

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

**Permitting and Compliance Division  
Air Resources Management Bureau  
1520 E. Sixth Avenue  
P.O. Box 200901  
Helena, Montana 59620-0901**

**Montana-Dakota Utilities, Co.  
Glendive Generating Station  
SE ¼ and Lot 4 of Section 15, Township 15 North, Route 55 East in Dawson County  
2001 Merrill Avenue  
Glendive, MT 59330**

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

<b>Facility Compliance Requirements</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Source Tests Required	X		
Ambient Monitoring Required		X	
COMS Required		X	
CEMS or PEMS Required	X		NO <sub>x</sub> PEMS
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
<b>Applicable Air Quality Programs</b>			
ARM Subchapter 7 Preconstruction Permitting	X		Permit #1551-06
New Source Performance Standards (NSPS)	X		40 CFR 60, Subpart GG
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	Except Subpart M
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		
State Implementation Plan (SIP)	X		General SIP
Compliance Assurance Monitoring Plan (CAM)		X	

## TABLE OF CONTENTS

<b>SECTION I.</b>	<b>GENERAL INFORMATION.....</b>	<b>3</b>
A.	Purpose.....	3
B.	Facility Location.....	3
C.	Facility Background Information.....	3
D.	Current Permit Action.....	5
E.	Taking and Damaging Analysis.....	6
F.	Compliance Designation.....	6
<b>SECTION II.</b>	<b>SUMMARY OF EMISSION UNITS.....</b>	<b>7</b>
A.	Facility Process Description.....	7
B.	Emission Units and Pollution Control Device Identification.....	7
C.	Categorically Insignificant Sources/Activities.....	8
<b>SECTION III.</b>	<b>PERMIT TERMS.....</b>	<b>9</b>
A.	Emission Limits and Standards.....	9
B.	Monitoring Requirements.....	10
C.	Test Methods and Procedures.....	10
D.	Recordkeeping Requirements.....	11
E.	Reporting Requirements.....	11
F.	Public Notice.....	11
<b>SECTION IV.</b>	<b>NON-APPLICABLE REQUIREMENTS ANALYSIS.....</b>	<b>15</b>
<b>SECTION V.</b>	<b>FUTURE PERMIT CONSIDERATIONS.....</b>	<b>16</b>
A.	MACT Standards.....	16
B.	NESHAP Standards.....	16
C.	NSPS Standards.....	16
D.	Risk Management Plan.....	16

## 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 U.S. 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 operating permit. Conclusions in this document are based on information provided in the renewal application submitted by Montana-Dakota Utilities Co. (Montana-Dakota) and received by the Department of Environmental Quality (Department) on March 5, 2004. The renewal application incorporated information from the original operating permit application submitted to the Department on August 22, 1997; the Acid Rain Phase II permit application submitted by Montana-Dakota and received by the Department on March 9, 2001; Permit #1551-01, issued March 6, 1998; Permit #1551-02, issued April 5, 2000; and Permit #1551-03, issued September 25, 2001; the permit modification request received by the Department on September 3, 2002; administrative amendment requests received on October 15, 2003 and February 9, 2004; and a permit modification request received by the Department on December 3, 2004. Permit #OP1551-05 incorporates information from an administrative amendment request received on October 5, 2007; a de minimis notification received January 9, 2008; emitting unit clarification received January 31, 2008; and a de minimis notification received May 12, 2008.

### B. Facility Location

Montana-Dakota owns and operates the Glendive Generating Station. This facility is located in the SE ¼ and Lot 4 of Section 15, Township 15 North, Range 55 East of the P.M.M. in Dawson County, Montana. Dawson County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. The Glendive Generating Station is located approximately 4 miles south of Glendive. The generation site is bordered on the West by Marsh Road. All other boundaries are essentially undeveloped. The Yellowstone River is approximately ½ mile west of the site. The surrounding area within one mile of the site is essentially undeveloped except for an occasional single family dwelling.

