March 14, 2016

Scott Stevenson
SJ & TJ Properties, LLC
1717 Main St.
Miles City, MT 59301

Dear Mr. Stevenson:

The Department of Environmental Quality (Department) has made its decision on the Montana Air Quality Permit application for the Eastern Montana Pet Crematory. The application was given permit number 5019-02. The Department's decision may be appealed to the Board of Environmental Review (Board). A request for hearing must be filed by March 29, 2016. This permit shall become final on March 30, 2016, unless the Board orders a stay on the permit.

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed before the final date stated above. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620.

Conditions: See attached.

For the Department,

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

Rhonda Payne
Environmental Science Specialist
Air Quality Bureau
(406) 444-5287

JM:RP
Enclosure

MONTANA AIR QUALITY PERMIT

Issued To: SJ & TJ Properties
1717 Main St.
Miles City, MT

MAQP: #5019-02
Administrative Amendment (AA)
Request Received: 2/22/16
Department's Decision on AA: 3/14/16
Permit Final:
AFS #017-0007

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to SJ & TJ Properties, pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

SJ & TJ Properties is located at 1717 Main Street in Miles City, Montana, 59301. The legal description of the facility is Section 32, Township 8N, Range 47E, in Custer County.

B. Current Permit Action

On February 22, 2016, the Department noticed the location listed in MAQP #5019-01 was incorrect. The original application for MAQP #5019-01 indicated a different location than what was listed in the February 17, 2015 updated application. MAQP #5019-01 listed the latter. Thus, MAQP #5019-02 lists the correct location as Township 8 North, Range 47 East, Section 32.

The current permit action incorporates the location change as well as updates the permit format and language to reflect current Department practices.

Section II: Conditions and Limitations

A. Emission Limitations

1. SJ & TJ Properties shall operate the Eastern Montana Pet Crematory as specified in their application for MAQP 5019-01, updated location information in MAQP 5019-02 and all supporting documentation (ARM 17.8.749).

2. SJ & TJ Properties shall not incinerate/cremate any material other than animal remains and/or any corresponding container unless otherwise approved by the Montana Department of Environmental Quality (Department) in writing (ARM 17.8.749)

3. SJ & TJ Properties shall provide written notice to the Department and obtain approval from the Department if material other than what would normally be termed animal remains, or its container, is to be incinerated (ARM 17.8.749).

4. The cremation unit shall be equipped with auxiliary fuel burners. The auxiliary fuel burners shall be used to preheat the secondary chamber of the cremation units to the minimum required operating temperature prior to igniting the primary chamber burners. The operating temperatures shall be maintained during operation and for one-half hour after waste feed has stopped (ARM 17.8.752).

5. The operating temperature of the secondary chamber in the cremation unit shall be maintained above 1500 degrees Fahrenheit (°F) for any one-hour averaging period with no single reading less than 1400°F (ARM 17.8.752).

6. SJ & TJ Properties shall develop crematorium operation procedures, print those procedures in a crematorium operation procedures manual or have them readily accessible via electronic device and require all personnel who operate the crematorium to familiarize themselves with the operating procedures. A copy of this manual shall be supplied to the Department upon request (ARM 17.8.752).

7. The Department must be notified promptly by phone 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. Bypassing any pollutant control device during operation except as expressly provided for in ARM 17.8.110. Malfunctions may be grounds for permit revocation (ARM 17.8.110).

B. Emission Limitations

SJ & TJ Properties shall not cause or authorize to be discharged into the atmosphere from the crematorium:

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 corrected to 12% carbon dioxide (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 further testing (ARM 17.8.105).

D. Operational Reporting Requirements

1. SJ & TJ Properties 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 the units 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).

2. SJ & TJ Properties 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 emissions 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 startup 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(l)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by SJ & TJ Properties 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).

E. Monitoring Requirements

1. SJ & TJ Properties shall install, calibrate, maintain, and operate continuous monitoring and recording equipment on each cremation unit to measure the secondary chamber exit gas temperature (ARM 17.8.749).

