

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Permitting and Compliance Division
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United States Dept. of Health and Human Services
National Institute of Health
Rocky Mountains Laboratories (RML)
Northeast ¼ of Section 36, Township 6 North, Range 21 West, Ravalli County
903 South 4th Street
Hamilton, MT 59840

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required	X		Incinerator CEMS 40 CFR 60.57c
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As applicable
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permits (MAQP)	X		MAQP #2991-04
New Source Performance Standards (NSPS)	X		Subpart Ce, Subpart Dc
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR)		X	
Prevention of Significant Deterioration (PSD)		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)		X	
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted complete by Rocky Mountain Laboratories (RML) on February 6, 2003, and on the information provided in the renewal application submitted to the Department on April 27, 2009.

B. Facility Location

The RML facility is located in the Northeast ¼ of Section 36, Township 6 North, Range 21 West, Ravalli County. The physical address is 903 South 4th Street, Hamilton, MT 59840. The Selway Bitterroot Wilderness (Class I area) is located approximately 10 miles west of the site.

C. Facility Background Information

Montana Air Quality Permit (MAQP)

In 1985, and then again in 1987, the Montana Department of Health and Environmental Sciences (predecessor to the Montana Department of Environmental Quality (Department)) determined that the RML facility did not need to obtain an air quality preconstruction permit prior to installing the above-mentioned emission sources. However, the air quality rules changed and the Department determined that it was no longer permissible for facilities to determine their potential to emit using controlled emissions. Therefore, since RML does have potential emissions exceeding 25 tons per year (tpy), RML was required to obtain an air quality preconstruction permit. RML was not required to demonstrate compliance with the additional permitting requirements contained in Montana Code Annotated (MCA) 75-2-215 because their incinerators were existing sources of emissions. Consequently, on October 22, 1997, RML submitted a complete permit application for their facility. **MAQP #2991-00** was issued final on January 2, 1998.

On March 17, 2000, RML was issued **MAQP #2991-01** to expand the boiler plant at their facility. The expansion involved the installation of two new 66-million British thermal units per hour (MMBtu/hr) boilers fired primarily on natural gas, with No. 2 fuel oil used as back-up fuel. As part of this project, RML also installed a 300-kilowatt (kW) emergency generator fired on diesel fuel and a 20,000-gallon above-ground storage tank. The emissions increase resulting from this boiler plant expansion was greater than 15 tpy; therefore, RML was required to submit an application to alter their air quality permit. However, a limitation on the amount of natural gas consumption was placed on the facility to keep the total emissions below the Title V threshold.

RML also included a de minimis project as part of this permit action. RML proposed to upgrade the wet scrubber controlling the incinerator system. The upgrade ensured that the incinerators would be able to meet the emission limitations contained in the Hospital/Medical/Infectious Waste (HMIW) Incinerator New Source Performance Standards 40 Code of Federal Regulations Part 60 (40 CFR 60), Subpart Ce. These emission standards were not applicable to RML's facility at the time of this permitting action because a limitation on the amount of waste defined as Hospital/Medical/Infectious Waste was placed in the air quality permit. The installation of the wet scrubber did not require a permit because it qualified as a de minimis project, as defined in the Administrative Rules of Montana

(ARM) 17.8.705(1)(r) (predecessor to current rule under ARM 17.8.745(1)). However, the scrubber was listed to avoid future confusion that could result from the installation of the wet scrubber. MAQP #2991-01 replaced MAQP #2991-00.

RML's MAQP #2991-01 limited the amount of HMIW, as defined under 40 CFR 60, Subpart Ce, to an amount less than 10% of the total waste stream incinerated at the facility. The condition was included in the permit for the purpose of allowing RML to operate as a co-fired combustor meeting the definition of an exempt source under 40 CFR 60, Subpart Ce. On February 15, 2002, the Department received a request from RML to review this determination. The request centered on questions regarding the interpretation and definition of HMIW as applicable to RML. Specifically, RML posed the question as to whether or not the disposable plastic lab-ware used at the facility was considered HMIW.

Based on subsequent information submitted by RML, the Department determined that the plastic lab-ware meets the definition of "...culture dishes and devices used to transfer, inoculate, and mix cultures" (40 CFR 60.51(c) *medical/infectious waste*(1)) and is therefore, by this definition, considered HMIW. When plastic lab-ware, as described above, was included with the waste stream as HMIW, RML exceeded the 10% HMIW threshold for the co-combustor exemption and was thus determined to be subject to all applicable requirements of 40 CFR 60, Subpart Ce.