### C. Facility Background Information

#### Montana Air Quality Permit

On July 1, 1977, Montana-Dakota submitted the original application for construction of Glendive turbine site. This facility was granted a construction permit, Permit #1085, on September 9, 1977. On December 15, 1980, Montana-Dakota requested a modification to the original permit to allow burning of natural gas as a fuel in addition to burning No.2 fuel oil. On March 3, 1981, the Department issued **Permit #1551** to Montana-Dakota for the continued operation of the turbine.

On January 8, 1998, Montana-Dakota submitted additional information to complete Permit Application #1551-01. As part of this application, Montana-Dakota requested an alteration to increase the hours of operation from 600 hours to 1,050 hours per year. After consultation with the Department and upon further consideration, Montana-Dakota decided to request an additional increase in the hours of operation and committed to submitting a Title V application within one year.

On March 6, 1998, Montana-Dakota was issued **Permit #1551-01** for the operation of their

Glendive turbine site with updated operating parameters. The Title V application was submitted within approximately 6 months of permit issuance of Permit #1551-01.

On April 5, 2000, Montana-Dakota was issued **Permit #1551-02** for the addition of fogging and Turbine Ice Peaking Power (TIPP) equipment. The addition of this equipment allowed the combustion turbine to operate more efficiently during periods of warm weather. By adding the new equipment to the facility the actual emissions increased; however, the permitted allowable emissions were not increased.

On March 9, 2001, the Department received the Acid Rain Phase II permit application submitted by Montana-Dakota. The acid rain permit is intended to include the requirements contained in 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78. The Department is issuing this permit in accordance with the EPA guidance issued by the Acid Rain Division in October 1997. The draft acid rain permit was issued March 29, 2002, with the comment period ending April 30, 2002.

On September 25, 2001, Montana-Dakota was issued **Permit #1551-03**. The alteration included the installation and operation of an additional multi-fuel turbine, rated at 43-MW capacity. The new turbine, designated as Unit 2, has its own 600-horsepower (hp) diesel starting engine and a fuel tank for the starting engine.

On September 3, 2002, Montana-Dakota submitted a request for a modification to Permit #1551-03. The modification included the installation and operation of a 43-MW General Electric LM-6000 dual fuel turbine instead of a General Electric 43-MW PG6561 dual fuel turbine, which was never installed. **Permit #1551-04** was issued to Montana-Dakota-Glendive on October 25, 2002.

On December 3, 2004, Montana-Dakota submitted an application for the addition of a 2 MW emergency generator to be available to supply additional peaking capacity during periods of equipment failure, malfunction, or the necessary replacement of equipment to prevent an equipment failure. The generator would also be available to supply an additional peaking capacity of approximately 2 MW. The facility accepted a federally enforceable limit for the generator of 1,000 hours/year to keep emissions below major modification significant emissions thresholds. Therefore, the action was not subject to NSR/PSD review. The permit format, language, and rule references were updated to reflect the Department's current permit format, language, and rule references. **Permit #1551-05** replaced Permit #1551-04.

On October 1, 2007 the Department received a request to amend Permit #1551-05. The letter requested that Section II.A.7 be changed to clarify that 40 CFR 60, Subpart GG is only applicable to Unit 2. No change was made to Section II.A.7 because the condition is clear in requiring Montana-Dakota to comply with all the requirements of 40 CFR 60, Subpart GG, as applicable. In addition, the request noted a number of inaccuracies in the Permit Analysis. The current permit action corrects those inaccuracies.

In addition, the Department received notifications from Montana-Dakota of de minimis actions. First, on November 26, 2007, Montana-Dakota provided notification they would be installing a 60 kilowatt (kW), 94.5 hp diesel-powered generator/engine for an uninterruptible power supply. In the event of a power outage, the generator is used to supply electrical power to the site for normal site functions and so Units 1 and 2 may be started if needed. Second, on May 9, 2007, notification was received for an action to install and operate a natural gas fired liquid fuel heater that will be used to heat No. 2 fuel used in Units 1 and 2. No changes were made to Permit #1551-06 as a result of these actions, but they were noted in the permit analysis under permitted equipment. **Permit #1551-06** replaced Permit #1551-05.

### **Title V Operating Permit**

On August 22, 1997, Montana-Dakota submitted the original Title V Permit Application. **Operating Permit #OP1551-00** was issued effective on October 15, 1999.