2. SJ & TJ Properties shall record the daily quantity of material incinerated/cremated and the daily hours of operation of the crematorium (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – SJ & TJ Properties 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 (Continuous Emissions Monitoring System (CEMS), Continuous Emissions Rate Monitoring System (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if SJ & TJ Properties fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving SJ & TJ Properties 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 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 therefor, 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 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 the 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 SJ & TJ Properties 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
SJ & TJ Properties
MAQP #5019-02

I. Introduction/Process Description

A. Permitted Equipment

SJ & TJ Properties owns and operates an animal crematorium with a maximum incineration design capacity of 150 pounds per hour (lbs/hr) of animal remains. SJ & TJ Properties is located at 1717 Main Street in Miles City, Montana, 59301. The legal description of the facility is Section 32, Township 8N, Range 47E, in Custer County, Montana.

B. Source Description

The crematorium has a maximum incineration design capacity of 150 lb/hr of animal remains with an average process rate of 100 lb/hr. The crematorium will utilize natural gas for combustion in the primary and secondary auxiliary burners. The unit is equipped with two Eclipse Therm-Jet burners rated at a maximum of 1.7 MM Btu/hr combined.

C. Permit History

On June 14, 2014, the Department of Environmental Quality (Department) issued Montana Air Quality Permit **MAQP 5019-00** to SJ & TJ Properties for the operation of a 1991 natural gas fired B&L Cremation Systems Model N-20AA.

On January 15, 2015, the Department received an initial application from SJ & TJ Properties to modify the Eastern Montana Pet Crematory. The B&L Cremation Systems Human Crematory Model N-20AA would be replaced with a B&L Cremation Systems Pet Crematory Model BLP-500M3. It had been the intention of SJ & TJ Properties to operate the human crematory as a converted pet crematory; however, the facility had since decided to abandon the conversion and purchase a new pet-specific crematory. On February 17, 2015 the Department received an updated application package to correctly identify the crematory. The January 15, 2015 application referenced a 75 lb/hr crematory. SJ & TJ Properties intended to install a 150 lb/hr crematory. The February 17, 2015 application and emissions calculations reflected this change in size.

D. Current Permit Action

On February 22, 2016, the Department noticed the location listed in MAQP #5019-01 was incorrect. The original application for MAQP #5019-01 indicated a different location than what was listed in the February 17, 2015 updated application. MAQP #5019-01 listed the latter. Thus, MAQP #5019-02 lists the correct location as Township 8 North, Range 47 East, Section 32.

The current permit action incorporates the requested changes as well as updates the permit format and language to reflect current Department practices.

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).

   SJ & TJ Properties 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 PM_{10}
11. ARM 17.8.230 Fluoride in Forage

SJ & TJ Properties must maintain compliance with the applicable ambient air quality standards. As part of the risk assessment required for issuance of the initial MAQP, the Department conducted SCREENVIEW modeling, an Environmental Protection Agency (EPA)-approved air dispersion model. Based on the model screening analysis demonstration the SJ & TJ Properties facility would comply with all applicable ambient air quality standards and present negligible risk to human health.

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.

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 emissions 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 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 SJ & TJ Properties is required to comply with the Emission Limitations specified in Section II.B of MAQP #5019-02, this particular rule does not apply to the crematorium because SJ & TJ Properties has applied for and will operate under an MAQP 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 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility 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. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.

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. SJ & TJ Properties 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 SJ & TJ Properties must obtain 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 the permit change 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 the permit action 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 SJ & TJ Properties 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 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.

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, Montana Code Annotated (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 ARM 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 tons per year 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 source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} 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 #5019-02 for SJ & TJ Properties, 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 PM_{10} 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.

   g. This source is not an EPA designated Title V source.

   Based on these facts, the Department determined that SJ & TJ Properties will be a minor source of emissions as defined under the Title V operating permit program and will not require a Title V operating permit.

H. MCA 75-2-103, Definitions provided, 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 commercial solid waste incinerators; therefore, SJ & TJ Properties 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 Department determined that the information submitted in the initial MAQP application was sufficient to fulfill 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 this MAQP application. Based on the results of the emission inventory, modeling, and the health risk assessment, the Department determined that SJ & TJ Properties complies with this requirement.

4. MCA 75-2-215 requires the application of pollution control equipment or procedures that meet or exceed BACT. The Department determined that the design of the incinerator and operating the incinerator according to the manufacturer-recommended operation procedures constitutes BACT.

