



Montana Department of
ENVIRONMENTAL **Q**UALITY

Brian Schweitzer, Governor

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May 12, 2009

Anthony V. Gloschat
Johnson - Gloschat Funeral Home and Crematory
P.O. Box 966
525 Main Street
Kalispell, Montana 59901

Dear Mr. Gloschat:

Montana Air Quality Permit #2929-02 is deemed final as of May 12, 2009, by the Department of Environmental Quality (Department). This permit is for a human crematorium. 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,

Vickie Walsh
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3490

Whitney Walsh
Environmental Engineer Intern
Air Resources Management Bureau
(406) 782-2701 ext. 208

VW:WW
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #2929-02

Johnson - Gloschat Funeral Home and Crematory
P.O. Box 966
525 Main Street
Kalispell, Montana 59901

May 12, 2009



Montana Air Quality Permit

Issued to: Johnson – Gloschat Funeral
Home and Crematory
P.O. Box 966
525 Main Street
Kalispell, MT 59901

Permit: #2929-02
Administrative Amendment (AA) Request
Received: 03/10/2009
Department's Decision on AA: 04/24/09
Permit Final: 05/12/09
AFS #: 029-0030

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 March 10, 2009, the Montana Department of Environmental Quality - Air Resources Management Bureau (Department) 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 current permit action changes the permitted facility name and updates the permit to reflect the current language and rule references used by the Department.

SECTION II: Conditions and Limitations

A. Operational Requirements

1. JG Funeral Home shall operate the Industrial Equipment & Engineering Company incinerator 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 other than human remains and the corresponding container (ARM 17.8.749).
3. The secondary chamber operating temperature shall be maintained above 1400 degrees Fahrenheit (°F). The operating temperature shall be maintained during operation and for the one-half hour after the feed has stopped (ARM 17.8.752).

B. Emission Limitations

JG Funeral Home shall not cause or authorize to be discharged into the atmosphere from the incinerator/crematorium:

1. Visible emissions that exhibit an opacity of 10% or greater average 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 17.9.106).
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. JG Funeral Home shall also record the daily quantity of material incinerated/cremated and daily hours of operation (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 the incinerator/crematorium.
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).

Permit Analysis
Johnson - Gloschat Funeral Home and Crematorium
Permit #2929-02

I. Introduction/Process Description

Johnson – Gloschat Funeral Home and Crematory (JG Funeral Home) owns and operates a human incinerator/crematorium. 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.

A. Permitted Equipment

JG Funeral Home operates a 1996 Industrial Equipment and Engineering Company (I.E.&E.) pathological incinerator, used as a human crematorium.

B. Source Description

The incinerator/crematorium is fired on natural gas and has a maximum rated design capacity of 100 pounds per hour (lbs/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.

D. Current Permit Action

On March 10, 2009, the Department received a name change request from Johnson Mortuary to change the name on MAQP #2929-01 from Johnson Mortuary to JG Funeral Home. The current permit action changes the permitted facility name and updates the permit to reflect the current language and rule references used by the Department.

MAQP #2929-02 replaces MAQP #2929-01.

E. 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 ARM and are available upon request from the Department. Upon request, the Department will provide references for locations 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. 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
11. ARM 17.8.230 Fluoride in Forage.

JG Funeral Home must maintain compliance with the applicable ambient air quality standards.

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. 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 (PM).
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 #2929-02, this rule does not apply to the incinerator 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 17.8.340 Standard of Performance 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.

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. The current permit action is an administrative action; therefore, a permit application and fee were not required.
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 (TPY) 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. A permit application was not required for the current permit action because it is considered an administrative permit change. (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. An affidavit of publication of public notice was not required for the current permit action because it is considered an administrative permit change.
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 17.8.762 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 altered 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.

12. 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).
13. 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.
14. 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.
15. 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, MCA.

F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications -- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 TPY of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE greater than (>) 100 TPY of any pollutant;
 - b. PTE > 10 TPY of any one hazardous air pollutant (HAP), PTE > 25 TPY of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 TPY of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
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 #2929-02 for JG Funeral Home, the following conclusions were made:
 - a. The facility's PTE is less than (<) 100 TPY for any pollutant;
 - b. The facility's PTE is < 10 TPY for any one HAP and < 25 TPY 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 standards;
 - f. This source is not a Title IV affected source, or a solid waste combustion unit; and
 - 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. Therefore, a Title V operating permit is not required.

H. MCA 75-2-103, Definitions provides, in part, as follows:

1. "Incinerator" means any single or multiple-chambered combustion device that burns combustible material, alone or with a supplemental fuel or catalytic combustion assistance, primarily for the purpose of removal, destruction, disposal, or volume reduction of all or any portion of the input material.
2. "Solid waste" means all putrescible and nonputrescible solid, semisolid, liquid, or gaseous wastes, including, but not limited to...air pollution control facilities...