On January 16, 2003, **Operating Permit #OP1551-01** was issued to incorporate the second turbine (General Electric LM6000 with Dry Low Emission Burners) at the Montana-Dakota-Glendive facility. The significant modification application originally included a General Electric model PG6561 dual fuel turbine, but was changed to a General Electric LM6000 with Dry Low Emission Burners in a minor modification request (both modifications are included in this action). Operating Permit #OP1551-01 replaced Operating Permit #OP1551-00.

On December 9, 2003, **Operating Permit #OP1551-02** was issued to update Section V.B.3 of the General Conditions incorporating changes to federal Title V rules 40 CFR 70.6(c)(5)(iii)(B) and 70.6(c)(5)(iii)(C) (incorporated into Montana's Title V rules at ARM 17.8.1213) regarding Title V annual compliance certifications. Operating Permit #OP1551-02 replaced Operating Permit #OP1551-01.

On April 4, 2004, the Department issued **Operating Permit #OP1551-03** to update the responsible official and contact person for the Montana-Dakota-Glendive facility. Operating Permit #OP1551-03 replaced Operating Permit #OP1551-02.

On March 5, 2004, the Department received an application for the renewal of Title V Operating Permit #OP1551-03. The permit modification included the addition of a 2 Megawatt emergency generator to be available for emergency situations as well as additional peaking capacity. **Operating Permit #OP1551-04** replaced Operating Permit #OP1551-03 and was issued on August 26, 2005.

#### **D. Current Permit Action**

On October 1, 2007 the Department received a request to amend Operating Permit #OP1551-04 to correct a number of inaccuracies in the permit. The inaccuracies include: removing reference of applicability of a Continuous Emission Monitoring System (CEMS) and replacing it with a Predictive Emission Monitoring System (PEMS); removing requirements in Appendix F that are not applicable as Montana-Dakota only operates a PEMS; and removing requirements from Appendix F that are not applicable as Montana-Dakota only burns natural gas and No. 2 fuel oil. The current permit action incorporates these changes.

On January 31, 2008 the Department received clarification from Montana-Dakota regarding storage tanks present at the facility. A tank, approximately 1.5 million gallons, was used on the site from 1979 to 1994. The tank was removed from service and is permanently closed. A second tank, listed in the Operating Permit #OP1551-04 as 75,000 gallons, was put into service in 1994 and is still currently being used. Montana-Dakota noted field measurements indicate the tank should be listed as 74,000 gallons. The current permit action notes the clarification and changes the size of the 74,000 gallon tank.

In addition, the Department received notifications from Montana-Dakota of de minimis actions. First, on November 26, 2007, Montana-Dakota provided notification they would be installing a 60 kilowatt (KW), 94.5 horsepower (hp) diesel-powered generator as an uninterruptible power supply. In the event of a power outage, the generator is used to supply electrical power to the site for normal site functions and so Units 1 and 2 may be started if needed. Second, on May 9, 2007, notification was received for an action to install and operate a natural gas fired liquid fuel heater that will be used to heat No. 2 fuel used in Units 1 and 2. These emitting units are considered insignificant and the current permit action adds the emitting units to the list of insignificant emitting units.

Finally, on February 13, 2008 the Department notified Montana-Dakota that in the process of

incorporating the changes requested above, it became evident Operating Permit #OP1551-04 does not accurately incorporate all applicable requirements and the Department would reopen and revise Operating Permit #OP1551-04. When the draft version of Operating Permit #OP1551-05 was issued, language was included in Section V.E which incorporated changes to Prompt Deviation Reporting requirements that are only applicable to operating permits undergoing renewal. In the Proposed Permit version of Operating Permit #1551-05, the Prompt Deviation Reporting language was changed to the previous language existing in Operating Permit #OP1551-04. **Operating Permit #OP1551-05** replaces Operating Permit #OP1551-04.

**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**

On November 27, 2007, a complete compliance evaluation and inspection report was completed by the Department. Montana-Dakota was found to be in compliance with their permit at that time.