III. BACT Determination

A BACT determination is required for each new or modified source. SJ & TJ Properties 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. In addition, MCA 75-2-215 requires a BACT determination for all pollutants resulting from the crematory operations, not only criteria pollutants. A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

IV. Emission Inventory

Cremation Unit - Remains Destruction [SCC 3-15-021-01]
Unit Capacity [Manufacturer Maximum Design]
Charge Capacity: 150 lbs/hr
Heat Input Rate: 1.70 mmbtu/hr
Operating Hours: 8760 hrs/year [Potential]

Natural Gas Combustion Emissions

Notes:

1. Emission factors from AP-42 for uncontrolled natural gas combustion in boilers < 100 MMBTU/hr.
AP-42 Chapter 1.4 (Tables 1.4-1 and 1.4-2)

PTE from Natural Gas Combustion			
Pollutant	Emission Factor (lb/MMft^3)	Annual (lb/yr)	Annual (Ton/yr)
PM10 & PM2.5 (including condensable)	7.6	114.22	0.06
NOx	100	1502.94	0.75
CO	84	1262.47	0.63
SO2	0.6	9.02	0.00
VOC	5.5	82.66	0.04

Cremation Emissions

Notes:

1. PM10 emission factor from EPA's FIRE program.

2. Emission factors from other pollutants are from AP-42 for uncontrolled medical waste incineration. AP-42 Chapter 2.3 (Tables 2.3-1 and 2.3-2)

PTE from Cremation of Body (including case wrappings)			
Pollutant	Emission Factor (lb/150 lb body)	Annual (lb/yr)	Annual (Ton/yr)
PM10 &PM2.5 (including condensable)	8.50E-02	744.60	0.37
NOx	2.57E-01	2251.32	1.13
CO	2.21E-01	1935.96	0.97
SO2	1.63E-01	1427.88	0.71
VOC	2.24E-01	1962.24	0.98

Total Criteria Pollutant Emissions

Total Criteria Pollutant Emissions			
Pollutant	Nat. Gas (ton/yr)	Cremation (ton/yr)	Annual (TPY)
PM10 & PM2.5	0.06	0.37	0.43
NOx	0.75	1.13	1.88
CO	0.63	0.97	1.60
SO2	0.00	0.71	0.71
VOC	0.04	0.98	1.02

Toxic Emissions from Crematory Retort (including fuel and case wrappings)				
HAP Category / Pollutant Name	Emission Factor (lb/150 lb body) - or - (lb/MMscf natural gas from AP-42 where not tested/reported in crematory emissions)	CAS #	lb/yr	Fraction of all HAPS
Heavy Metals				
Antimony (less than)	1.51E-05	7440360	1.32E-01	1.97E-04
Arsenic (less than)	1.50E-05	7440382	1.31E-01	1.96E-04
Beryllium	1.37E-06	7440417	1.20E-02	1.79E-05
Cadmium	1.10E-05	7440439	9.64E-02	1.44E-04
Chromium	2.99E-05	7440473	2.62E-01	3.91E-04
Chromium, hx	1.35E-05	18540299	1.18E-01	1.76E-04
Cobalt (less than)	8.75E-07	7440484	7.67E-03	1.14E-05
Lead	6.62E-05	7439921	5.80E-01	8.65E-04
Nickel	3.82E-05	7440020	3.35E-01	4.99E-04
Selenium	4.36E-05	7782492	3.82E-01	5.70E-04
Zinc	3.53E-04	7440666	3.09E+00	4.61E-03
Polycyclic Organic Matter (POM)				
2-methylnaphthalene	2.40E-05	91576	3.61E-04	5.38E-07

