary and secondary combustion chamber provide the necessary destruction efficiency. The presence of visible emissions may be an indicator that the unit is not functioning properly. Therefore, while a BACT derived visible emissions standard has not been included, a visible emissions performance requirement has been assigned as another indicator of performance.

JG Funeral Home has proposed incinerator #2 with a design capable of achieving these BACT concepts. The Department concurs it represents BACT for this source category with controls and control costs comparable to other recently permitted similar sources capable of achieving the appropriate emission standards. Further, incinerator #2 was previously permitted under an existing MAQP and incinerator #2 is nearly identical to the existing permitted incinerator #1.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Criteria Pollutant Emission Source	Emissions Tons/Year [PTE]							
	PM	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	Lead
Crematorium (Total of All Units)	1.53	0.37	0.49	1.17	0.97	0.71	0.99	0.02
Natural Gas Combustion	0.06	0.06	0.06	0.82	0.69	0.00	0.04	0.00
TOTAL EMISSIONS >	1.60	0.43	0.55	1.99	1.65	0.72	1.03	0.02

PM, particulate matter
 PM₁₀, particulate matter with an aerodynamic diameter of 10 microns or less
 PM_{2.5}, particulate matter with an aerodynamic diameter of 2.5 microns or less
 NO_x, oxides of nitrogen
 CO, carbon monoxide
 SO₂, oxides of sulfur
 VOC, volatile organic compounds
 Lead, Lead emissions
 MMscf, Million standard cubic feet

V. Existing Air Quality

Flathead County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants except carbon monoxide (CO) and PM₁₀.

VI. Ambient Air Impact Analysis

The Department determined, based on the amount of allowable emissions, that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

YES	NO	
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

IX. Health Risk Assessment

A health risk assessment was conducted for the addition of the second incinerator initial to determine if the incinerator/crematorium complied with the negligible risk requirement of MCA 75-2-215. The emission inventory did not contain sufficient quantities of any pollutant on the Department's list of pollutants for which non-inhalation impacts had to be considered; therefore, the Department determined that inhalation risk was the only pathway to consider. Only those HAPs for which there were established emission factors were considered in the emission inventory. The Department considers the risks estimated in the risk assessment (see section II.E.16) to comply with the requirement to demonstrate negligible risk to human health and the environment.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy & Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Johnson- Gloschat Funeral Home and Crematory
525 S. Main Street
Kalispell, MT 59901

Montana Air Quality Permit number (MAQP): 2929-03

EA Draft: 10/18/2019

EA Final: 11/19/2019

Permit Final: 12/5/2019

1. *Legal Description of Site:* Johnson- Gloschat Funeral Home and Crematory (JG Funeral Home) operates a human crematorium located at 525 Main Street in Kalispell, Montana. The legal description is the NE¹/₄ of the NE¹/₄ of Section 18, Township 28 North, Range 21 West, in Flathead County, Montana. 48.19281 latitude, -114.31097 longitude.
2. *Description of Project:* The project adds a second human crematorium to the existing site. The second crematorium was previously operated under MAQP #3144 which was revoked. The original incinerator operated under MAQP #2929 has been identified as incinerator #1, and the second relocated incinerator identified as incinerator #2.
3. *Objectives of Project:* Provide additional capacity for the existing crematorium as a for-profit business.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. JG Funeral Home has complied with all applicable requirements in obtaining a Montana Air Quality Permit, therefore, the “no-action” alternative was eliminated from further consideration. Other alternatives considered were discussed in the BACT analysis of the permit.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2929-03.

As required under the Sage Grouse Executive Order (EO), the proposed project was reviewed relative to Sage Grouse habitat and the location is not in Sage Grouse habitat as defined under the EO.

6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS*: The following comments have been prepared by the Department.

A. *Terrestrial and Aquatic Life and Habitats*

The amount of allowable emissions which would be permitted in MAQP #2929-03 would be very small on an industrial scale. The amount of allowable emissions after application of control technology would make JG Funeral Home a minor source of emissions under Montana's air quality permitting program. The Department would not expect any significant impact to terrestrial and aquatic life and habitats from the amount of emissions which would be permitted.

The location is not located within designated Sage Grouse Habitat.

B. *Water Quality, Quantity and Distribution*

The project site is located within the city of Kalispell in an area of mixed industrial and residential. No discharges into surface waters is expected. No significant impacts would be expected to water quality, quantity, or distribution.

C. *Geology and Soil Quality, Stability and Moisture*

The project site for the second incinerator is at an existing site with a single incinerator. Impacts to geology, soil quality, stability, and moisture would not be expected to be significant.

D. *Vegetation Cover, Quantity, and Quality*

The project site for the second incinerator is at an existing site with a single incinerator. Emissions from normal operations at the site would be mostly combustion pollutants including NO_x, and CO with some additional small fraction of VOC and particulate matter. Impacts to vegetation cover, quantity, and quality, would not be expected to be significant.