## SECTION II. SUMMARY OF EMISSION UNITS

### A. Facility Process Description

The Montana-Dakota Glendive Generating Station is used for electrical power generation, transmission, and distribution. The Standard Industrial Classification (SIC) for this facility is “Electrical Power Generation, Transmission, and Distribution” which has an SIC Code of “4911.”

The Glendive combustion turbine (Unit 1) is a General Electric Model MS-6000 dual fuel unit. Name plate rating of the combustion turbine is 34-MW with 38-MW peak capability at optimum conditions. The turbine is capable of maintaining full load using either natural gas or No.2 fuel oil. A Detroit Diesel starting motor rated at 600-hp, burning No.2 fuel oil, is used for starting the turbine.

The Montana-Dakota combustion turbine (Unit 2) is a General Electric Model LM-6000 dual fuel unit. The turbine, rated at 43-MW capacity, has its own electric starting engine.

The turbines are used to provide electricity during peak electrical demand. These periods are normally short in time duration during summer or winter seasons. The units are capable of sustaining maximum generation for long periods of time when needed.

### B. Emission Units and Pollution Control Device Identification

The emission units regulated by Operating Permit #OP1551-05 and the pollution control device utilized by each emission unit are summarized in the following table:

Emissions Unit ID	Description	Pollution Control Device/Practice
EU1	34-MW General Electric MS-6000 Turbine/Generator Peaking Plant (Natural Gas or No. 2 Fuel Oil)	none
EU2	43-MW General Electric LM-6000 Turbine/Generator Peaking Plant (Natural Gas or No. 2 Fuel Oil)	Dry-Low NO <sub>x</sub> combustor
EU3	600-hp Detroit Diesel 7123-7300 Starting Motor	none
EU4	No.2 Fuel Oil Storage Tank (74,000 gallon capacity)	none
EU5	No.2 Fuel Oil Storage Tank (200 gallon capacity)	none
EU6	2-MW Emergency Diesel Generator	None

Unit 2 is subject to New Source Performance Standards (NSPS) requirements of 40 CFR Part 60, Subpart GG. The turbine routinely burns natural gas, but has the capability to also burn No. 2 fuel oil.

**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 any applicable requirement other than a generally applicable requirement. The list of insignificant emitting units at the Montana-Dakota facility are summarized in the following table.

<b>Insignificant Emissions Unit ID</b>	<b>Description</b>
IEU1	Fugitive emissions from in-plant vehicle traffic
IEU2	60 kilowatt emergency plant power supply diesel generator
IEU3	Natural gas fired liquid fuel heater

## SECTION III. PERMIT TERMS

### A. Emission Limits and Standards

The emission units at this facility are not subject to any current MACT or NESHAP standards. This facility is not subject to PSD regulations. General emission limits apply to the 34-MW General Electric MS-6000. The 43-MW General Electric LM-6000, Unit 2, is subject to the NSPS requirements of 40 CFR Part 60, Subpart GG. Montana-Dakota will primarily use pipeline quality natural gas in Unit 2, but will have the capability to also burn No.2 fuel oil. If No.2 fuel oil is burned in Unit 2, the existing 74,000-gallon diesel (No. 2 fuel oil) tank will supply fuel to both Unit 1 and Unit 2. Several of the conditions for both turbines will vary according to the fuel type that is used (refinery quality No.2 fuel oil or pipeline quality natural gas).

An opacity limit of 20% is required for the 34-MW General Electric MS-6000, the 43-MW General Electric LM-6000, the 600-hp Detroit Diesel Starting Motors, and the Fuel Oil Storage Tanks. This limit was established through ARM 17.8.304(2) for Visible Air Contaminants. A particulate matter from fuel combustion limit is applicable to the 34-MW General Electric MS-6000, the 43-MW General Electric LM-6000 and the 600-hp Detroit Diesel Starting Motors. The particulate from fuel combustion limit was established through ARM 17.8.309.

Additional limits have been incorporated in the permit for sulfur compounds in fuel (gaseous and liquid). The sulfur compounds in fuel (gaseous) limit was established through ARM 17.8.322(5) and is applicable to the 34-MW General Electric MS-6000 and the 43-MW General Electric LM-6000 while burning natural gas. The sulfur compounds in fuel (liquid) limit was established through ARM 17.8.322(4) and is applicable to the 600 Hp Detroit Diesel Starting Motor, the 34-MW General Electric MS-6000, and the 43-MW General Electric LM-6000 while burning No.2 fuel oil.