Toxic Emissions from Crematory Retort (including fuel and case wrappings)				
HAP Category / Pollutant Name	Emission Factor (lb/150 lb body) - or - (lb/MMscf natural gas from AP-42 where not tested/reported in crematory emissions)	CAS #	lb/yr	Fraction of all HAPS
3-methylchloranthrene (less than)	9.00E-07	56495	1.35E-05	2.02E-08
7,12 Dibenz(a)anthracene (less than)	8.00E-06		1.20E-04	1.79E-07
Anthracene (less than)	1.20E-06	120127	1.80E-05	2.69E-08
Benzene	2.10E-03	71432	3.16E-02	4.71E-05
Dichlorobenzene	1.20E-03	25321226	1.80E-02	2.69E-05
Hexane	1.80E+00	110543	2.71E+01	4.04E-02
Napthalene	6.10E-04	91203	9.17E-03	1.37E-05
Phenanathrene	1.70E-05	85018	2.56E-04	3.81E-07
Toluene	3.40E-03	108883	5.11E-02	7.62E-05
Acenaphthene	1.11E-07	83329	9.72E-04	1.45E-06
Acenaphthylene	1.22E-07	208968	1.07E-03	1.59E-06
Benzo(a)anthracene (less than)	4.88E-09	56553	4.27E-05	6.38E-08
Benzo(a)pyrene (less than)	1.46E-08	50328	1.27E-04	1.90E-07
Benzo(b)fluoranthene (less than)	7.95E-09	205992	6.96E-05	1.04E-07
Benzo(g,h,i)perylene (less than)	1.46E-08	191242	1.27E-04	1.90E-07
Benzo(k)fluoranthene (less than)	7.10E-09	207089	6.22E-05	9.28E-08
Chrysene (less than)	2.70E-08	218019	2.37E-04	3.53E-07
Dibenzo(a,h)anthracene (less than)	6.35E-09	53703	5.56E-05	8.30E-08
Fluorene	4.17E-07	86737	3.65E-03	5.45E-06
Fluoranthene	2.05E-07	206440	1.80E-03	2.68E-06
Indeno(1,2,3-cd)pyrene (less than)	7.70E-09	193395	6.75E-05	1.01E-07
Phenanthrene	2.29E-06	85018	2.01E-02	2.99E-05
Pyrene	1.62E-07	129000	1.42E-03	2.12E-06
Dibenzofurans				
1,2,3,4,6,7,8-Heptachlorodebenzofuran (less than)	2.29E-09	67562394	2.00E-05	2.99E-08
1,2,3,4,7,8,9-Heptachlofodibenzofuran (less than)	1.39E-10	55673897	1.22E-06	1.82E-09
1,2,3,4,7,8-Hexachlorodibenzofuran	9.53E-10	70648269	8.35E-06	1.25E-08
1,2,3,6,7,8-Hexachlorodibenzofuran	8.52E-10	57117449	7.46E-06	1.11E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	1.67E-09	72918219	1.46E-05	2.18E-08
2,3,4,6,7,8-Hexachlorodibenzofuran	3.44E-10	60851345	3.01E-06	4.50E-09
1,2,3,7,8-Pentachlorodibenzofuran (less than)	1.47E-10	57117416	1.29E-06	1.92E-09
2,3,4,7,8-Pentachlorodibenzofuran (less than)	4.43E-10	57117314	3.88E-06	5.78E-09
2,3,7,8-Tetrachlorodibenzofuran	5.19E-10	51207319	4.55E-06	6.78E-09
Listed Non-POM Organic HAPs				
Acetaldehyde	1.30E-04	75070	1.14E+00	1.70E-03
Formaldehyde	3.40E-05	50000	2.98E-01	4.44E-04
Listed Acids				
Hydrogen chloride	7.20E-02	7647010	6.31E+02	9.41E-01

Toxic Emissions from Crematory Retort (including fuel and case wrappings)				
HAP Category / Pollutant Name	Emission Factor (lb/150 lb body) - or - (lb/MMscf natural gas from AP-42 where not tested/reported in crematory emissions)	CAS #	lb/yr	Fraction of all HAPS
Hydrogen fluoride	6.60E-04	7664393	5.78E+00	8.63E-03
Dioxins				
2,3,7,8-tetrachlorodibenzo-p-dioxin	7.94E-11	1746016	6.96E-07	1.04E-09
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3.79E-09	35822469	3.32E-05	4.95E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.75E-10	39227286	2.41E-06	3.59E-09
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	3.97E-10	57653857	3.48E-06	5.19E-09
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	4.92E-10	19408743	4.31E-06	6.43E-09
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	2.33E-10	40321764	2.04E-06	3.05E-09
Total			**6.70E+02**	**1.00E+00**

*Formaldehyde and Acetaldehyde emissions factors are from CARB's Test Report No. C-90-004, October, 1992. Mercury assumed negligible
** All other pollutants determined from Webfire, using SCC 31502101 for Crematoriums. Factors derived from Emissions Testing of a Crematorium, October 29, 1992
*** Pursuant to ARM 17.8.770(1)(a)and (c), only pollutants regulated as a Hazardous Air Pollutant, and which have a chronic inhalation health risk, are calculated.