E. *Aesthetics*

The post-project emissions would not be visible. No change in the aesthetics is expected as the second incinerator is located inside an existing structure.

F. *Air Quality*

No significant impacts are expected to air quality as the overall hours of incinerator operation are relatively low.

G. *Unique Endangered, Fragile, or Limited Environmental Resources*

The amount of allowable emissions which would be permitted by MAQP #2929-03 would be small on an industrial scale. Post-control potential emissions would be less than the permitting thresholds for an MAQP but all incinerators are required to be

permitted under an MAQP. No significant impacts to unique endangered, fragile, or limited environmental resources would be expected from the normal operations emissions from the facility.

The Montana Natural Heritage Program website was reviewed to determine species of concern. MAQP #2929-00 was originally issued in 2009, however, a review of the Montana Natural Heritage Program was reviewed to determine the current list of species of concern. An area of approximately a nine-block polygon surrounding the coordinates of the crematorium was used for the selected area. Species of concern include Hoary Bat, Great Blue Heron, Grizzly Bear, Alberta Snowfly, Hooked Snowfly. Other observations of species of concern also include: Black Tern, Lewis's Woodpecker, Evening Grosbeak, Bobolink, Golden Eagle, Horned Grebe, Peregrine Falcon, Brown Creeper, Cassin's Finch, Pacific Wren, Pileated Woodpecker, Black Swift, Varied Thrush, Bull Trout, and Westslope Cutthroat Trout.

H. *Sage Grouse Executive Order*

The location is not located within Sage Grouse Habitat as identified under the EO.

I. *Demands on Environmental Resource of Water, Air and Energy*

As discussed in Sections 7.B and 7.F above, no significant impacts to water or air quality is expected. Demands on water, air, and energy is not expected to be significant.

J. *Historical and Archaeological Sites*

As the second incinerator did not require any new disturbance no consultation was conducted with the Montana Historical Society – Historic Preservation Office (SHPO).

K. *Cumulative and Secondary Impacts*

This project will allow additional capacity at the existing site and cumulative and secondary impacts are expected to be minor.

8. *SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:*

The following comments have been prepared by the Department.

A. *Social Structures and Mores*

The project location is mixed industrial and residential. No increase in employees is expected to be required as a result of this project. Impacts to social structures and mores, if any, would be expected to be minor.

B. *Cultural Uniqueness and Diversity*

The project location is mixed industrial and residential. Impacts to cultural uniqueness and diversity, if any, would be expected to be minor.

C. *Local and State Tax Base and Tax Revenue*

This project will provide additional cremation capacity. The additional capacity should provide additional revenue and tax base.

D. *Agricultural or Industrial Production*

Impacts to agricultural or industrial production at the project location would be expected to be minor, if any at all, as the site location is located with the city of Kalispell at an existing site.

E. *Human Health*

MAQP #2929-03 would be written in accord with rules designed to protect human health. The amount of allowable emissions contained in MAQP #2929-03 would be small on an industrial scale, less than permit triggering levels. No significant impact to human health would be expected.

F. *Access to and Quality of Recreational and Wilderness Activities*

The project is not located at or nearby wilderness or recreational access route. Normal operation emissions would not be visible, and would be in amounts that are very small on an industrial scale. Impacts to access of or quality of recreational and wilderness activities would be expected to be minor, if any.

G. *Quantity and Distribution of Employment*

No increase in the permanent number of people employed by JG Funeral Home would be expected as the result of this project. Impacts to quantity and distribution of employment, if any, would be expected to be minor.

H. *Distribution of Population*

No increase in the number of people employed by JG Funeral Home would be expected as the result of this project. Impacts to distribution of population, if any, would be expected to be minor.

I. *Demands for Government Services*

The project would require a Montana Air Quality Permit and the associated administration of that permit. The project would consist of a minor source of emissions. Minor impacts would be expected.

J. *Industrial and Commercial Activity*

Construction/installation activities likely occurred with the installation of the second incinerator. However, no additional construction or industrial activities are associated with the operation of the second incinerator.

K. *Locally Adopted Environmental Plans and Goals*

The Department is not aware of any other locally adopted environmental plans and goals which this project would affect. MAQP #2929-03 would be issued in accord to applicable state rules which are designed to protect public health.

L. *Cumulative and Secondary Impacts*

This project would allow additional capacity at the existing site and cumulative and secondary impacts are expected to be minor.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the operation of a previously permitted human incinerator which has been relocated to a site which currently already has an incinerator. MAQP #2929-03 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program – Montana Sage Grouse Conservation Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Quality Bureau. No additional groups were contacted as the second incinerator is going into an existing building with no new ground disturbance.

EA prepared by: Craig Henrikson

Date: 9/10/2019