An operational limit has been placed on the 34-MW General Electric MS-6000. The operational limit is dependent upon the type of fuel that is being used. If natural gas is being used exclusively, then the operational limit for the turbine is 2,620 hours per any rolling 12-month time frame. If refinery quality No.2 fuel oil is being used exclusively, then the operational limit for the turbine is 1,667 hours per any rolling 12-month time frame. If a combination of pipeline quality natural gas and refinery quality No.2 fuel oil are being used, then the operational limit for the turbine will be some amount of time between 1,667 and 2,620 hours per any rolling 12-month time period, depending on how long each fuel type is used.

An operational limit has been placed on the 43-MW General Electric LM-6000. The operational limit is dependent upon the type of fuel that is being used. If natural gas is being used exclusively, then the operational limit for the turbine is 6500 hours per any rolling 12-month time frame. If refinery quality No.2 fuel oil is being used exclusively, then the operational limit for the turbine is 3,254 hours per any rolling 12-month time frame. If a combination of pipeline quality natural gas and refinery quality No. 2 fuel oil are being used, then the operational limit for the turbine will be some amount of time between 3,254 and 6,500 hours per any rolling 12-month time period, depending on how long each fuel type is used.

A NO<sub>x</sub> emission limit of 225 tons per any rolling 12-month time period has been placed on Unit 1 and its associated startup engine. The total emissions of NO<sub>x</sub> are derived through several steps 1) multiplying the hours of operation of the 34-MW General Electric turbine while using natural gas by the most recent source test on file with the Department of the 34-MW General Electric turbine while burning natural gas (results will be in lb/yr); 2) multiplying the hours of operation of the 34-MW General Electric turbine while using No.2 fuel oil by the most recent source test on file with the Department of the 34-MW General Electric turbine while burning No.2 fuel oil

(results will be in lb/yr); 3) add the results of 1) and 2) and divide by 2000 to convert to ton/yr; 4) add the total NO<sub>x</sub> from the 34-MW General Electric to any other NO<sub>x</sub> emissions from the site and compare the result with the 225 ton per any rolling 12-month time period limit.

A NO<sub>x</sub> emissions limit of 247 tons per rolling 12-month period has been placed on Unit 2 when combusting pipeline quality natural gas, No.2 fuel oil, or a combination of pipeline quality natural gas and No.2 fuel oil. Any calculations used to establish NO<sub>x</sub> emissions shall be approved by the Department.

Unit 2 has a NO<sub>x</sub> emission limit of 76.0 pounds per hour and a CO emission limit of 17.0 pounds per hour while combusting pipeline quality natural gas. Unit 2 has a NO<sub>x</sub> emission limit of 151.8 pound per hour and a SO<sub>2</sub> limit of 90.8 pound per hour while combusting No.2 fuel oil.

One additional limit was placed on the 34-MW General Electric MS-6000 and the 43-MW General Electric LM-6000. Only refinery quality No.2 fuel oil or pipeline quality natural gas may be used as fuel for the 34-MW General Electric MS-6000 and the 43-MW General Electric LM-6000.

The 2-MW CAT diesel-powered generator has an hourly operational limit of no more than 1,000 hours per rolling 12-month period.

## **B. Monitoring Requirements**

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required by any applicable requirement be contained in the operating permit. 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 requirement 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 emissions 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 and/or recordkeeping for all generally applicable requirements such as ARM 17.8.304, 309, 322, 324, and 710. However, the Department may request additional testing to determine compliance with the emission limits and standards. If it is determined through testing, using test methods identified in the Montana Source Testing Protocol, that any emissions unit is out of compliance with any applicable requirement, Montana-Dakota will not be shielded from an enforcement action even if the required monitoring methods listed in the permit indicate compliance with the applicable requirement. Since the fuel consumed by the emission units is pipeline quality natural gas and No.2 fuel oil, the potential to exceed the opacity, particulate, or sulfur in fuel conditions in this permit is negligible. However, while burning No.2 fuel oil, Montana-Dakota shall provide a fuel analysis from the fuel provider on a semiannual basis to demonstrate compliance with sulfur compounds in fuel requirements (gaseous and liquid). Furthermore, the recordkeeping provisions of this permit should demonstrate compliance with the permit conditions.