V. Existing Air Quality

SJ & TJ Properties is located at 1717 Main Street, Miles City, Custer County, Montana. The immediate area in which the proposed facility is planned is designated attainment/unclassifiable for all National Ambient Air Quality Standards (NAAQS). The screening analysis performed during the MAQP process demonstrated that the facility complies with all applicable ambient air quality standards and poses a negligible risk to human health as required for permit issuance. Additionally, MAQP #5019-02 contains operating and monitoring requirements to ensure that proper operation of the facility would not result in air emissions that violate any ambient air quality standards.

VI. Ambient Air Impact Analysis

Potential emissions from the proposed facility are significantly less than the Department's regulatory permitting threshold; therefore a comprehensive impact analysis is not required to ensure associated emissions do not negatively affect or impede conformance to the Nonattainment or Maintenance Area compliance plans. SJ & TJ Properties applied for this MAQP in accordance with ARM 17.8.770 and MCA 75-2-215 for this unit.

The Department conducted SCREEN3 Modeling, an EPA-approved screening model, using the indicated inputs obtained from the emission inventory and a HAP emission rate of 0.0096 grams per second (g/s), which is the sum of all toxic pollutant and/or HAP emissions from the proposed crematorium. The maximum 1-hour modeled concentration was then converted to

an annual average and used in the risk assessment. The individual one-hour results for each pollutant were calculated by multiplying the maximum modeled annual concentration of toxic and/or HAP's in micrograms per cubic meter ($\mu g/m^3$), by the percentage of each individual pollutant identified within the emission inventory. The emission factors employed in development of the emission inventory were derived from stack test data; as such include pollutant contributions of fuel utilized in firing the crematory.

As shown by the Health Risk Assessment of the following Section VII, the Department determined that there is a negligible human health risk associated with the proposed project. With consideration of the modeling accomplished for the Health Risk Assessment, and the small potential to emit of criteria pollutants, the Department determined that the impacts from this permitting action will be minor. Further, that the proposed action will not cause or contribute to a violation of any ambient air quality standard.

VII. Human Health Risk Assessment

A health risk assessment was conducted to determine if the proposed crematorium complies with the negligible risk requirement of MCA 75-2-215. The environmental effects unrelated to human health were not considered in determining compliance with the negligible risk standard, but were evaluated as required by the Montana Environmental Policy Act, in determining compliance with all applicable rules or other requirements requiring protection of public health, safety, and welfare and the environment.

The proposed SJ & TJ Properties incinerator has a stack height of 5.8 meters (m) with vertical discharge, a stack exit temperature of 1000 °F, and a flow rate of 2,000 actual cubic feet per minute (ACFM) with a stack diameter of 0.46 m. Ambient air modeling was accomplished using SCREEN3 software; an EPA approved ambient air modeling software used for conservative modeling. Ambient air impacts were modeled for the non-criteria pollutants identified in the potential to emit calculations.

Pursuant to ARM 17.8.770(1)(c), pollutants may be excluded from the human health risk assessment if the Department determines that exposure from inhalation is the only appropriate pathway to consider in the human health risk assessment and if the ambient concentrations of the pollutants (calculated using the potential to emit; enforceable limits or controls may be considered) are less than the levels specified in Table 1 or Table 2 of ARM 17.8.770.