I. MCA 75-2-215, Solid or Hazardous Waste Incineration - Additional permit requirements:

1. MCA 75-2-215 requires air quality permits for all new solid waste incinerators; therefore, JG Funeral Home must obtain an air quality permit.
2. MCA 75-2-215 requires the applicant to provide, to the Department's satisfaction, a characterization and estimate of emissions and ambient concentrations of air pollutants, including hazardous air pollutants, from the incineration of solid waste. The information in the initial permit application fulfilled this requirement.
3. MCA 75-2-215 requires that the Department reach a determination that the projected emissions and ambient concentrations constitute a negligible risk to public health, safety, and welfare. The Department completed a health risk assessment, based on an emissions inventory and ambient air quality modeling, for the initial permitting action.
4. MCA 75-2-215 requires the application of pollution control equipment or procedures that meet or exceed BACT. There was no increase in emissions for the current permit action because no sources were added or altered. Therefore, a BACT determination is not required.

III. Best Available Control Technology Analysis

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 best available control technology shall be utilized. In addition, MCA 75-2-215 requires a BACT determination for all pollutants, not just criteria pollutants. There was no increase in emissions for the current permit action because no sources were added or modified. Therefore, a BACT determination is not required.

IV. Emission Inventory

TABLE 1. AIR POLLUTANTS (tons / year)					
Emission Unit	PM ₁₀	SO _x	NO _x	VOC	CO
I.E. & E. Incinerator	1.30	1.75	0.66	0.66	0.00
Natural Gas Fuel	0.28	0.06	9.21	0.49	1.84
Total Emissions	1.58	1.81	9.87	1.15	1.84

I.E.&E. Incinerator

PM₁₀ Emissions

Emission Factor: 5.92 lbs/ton { AFSSCC 5-02-005-05, pg 227 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 tons/year (Maximum Rated Design)
 Calculations: 438.00 tons/year * 6 lbs/ton * 0.0005 ton/lb = **1.30 tons/year**

NO_x Emissions

Emission Factor: 3.00 lbs/ton { AFSSCC 5-02-005-05, pg 227 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 tons/year (Maximum Rated Design)
 Calculations: 438.00 tons/year * 3.00 lbs/ton * 0.0005 ton/lb = **0.66 tons/year**

VOC Emissions

Emission Factor: 3.00 lbs/ton { AFSSCC 5-02-005-05, pg 227 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 tons/year (Maximum Rated Design)
 Calculations: 438.00 tons/year * 3.00 lbs/ton * 0.0005 ton/lb = **0.66 tons/year**

CO Emissions

Emission Factor: 0.00 lbs/ton { AFSSCC 5-02-005-05, pg 227 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 tons/year (Maximum Rated Design)
 Calculations: 438.00 tons/year * 0 lbs/ton * 0.0005 ton/lb = **0.00 tons/year**

SO_x Emissions

Emission Factor: 8.00 lbs/ton { AFSSCC 5-02-005-05, pg 227 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 tons/year (Maximum Rated Design)
 Calculations: 438.00 tons/year * 8.00 lbs/ton * 0.0005 tons/lb = **1.75 tons/year**

Natural Gas Fuel

PM₁₀ Emissions

Emission Factor: 3.00 lbs/MMscf { AFSSCC 1-02-006-03, pg 23 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 21.02 MMscf/yr (Maximum Rated Design)
 Calculations: 21.02 MMscf/yr * 3 lbs/MMscf * 8760 hrs/yr * 0.0005 ton/lb = **0.28tons/year**

NO_x Emissions

Emission Factor: 100.00 lbs/MMscf { AFSSCC 1-02-006-03, pg 23}
 Control Efficiency: 0.0 %
 Fuel Consumption: 21.02 MMscf/yr (Maximum Rated Design)
 Calculations: $21.02 \text{ MMscf/yr} * 100.00 \text{ lbs/MMscf} * 8760 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = \mathbf{9.21 \text{ tons/year}}$

VOC Emissions

Emission Factor: 5.30 lbs/MMscf { AFSSCC 1-02-006-03, pg 23}
 Control Efficiency: 0.0 %
 Fuel Consumption: 21.02 MMscf/yr (Maximum Rated Design)
 Calculations: $21.02 \text{ MMscf/yr} * 5.30 \text{ lbs/MMscf} * 8760 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = \mathbf{0.49 \text{ tons/year}}$

CO Emissions

Emission Factor: 20.00 lbs/MMscf { AFSSCC 1-02-006-03, pg 23}
 Control Efficiency: 0.0 %
 Fuel Consumption: 21.02 MMscf/yr (Maximum Rated Design)
 Calculations: $21.02 \text{ MMscf/yr} * 20 \text{ lbs/MMscf} * 8760 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = \mathbf{1.84 \text{ tons/year}}$

SO_x Emissions

Emission Factor: 0.60 lbs/MMscf { AFSSCC 1-02-006-03, pg 23}
 Control Efficiency: 0.0 %
 Fuel Consumption: 21.02 MMscf/yr (Maximum Rated Design)
 Calculations: $21.02 \text{ MMscf/yr} * 0.60 \text{ lbs/MMscf} * 8760 \text{ hrs/yr} * 0.0005 \text{ tons/lb} = \mathbf{0.06 \text{ tons/year}}$