## **C. Test Methods and Procedures**

This operating permit contains requirements for performing Method 9 tests as required by the Department. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time.

This operating permit contains requirements for Method 5 tests as required by the Department. The Method 5 test will be used to determine compliance with the condition that Montana-Dakota shall not cause or authorize particulate matter caused by the combustion of fuel to be discharged from any stack or chimney into the outdoor atmosphere in excess of  $E = 1.026 * H^{0.233}$  for existing fuel burning equipment, where H = heat input capacity in MMBtu/hr and E = maximum allowable emission rate in lb/MMBtu.

This operating permit contains requirements that Montana-Dakota shall test the Unit 1 turbine and demonstrate compliance with the NO<sub>x</sub> emission limit contained in Section III.B.7 of the operating permit within 40 days of the hours of operation equaling 1,620 in any 12-month period. The turbine shall be tested using the major fuel combusted during the previous 500 hours of operation. All testing and reporting of tests shall include a determination of the amount of NO<sub>x</sub> and the amount of NO<sub>2</sub> emissions from the turbine. Testing is not required to be conducted more frequently than once every 4 years, regardless of hours operated.

Montana-Dakota is required to test the Unit 2 turbine and demonstrate compliance with the NO<sub>x</sub>, SO<sub>2</sub>, and carbon monoxide (CO) emission limits contained in Section III.C.8 and III.C.9 of the operating permit. The performance test shall be conducted while the Unit 2 turbine is combusting natural gas or No.2 Fuel Oil (as appropriate). Testing shall occur on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department. All testing and reporting of tests shall include a determination of the amount of NO<sub>x</sub> and the amount of NO<sub>2</sub> emissions from the turbine.

All source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

#### **D. Recordkeeping Requirements**

The recordkeeping provisions shall be sufficient to meet the provisions of the monitoring requirements and shall include, as necessary, the installation, use, and maintenance of the monitoring equipment or methods. The following information shall also be provided as necessary: the date the analyses were performed, the place and time of the sampling, the company or entity performing the sampling, the analytical techniques or methods used, the results of such analyses, and the operating conditions at the time of the analyses. Retention of the records of all required monitoring data and support information shall be for a period of at least 5 years from the date of measurement. Support information includes all calibration and maintenance records and copies of all reports required by the operating permit.

#### **E. Reporting Requirements**

Montana-Dakota is required to submit, to the Department, reports of any required monitoring at least every six months and to annually certify compliance with the applicable requirements contained in the permit. All deviations from permit requirements must be clearly identified in these reports. All reports must be certified by a responsible official. The permittee is also required to promptly report any deviations from the permit requirements due to upset conditions and the probable cause of the upset condition along with any corrective actions or preventive measures taken.

#### **F. Public Notice**

In accordance with ARM 17.8.1232, a public notice was published in the *Ranger Review* newspaper on or before March 1, 2009. The Department provided a 30-day public comment period on the draft operating permit from March 2, 2009, to April 1, 2009. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by April 1, 2009, were summarized, along with the Department's responses, in the following table.

### Summary of Permittee Comments

Person/Group Commenting	Comment	Department Response
Montana-Dakota	Section I  The facility contact person is incorrect. It should be changed to Abbie Krebsbach at (701) 222-7844.	The permit was updated to reflect the correct facility contact.
Montana-Dakota	Section III.F  EU6 is referenced as EU06. Montana-Dakota recommended changing EU06 to EU6 to maintain uniformity with the emitting unit's naming convention in the rest of the permit.	The Department agrees. EU06 was changed to EU6.
Montana-Dakota	Section II  Additional descriptors should be added the EU6, the emergency generator to avoid confusion with IEU2, the 60 KW emergency power plant supply diesel generator. Montana-Dakota suggested adding the size of EU6, 2-MW, to the description.	The Department agrees. 2-MW was added to the name of EU6.
Montana-Dakota	Section III.C.20  The condition references MDU-Glendive. The name should be changed to Montana-Dakota to be consistent with the rest of the permit.	The Department agrees. The name was changed to Montana-Dakota.
Montana-Dakota	Section III.B.15 and III.C.21  Current testing practices combine NO and NO <sub>2</sub> and report total NO <sub>x</sub> . While NO <sub>2</sub> is measured it is not reported as a separate parameter. Montana-Dakota recommended the requirement be changed to indicate only total NO <sub>x</sub> be reported.	The Department agrees. The condition was changed to indicate total NO <sub>x</sub> be reported.