The SCREEN3 Modeling results, extrapolation of individual pollutant concentrations, and comparisons of Table 1and Table 2 of ARM 17.8.770 are provided below:

Hazardous & Toxic Air Pollutant Dispersion Screen Model Run Summary

Stack Parameters

Stack Height:	5.8	m
Inside Diameter:	0.046	m
Exit Velocity:	5.48	m/s
Gas Exit Temperature:	1000	ºF
	538	ºC
Emission Rate	0.076	lbs/hr
	0.00957	g/sec

Screen Model Run Results

Maximum 1-hour Concentration:	1.993	$\mu g/m^3$
Distance from Maximum 1-hour Concentration:	75	m
Maximum 24-hour Concentration:	0.80	$\mu g/m^3$
Maximum Annual Concentration:	0.1993	$\mu g/m^3$

HAP Category / Pollutant Name	CAS #	Fraction of all HAPS	Calculated HAP Concentration	ARM 17.8.770 De Minimis Levels		
				Table 1 Cancer Annual	Table 2 Noncancer Chronic Annual	Table 2 Noncancer Acute Annual
Heavy Metals						
Antimony (less than)	7440360	1.97E-04	3.93E-05	N/A	2.00E-03	N/A
Arsenic (less than)	7440382	1.96E-04	3.91E-05	2.33E-05	5.00E-03	N/A
Beryllium	7440417	1.79E-05	3.57E-06	4.17E-05	N/A	N/A
Cadmium	7440439	1.44E-04	2.87E-05	5.56E-05	N/A	N/A
Chromium	7440473	3.91E-04	7.79E-05	8.33E-06	N/A	N/A
Chromium, hx	18540299	1.76E-04	3.52E-05	N/A	N/A	N/A
Cobalt (less than)	7440484	1.14E-05	2.28E-06	N/A	N/A	N/A
Lead	7439921	8.65E-04	1.72E-04	N/A	1.50E-02	N/A
Nickel	7440020	4.99E-04	9.95E-05	3.85E-04	2.40E-03	1.00E-02
Selenium	7782492	5.70E-04	1.14E-04	N/A	5.00E-03	2.00E-02
Zinc	7440666	4.61E-03	9.19E-04	N/A	N/A	N/A
Polycyclic Organic Matter (POM)						
2-methylnaphthalene	91576	5.38E-07	1.07E-07	N/A	N/A	N/A
3-methylchloranthrene (less than)	56495	2.02E-08	4.02E-09	N/A	N/A	N/A
7,12 Dibenz(a)anthracene (less than)		1.79E-07	3.58E-08	N/A	N/A	N/A
Anthracene (less than)	120127	2.69E-08	5.36E-09	N/A	N/A	N/A
Benzene	71432	4.71E-05	9.38E-06	1.20E-02	7.10E-01	N/A
Dichlorobenzene	25321226	2.69E-05	5.36E-06	9.09E-03	8.00E+00	N/A
Hexane	110543	4.04E-02	8.04E-03	N/A	2.00E+00	N/A
Napthalene	91203	1.37E-05	2.73E-06	N/A	1.40E-01	N/A
Phenanathrene	85018	3.81E-07	7.60E-08	N/A	N/A	N/A
Toluene	108883	7.62E-05	1.52E-05	N/A	4.00E+00	N/A
Acenaphthene	83329	1.45E-06	2.89E-07	N/A	N/A	N/A
Acenaphthylene	208968	1.59E-06	3.18E-07	N/A	N/A	N/A
Benzo(a)anthracene (less than)	56553	6.38E-08	1.27E-08	5.88E-05	N/A	N/A
Benzo(a)pyrene (less	50328	1.90E-07	3.79E-08	5.88E-05	N/A	N/A