On June 17, 2002, the Department received a request from RML to modify air quality MAQP #2991-01 to include all applicable requirements of 40 CFR 60, Subpart Ce. The permit action removed the condition in Section II.A.3 of MAQP #2991-01, which limited the allowable amount of HMIW incinerated at the facility. The permit action also incorporated all applicable requirements of 40 CFR 60, Subpart Ce. Further, with the new determination of HMIW applicability and in accordance with 40 CFR 60.32(i), RML was required to obtain and operate pursuant to a Title V Operating Permit. **MAQP #2991-02** was issued final on August 9, 2002, and replaced MAQP #2991-01.

On October 1, 2002, the Department received a request from RML to modify MAQP #2991-02 to include federally enforceable permit limits for the HMIW incinerators at the facility. The purpose of the proposed limits was to ensure that the incinerators meet the definition of medium HMIW incinerators as defined in 40 CFR 60, Subpart Ce.

In addition, on August 5, 2002, the Department received information from RML regarding equipment changes at the facility. The equipment changes included an increase in the number of fume hoods at the facility, the removal of an 18,000-gallon fuel storage tank (FST), the replacement of a 120-gallon FST with a 300-gallon FST, the replacement of a 550-gallon FST with a 300-gallon FST, the addition of an 8000-gallon FST, and the addition of a 1500-kW emergency generator. After correspondence with RML, the Department determined that because the potential to emit (PTE) for all previously listed and previously un-permitted equipment is less than 15 tons per year (tpy), the equipment could be added to the list of permitted equipment in accordance with ARM 17.8.705(1)(r). **MAQP #2991-03** was issued final on November 8, 2002, and replaced MAQP #2991-02.

On February 6, 2003, the Department received a complete permit application from RML for proposed changes to the existing permitted facility. Specifically, the permit application indicated that RML would be removing three natural gas fired boilers of 20 MMBtu/hr heat input capacity, 14.7 MMBtu/hr capacity, and 14.7 MMBtu/hr capacity, respectively; removing 2 existing and permitted emergency/back-up status generators of 400 kW and 600 kW, respectively; and removing one 2500-gallon above ground number 2 fuel-oil FST. In addition, the application indicated the RML would be adding one 64.5-MMBtu/hr natural gas fired boiler; adding two emergency/back-up status diesel-fired generators of 1250 kW and 2000 kW, respectively; adding one 10,000-gallon number 2 fuel oil FST; and adding various laboratory fume hoods to the permitted facility.

After submittal of the application for the above listed proposed permit changes, RML informed the Department that the previously listed equipment to be removed from the permitted facility would not be removed for a period of time. Therefore, the Department suggested, and RML agreed, that the facility should maintain a permit for this equipment as long as the equipment physically remained on the site and only remove each respective piece of equipment from the permitted facility when and if RML begins preparations for the physical removal of the equipment from the site. The current permit action includes the equipment listed above as additions to the permitted facility but does not remove any of the above listed equipment at this time.

Further, in accordance with 40 CFR 60, Subpart Ce, RML submitted a permit application for a major source Title V Operating Permit concurrently with the previously discussed application for changes to the existing MAQP. **MAQP #2991-04** replaced MAQP #2991-03.

Title V Operating Permit

On March 23, 2003, RML submitted a complete application for a Title V Operating Permit in accordance with 40 CFR 60, Subpart Ce. On October 28, 2004, the Department issued **Title V Operating Permit #OP2991-00** final and effective to RML.

D. Current Permit Action

On April 27, 2009, the Department received an application for the renewal of Title V Operating Permit #OP2991-00. The permit action included the removal of three decommissioned boilers (14.7, 14.7, and 20MMBtu/hr), the addition of several insignificant emitting units (5 diesel fuel storage tanks and 15 laboratory fume hoods). **Title V Operating Permit #OP2991-01** replaces Title V Operating Permit #OP2991-00.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 105, MCA, the Department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

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)

F. Compliance Designation

RML was last inspected on August 12, 2008, and was found to be in compliance with all applicable requirements. A copy of the inspection report is on file with the Department.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

RML operates a biomedical research facility conducting basic and applied research in immunological, allergic, and infectious diseases for the National Institute of Allergy and Infectious Disease, National Institutes of Health, Department of Health and Human Services. Processes and equipment at the facility include waste incineration, boilers, emergency generators, fuel storage tanks, and laboratory fume hoods.