<b>Person/Group Commenting</b>	<b>Comment</b>	<b>Department Response</b>
Montana-Dakota	<p>Section III.B.22.a and III.C.33.a</p> <p>These emitting units are not required to test more frequently than every 4 years. These reporting requirements are for a summary of the last source tests conducted and are to be submitted semiannually. Montana-Dakota believes this is onerous and creates redundancy in the reporting. Montana-Dakota recommended changing the condition to require a summary of “results of any source test performed during the reporting period.”</p>	The Department agrees. The language was changed as requested.
Montana-Dakota	<p>Section III.B.22.c and III.C.33.c</p> <p>These conditions require Montana-Dakota to keep fuel analyses provided by the fuel supplier. Montana-Dakota has found that information supplied by the fuel supplier did not always contain all the information needed to demonstrate compliance with the applicable requirement and has been using an independent lab to conduct their fuel analyses. Montana-Dakota recommended adding the language “or fuel analysis conducted by an independent laboratory” to these conditions.</p>	The Department agrees. The language was changed to indicate that a fuel analysis is required and that the fuel analysis may be from the fuel supplier or from an independent laboratory.
Montana-Dakota	<p>Section III.B.22.e and III.C.33.f</p> <p>Montana-Dakota reports the maximum monthly 12-month rolling cumulative tons of NO<sub>x</sub> emissions during the previous 6 months. Montana-Dakota does not report each monthly value during the reporting periods. Montana-Dakota suggested replacing the language to clarify what values were to be reported.</p>	The Department agrees that the conditions were misleading. The Department changed the conditions to now read: “A summary of the log required in Section III.B.19 monitoring compliance with the NO <sub>x</sub> emission limit. The summary shall include a rolling 12-month average for each month in the reporting period..”
Montana-Dakota	<p>Section III.C. Table, rows 10 to 13</p> <p>The required stack testing frequency for EU2 is every 2 years. Montana-Dakota recommended change “biannual” to “biennial”.</p>	The Department agrees. “Biannual” was changed to “biennial”.

<b>Person/Group Commenting</b>	<b>Comment</b>	<b>Department Response</b>
Montana-Dakota	<p>Appendix A. and Technical Review Document (TRD) Section II.C</p> <p>IU3 (Starting Motor) and IU4 (Storage Tank) do not exist. Montana-Dakota recommends removing reference to these emitting units.</p>	The Department agrees. Reference to these emitting units has been removed from the lists of Insignificant Emitting Units.
Montana-Dakota	<p>Appendix C</p> <p>The EPA notification address is an old address. Montana-Dakota recommended changing the address to the current and correct address.</p>	The Department agrees. The address was updated.
Montana-Dakota	<p>Appendix D.2</p> <p>Montana-Dakota asked that the permit be changed to indicate that side shields must be worn on all safety glasses worn at the facility.</p>	The Department agrees. The permit was changed to read “safety glasses with side shields” are required at the facility.
Montana-Dakota	<p>Appendix F.6.c.1</p> <p>This section references only a CEMS. Unit 2 utilizes a PEMS. Montana-Dakota recommended adding “or PEMS” to this section.</p>	The Department agrees. The “or PEMS” was added to the section.
Montana-Dakota	<p>TRD Section II.A. paragraph 3</p> <p>This section indicated Unit 2 has a 600 hp diesel starting engine. Unit 2 has an electric starting motor. Montana-Dakota recommended language be changed to indicate an electric starting motor is utilized for Unit 2.</p>	The Department agrees. Language referring to a starting engine was removed and it now indicates the use of an electric starting motor.
Montana-Dakota	<p>TRD Section II.B. last paragraph and Section III.A first paragraph</p> <p>Language refers to Unit 2 in a future sense. Montana-Dakota recommended the permit be updated to reflect current operations at the facility.</p>	The Department agrees. Language was updated to indicate Unit 2 operates as a dual fuel unit that can burn No. 2 fuel oil as well as pipeline quality natural gas. In addition, it indicates the 74,000 gallon tank supplies No. 2 fuel oil to both turbines.
Montana-Dakota	<p>TRD Section III.C. fourth paragraph</p> <p>This section indicates testing is only required on Unit 2 when burning natural gas. Testing is also required when burning NO. 2 fuel oil. Montana-Dakota recommended correcting the language to reflect the correct testing requirements.</p>	The Department agrees. Language was changed to indicate compliance testing is required when burning either No. 2 fuel oil or natural gas.