HAP Category / Pollutant Name	CAS #	Fraction of all HAPS	Calculated HAP Concentration	ARM 17.8.770 De Minimis Levels		
				Table 1 Cancer Annual	Table 2 Noncancer Chronic Annual	Table 2 Noncancer Acute Annual
than)						
Benzo(b)fluoranthene (less than)	205992	1.04E-07	2.07E-08	5.88E-05	N/A	N/A
Benzo(g,h,i)perylene (less than)	191242	1.90E-07	3.79E-08	N/A	N/A	N/A
Benzo(k)fluoranthene (less than)	207089	9.28E-08	1.85E-08	5.88E-05	N/A	N/A
Chrysene (less than)	218019	3.53E-07	7.03E-08	N/A	N/A	N/A
Dibenzo(a,h)anthracene (less than)	53703	8.30E-08	1.65E-08	5.88E-05	N/A	N/A
Fluorene	86737	5.45E-06	1.09E-06	N/A	N/A	N/A
Fluoranthene	206440	2.68E-06	5.34E-07	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene (less than)	193395	1.01E-07	2.01E-08	5.88E-05	N/A	N/A
Phenanthrene	85018	2.99E-05	5.96E-06	N/A	N/A	N/A
Pyrene	129000	2.12E-06	4.22E-07	N/A	N/A	N/A
Dibenzofurans			1.91E-08	2.63E-09	3.50E-08	N/A
1,2,3,4,6,7,8-Heptachlorodebenzofuran (less than)	67562394	2.99E-08	5.95E-09	N/A	N/A	N/A
1,2,3,4,7,8,9-Heptachlofodibenzofuran (less than)	55673897	1.82E-09	3.62E-10	N/A	N/A	N/A
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	1.25E-08	2.48E-09	N/A	N/A	N/A
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	1.11E-08	2.22E-09	N/A	N/A	N/A
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	2.18E-08	4.35E-09	N/A	N/A	N/A
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345	4.50E-09	8.96E-10	N/A	N/A	N/A
1,2,3,7,8-Pentachlorodibenzofuran (less than)	57117416	1.92E-09	3.83E-10	N/A	N/A	N/A
2,3,4,7,8-Pentachlorodibenzofuran (less than)	57117314	5.78E-09	1.15E-09	N/A	N/A	N/A
2,3,7,8-Tetrachlorodibenzofuran	51207319	6.78E-09	1.35E-09	N/A	N/A	N/A
Listed Non-POM Organic HAPs						
Acetaldehyde	75070	1.70E-03	3.39E-04	4.55E-02	9.00E-02	N/A

HAP Category / Pollutant Name	CAS #	Fraction of all HAPS	Calculated HAP Concentration	ARM 17.8.770 De Minimis Levels		
				Table 1 Cancer Annual	Table 2 Noncancer Chronic Annual	Table 2 Noncancer Acute Annual
Formaldehyde	50000	4.44E-04	8.86E-05	7.69E-03	3.60E-02	3.70E+00
Listed Acids						
Hydrogen chloride (hydrochloric acid)	7647010	9.41E-01	1.88E-01	N/A	2.00E-01	3.00E+01
Hydrogen fluoride	7664393	8.63E-03	1.72E-03	N/A	5.90E-02	5.80E+00
Dioxins						
2,3,7,8-tetrachlorodibenzo-p-dioxin	1746016	1.04E-09	2.07E-10	N/A	N/A	N/A
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	4.95E-08	9.87E-09	N/A	N/A	N/A
SUM of Hexachlorodibenzo-p-dioxin			3.03E-09	N/A	N/A	N/A
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	3.59E-09	7.16E-10	N/A	N/A	N/A
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	5.19E-09	1.03E-09	N/A	N/A	N/A
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	6.43E-09	1.28E-09	N/A	N/A	N/A
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	3.05E-09	6.07E-10	N/A	N/A	N/A

Although not all pollutants exceeded the levels specified in Table 1 or Table 2 of ARM 17.8.770, the Department conducted a full risk assessment. The Department included those pollutants for which emissions factors are available for crematory operations. Although additional species of pollutants have been identified in documented emission factors for the combustion of natural gas and/or propane, prior analyses indicate those pollutants would pass the human health risk assessment. Therefore, emission factors based on stack test data specific to crematory emissions were used. For those pollutants reviewed, the calculated cancer risks demonstrate there is not more than a negligible health, safety, and welfare risk to the public and to the environment, as defined in ARM 17.8.740(16). The demonstrate health risk assessment is provided below:

Negligible Risk Assessment [1]