B. Emission Units and Pollution Control Device Identification

The following table indicates all significant (PTE > 5 TPY) permitted sources of emissions or sources with applicable requirements and emission controls/practices utilized for each emitting unit at the RML facility:

Emitting Unit/Process	Control Device/Practice
EU001 - Facility-Wide Fuel Consumption and Use (Natural Gas and Number 2 Fuel Oil)	Natural gas fuel use limitation and maximum fuel oil sulfur concentration of 0.5%
EU002 – 66-MMBtu/hr Natural Gas-Fired Boiler	Natural gas fuel use limitation
EU003 – 66-MMBtu/hr Natural Gas-Fired Boiler	Natural gas fuel use limitation
EU004 – 66-MMBtu/hr Natural Gas-Fired Boiler	Natural gas fuel use limitation
EU005 – 6.5-MMBtu/hr Natural Gas-Fired Consumat Model C-325PA Pathological Furnace (Incinerator)	Limited incineration content (material type), maximum charge rate of 500 lb/hr, 3504 ton/yr pathological and general refuse incineration.
EU006 – 3.5-MMBtu/hr Natural Gas-Fired Consumat Model C-225P Pathological Furnace (Incinerator)	Limited incineration content (material type), maximum charge rate of 500 lb/hr, 3504 ton/yr pathological and general refuse incineration.
EU007 – Emergency Generators (Diesel-Fired)	Emergency/back-up operation only. Maximum of 500 hours of operation/unit/year

C. Categorically Insignificant Sources/Activities

The Administrative Rules of Montana (ARM) 17.8.1201(22)(a) defines an insignificant emissions unit as one that emits less than 5 tons per year of any regulated pollutant, has the potential to emit less than 500 pounds per year of lead or any hazardous air pollutant, and is not regulated by an applicable requirement other than a generally applicable requirement. The following table lists the insignificant emissions units at RML.

Emissions Unit ID	Description
IEU01	20,000 Gallon Fuel Oil Storage Tank
IEU02	8,000 Gallon Fuel Oil Storage Tank
IEU03	5,000 Gallon Fuel Oil Storage Tank
IEU04	2,500 Gallon Fuel Oil Storage Tank
IEU05	500 Gallon Fuel Oil Storage Tank
IEU06	10,000 Gallon Fuel Oil Storage Tank
IEU07	300 Gallon Motor Fuel Oil Storage Tank
IEU08	300 Gallon Motor Fuel Oil Storage Tank
IEU09	Miscellaneous Laboratory Fume Hoods
IEU10	500-Gallon Diesel Fuel Storage Tank
IEU11	600-Gallon Diesel Fuel Storage Tank
IEU12	800-Gallon Diesel Fuel Storage Tank
IEU13	800-Gallon Diesel Fuel Storage Tank
IEU14	3000-Gallon Diesel Fuel Storage Tank

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Emission limits, operating conditions, and applicable standards in the Title V operating permit are based on, and were established from, applicable conditions/limits in RML's MAQP and applicable NSPS requirements. In addition to Title V Operating Permit #OP2991-01, RML currently operates under MAQP #2991-04.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor for all emission units. Furthermore, it does not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Ravalli Republic* newspaper on or before June 17, 2010. The Department provided a public comment period on the draft operating permit from June 17, 2010, through July 19, 2010. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process.

G. Draft Permit Comments

Summary of Public Comments

No public comments were received on Draft Operating Permit #OP2991-01.

Summary of Permittee Comments

No comments were received from the Permittee on Draft Operating Permit #OP2991-01

Summary of EPA Comments

No comments were received from EPA on Proposed Operating Permit #OP2991-01.

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

RML did not request a shield from any of the air quality Administrative Rules of Montana (ARM) or federal regulations (pursuant to ARM 17.8.1214). Therefore, no further analysis of non-applicable requirements is necessary.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT/NESHAPs Standards

As of June 17, 2010, the Department is unaware of any future MACT or NESHAPs standards that may be promulgated that will affect this facility.

B. NSPS Standards

As of June 17, 2010, the Department is unaware of any future NSPS Standards that may be promulgated that will affect this facility. The facility is currently subject to 40 CFR 60, Subparts Ce and Ec. Boilers #4, #5, and #6 are affected units under 40 CFR 60 Subpart Dc.

C. Risk Management Plan

As of June 17, 2010, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; 3 years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

D. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (other than emission limits or standards proposed after November 15, 1990, since these regulations contain specific monitoring requirements);
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emissions of the applicable regulated air pollutant that are greater than major source thresholds.

RML does not currently have any emitting units that meet all the applicability criteria in ARM 17.8.1503, and is therefore not currently required to develop a CAM Plan.