## SECTION IV. NON-APPLICABLE REQUIREMENTS ANALYSIS

Section IV of the operating permit “Non-applicable Requirements” contains the requirements that the Department determined were non-applicable. Montana-Dakota did not identify any non-applicable requirements on a facility-wide basis or an individual emissions unit basis.

Although Section IV of the operating permit lists numerous federal requirements that are not applicable to the Montana-Dakota facility, several required a more detailed analysis. Specifically, Subparts K, Ka, and Kb do not apply to the facility because of the following:

- A. The No.2 Fuel Oil Storage Tank with Source ID #3 (74,000 gallon capacity) is not an NSPS source as identified in 40 CFR 60, Subparts K and Ka because the date of manufacture of the tank excludes these subparts. According to date only, Subpart Kb would apply to the facility. However, because the capacity of the tank is greater than 151 m<sup>3</sup> (39,894.2 gallons) and because the No.2 Fuel Oil has a true vapor pressure less than 3.5 kPa (actual vapor pressure is 0.04 kPa), this tank is exempt from the General Provisions and the provisions of Subpart Kb.

Although the capacity of the No.2 Fuel Oil Storage Tank (Source ID #3) is greater than 65,000 gallons, ARM 17.8.324 does not apply because the vapor pressure of the distillate is less than 2.5 psia. Since ARM 17.8.324 is not applicable, the tank is not required to install one of the vapor loss control devices mentioned in the rule.

- B. The No.2 Fuel Oil Storage Tank with Source ID #4 (200 gallon capacity) is not an NSPS source as identified in 40 CFR 60, Subparts K and Ka because the capacity of the storage vessel is well below the 40,000-gallon cutoff. The year of manufacture of the tank was not provided, but due to the size of the tank, these subparts do not apply. Source ID #4 is not an NSPS source as identified in 40 CFR, Subpart Kb because the capacity of the storage vessel is well below the 40 cubic meter cutoff.

The provisions of ARM 17.8.324 do not apply to Source ID #4 because the tank has a capacity less than 65,000 gallons.

- C. Furthermore, 40 CFR 60, Subpart GG does not apply to Unit 1 of the Montana-Dakota Glendive Turbine because Unit 1 commenced construction prior to October 3, 1977. Subparts KKK and LLL do not apply because the facility does not process natural gas. The remainder of the subparts listed in Section IV of the operating permit do not apply because the facility is not an affected source as defined in these regulations.

## SECTION V. FUTURE PERMIT CONSIDERATIONS

### A. MACT Standards

As of the issuance date of this permit, the Department is unaware of any future MACT Standards that may be promulgated that will affect this facility.

### B. NESHAP Standards

As of the issuance date of this permit, the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

### C. NSPS Standards

As of the issuance date of this permit, the Department is unaware of any future NSPS Standards that may be promulgated that will affect this facility.

### D. Risk Management Plan

As of the issuance date of this permit, this facility does not have any substance listed in 40 CFR 68.115 or 40 CFR 68.130, which exceeds the minimum threshold quantities. Consequently, this facility is not required to submit a Risk Management Plan.

### E. Compliance Assurance Monitoring (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 emission of the applicable regulated air pollutant that are greater than major source thresholds.

Montana-Dakota 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.