HAP Category / Pollutant Name	Cancer URF (2)	Cancer Risk (3)	CNCREL (4) (ug/m3)	CNCREL Quotient (5)
Antimony (less than)	N/A	N/A	N/A	N/A
Arsenic (less than)	0.0043	1.68E-07	0.015	2.60E-03
Beryllium	0.0024	8.56E-09	0.02	1.78E-04
Cadmium	0.0018	5.16E-08	0.01	2.87E-03
Chromium	N/A	N/A	N/A	N/A
Chromium, hx	0.012	4.22E-07	0.1	3.52E-04
Cobalt (less than)	N/A	N/A	0.1	2.28E-05
Lead	N/A	N/A	0.15	1.15E-03
Nickel	N/A	N/A	0.09	1.11E-03
Selenium	N/A	N/A	20	5.68E-06
Zinc	N/A	N/A	N/A	N/A
2-methylnaphthalene	N/A	N/A	N/A	N/A
3-methylchloranthrene (less than)	0.0063	2.53E-11	N/A	N/A
7,12 Dibenz(a)anthracene (less than)	0.071	2.54E-09	N/A	N/A
Anthracene (less than)	N/A	N/A	N/A	N/A
Benzene	0.0000078	7.32E-11	30	3.13E-07
Dichlorobenzene	0.000011	5.90E-11	800	6.70E-09
Hexane	N/A	N/A	700	1.15E-05
Napthalene	0.000034	N/A	3	9.09E-07
Phenanathrene	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	5000	3.04E-09
Acenaphthene	N/A	N/A	N/A	N/A
Acenaphthylene	N/A	N/A	N/A	N/A
Benzo(a)anthracene (less than)	N/A	N/A	N/A	N/A
Benzo(a)pyrene (less than)	0.0011	4.17E-11	N/A	N/A
Benzo(b)fluoranthene (less than)	0.00011	2.28E-12	N/A	N/A
Benzo(g,h,i)perylene (less than)	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene (less than)	0.00011	2.03E-12	N/A	N/A
Chrysene (less than)	0.000011	7.74E-13	N/A	N/A
Dibenzo(a,h)anthracene (less than)	0.00011	1.82E-12	N/A	N/A
Fluorene	N/A	N/A	N/A	N/A
Fluoranthene	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene (less than)	0.00011	2.21E-12	N/A	N/A
Phenanthrene	N/A	N/A	N/A	N/A
Pyrene	N/A	N/A	N/A	N/A
Acetaldehyde	N/A	N/A	9	3.76E-05
Formaldehyde	0.000013	1.15E-09	9.8	9.04E-06
Hydrogen chloride (hydrochloric acid)	N/A	N/A	20	9.38E-03
Hydrogen fluoride	N/A	N/A	14	1.23E-04
2,3,7,8-tetrachlorodibenzo-p-dioxin	33	6.82E-09	0.00004	5.17E-06
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin				
SUM of Hexachlorodibenzo-p-dioxin	1.3	3.94E-09	N/A	N/A

HAP Category / Pollutant Name	Cancer URF (2)	Cancer Risk (3)	CNCREL (4) (ug/m3)	CNCREL Quotient (5)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin				
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin				
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin				
1,2,3,7,8-Pentachlorodibenzo-p-dioxin				
SUM --->		6.65E-07		0.017848

(1) Source of chronic dose-response values is from USEPA Table 1: Prioritized Chronic Dose-Response Values for Screening Risk Assessments

(2) Cancer Chronic Inhalation Unit Risk Factor, units 1/µg/m3

(3) Cancer Risk is unit less and is calculated by multiplying the predicted concentration by the URF.

(4) Chronic Noncancer Reference Exposure Level

(5) CNCREL Quotient Value is calculated by dividing the modeled HAP concentration by the CNCREL.

Impacts are determined to be negligible if pollutant outputs meet the following values

Health Risk	Total Cumulative	Individual
Cancer Risk:	< 1.0E-05	< 1E-06
CNCREL Quotient:	< 1.0	NA

As documented in the Negligible Risk Assessment table and in accordance with the Department's negligible risk requirement, as defined in ARM 17.8.740(16), no individual pollutant concentration exceeds the Cancer Risk threshold of 1.00E-06 and the sum of all Cancer Risks concentrations do not exceed 1.00E-05. Further, the sum of the Chronic Non-cancer Reference Exposure Level (CNCREL) hazard quotients is less than 1.0 as required to demonstrate compliance with the negligible risk requirement.

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?
	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.

Analysis Prepared By: R. Payne
Date: 3/8/2016