HAZARDOUS AIR POLLUTANTS**Bromoform**

Emission Factor: 2.90 E-05 lbs/ton { AFSSCC 5-02-005-05, pg 227}
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: $438.00 \text{ ton/yr} * 0.00003 \text{ lbs/ton} * 0.0005 \text{ tons/lb} = \mathbf{6.35 \text{ E-06 tons/year}}$

Carbon Tetrachloride

Emission Factor: 5.74 E-05 lbs/ton { AFSSCC 1-02-009-01}
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: $438.00 \text{ ton/yr} * 0.00006 \text{ lbs/ton} * 0.0005 \text{ ton/lb} = \mathbf{1.26 \text{ E-05 tons/year}}$

Chloroform

Emission Factor: 5.45 E-05 lbs/ton { AFSSCC 1-02-009-01}
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: $438.00 \text{ ton/yr} * 0.0000545 \text{ lbs/ton} * 0.0005 \text{ ton/lb} = \mathbf{1.19 \text{ E-05 tons/year}}$

1,2-Dichloropropane

Emission Factor: 1.32 E-03 lbs/ton { AFSSCC 1-02-009-01}
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: $438.00 \text{ ton/yr} * 0.001320000 \text{ lbs/ton} * 0.0005 \text{ ton/lb} = \mathbf{2.89 \text{ E-04 tons/year}}$

Ethyl Benzene

Emission Factor: 1.61 E-03 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.001610000000 lbs/ton * 0.0005 ton/lb = **3.53 E-04 tons/year**

Naphthalene

Emission Factor: 1.16 E-02 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.011600 lbs/ton * 0.0005 ton/lb = **2.54 E-03 tons/year**

Tetrachloroethylene

Emission Factor: 4.03 E-05 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.0000 lbs/ton * 0.0005 tons/lb = **8.83 E-06 tons/year**

1,1,2,2-Tetrachloroethane

Emission Factor: 1.10 E-04 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.0001 lbs/ton * 0.0005 tons/lb = **2.41 E-05 tons/year**

Toluene

Emission Factor: 4.62 E-03 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.00462 lbs/ton * 0.0005 ton/lb = **1.01 E-03 tons/year**

Vinylidene Chloride

Emission Factor: 7.10 E-05 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.0000710 lbs/ton * 0.0005 ton/lb = **1.55 E-05 tons/year**

Xylene

Emission Factor: 2.20 E-03 lbs/ton { AFSSCC 1-02-009-01 }
 Control Efficiency: 0.0 %
 Fuel Consumption: 438.00 ton/yr (Maximum Rated Design)
 Calculations: 438.00 ton/yr * 0.002200000 lbs/ton * 0.0005 ton/lb = **4.82 E-04 tons/year**

V. Air Quality Impacts

The facility is located at 525 Main Street in Kalispell, Montana. The legal description is the NE¼ of the NE¼ of Section 18, Township 28 North, Range 21 West in Flathead County, Montana. Flathead County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants except carbon monoxide (CO) and PM₁₀.

The EPA notified the State that the State Implementation Plan (SIP) was inadequate for CO in the Kalispell area. The area hasn't been designated as nonattainment for the ambient CO standards and the nonattainment area boundary hasn't been delineated, but the State is required to develop a control strategy. The urban areas of Kalispell, Columbia Falls and Whitefish have been designated as nonattainment area for PM₁₀. This permitting action is an administrative action and does not increase emissions from the facility.

VI. Health Risk Assessment

A health risk assessment was conducted for the initial permitting action 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, listed in Table 1. The Department considers the risks estimated in the risk assessment (see Table 2) to comply with the requirement to demonstrate negligible risk to human health and the environment.

Chemical Compound	Hourly Concentration ($\mu\text{g}/\text{m}^3$)	Cancer ELCR ¹ Chronic	Non – Cancer Hazard Quotient	
			Chronic	Acute
Bromoform	0.1310 E-02	0.14 E-09	0.0000	0.0000
Carbon Tetrachloride	0.2600 E-02	0.39 E-08	0.0001	0.0000
Chloroform	0.2440 E-02	0.56 E-08	0.0000	0.0000
1,2 Dichloropropane	0.5940 E-01	0.00	0.0015	0.0000
Ethyl Benzene	0.7300 E-01	0.00	0.0000	0.0000
Napthalene	0.5220	0.00	0.0037	0.0000
Tetrachloroethylene	0.1800 E-02	0.11 E-08	0.0000	0.0000
1,1,2,2 Tetrachloroethane	0.4950 E-02	0.29 E-07	0.0000	0.0000
Toluene	0.2080	0.00	0.0001	0.0000
Vinylidene Chloride	0.3200 E-02	0.16 E-07	0.0000	0.0000
Xylene	0.9920 E-01	0.00	0.0000	0.0000
Total Risks	N/A	0.56 E-07	0.0054	0.0000

¹ ELCR = excess lifetime cancer risks

The Department considers the risks estimated in the risk assessment to be in compliance with the requirement to demonstrate negligible risk to public health.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department has conducted a 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?
	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

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Prepared by: Whitney Walsh

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