

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

**Permitting and Compliance Division
1520 E. Sixth Avenue
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Helena, Montana 59620-0901**

Williston Basin Interstate Pipeline Company
Baker Station
SE¼ of the SE¼ of Section 12, Township 7 North, Range 59 East, in Fallon County
P.O. Box 131
Glendive, MT 59330

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

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Methods 7 & 10
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semi-annual Reporting Required	X		As applicable
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permitting (MAQP)	X		MAQP #2954-01
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR)-includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring	X		EB01 – Waukesha 7044GSI
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 operating permit. Conclusions in this document are based on information provided in the original operating permit application submitted by Williston Basin Interstate Pipeline Company (WBI) and received by the Department of Environmental Quality (Department) on June 12, 1996; the modification application received on November 26, 2002; the administrative amendment request received on January 8, 2004 and July 31, 2009; the renewal applications received on February 12, 2003 and February 2, 2008; and the significant modification application received on January 11, 2010.

B. Facility Location

WBI owns and operates the Baker Station. This facility is located in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 12, Township 7 North, Range 59 East, in Fallon County, Montana. Fallon County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. This site is east of Baker on Highway 12. Land use on nearby property is commercial and rangeland/grain croplands. The nearest residence is approximately 2 city blocks away from the site.

C. Facility Background Information

Montana Air Quality Permit (MAQP)

This facility was constructed prior to November 23, 1968, and was therefore grandfathered from the MAQP process.

On January 24, 2003, WBI was issued MAQP #2954-00 which allowed the addition of a 1,680-horsepower (hp) Waukesha compressor engine with a potential to emit (PTE) greater than 25 tons per year. The permit was issued for the operation of the Baker Compressor Station; which included six engines, a dehydration unit, and the miscellaneous heaters, boilers, tanks, and, fugitive volatile organic compound (VOC) sources.

On January 8, 2004, the Department received an administrative amendment request from WBI. WBI requested that the Department make emission offsets from the 1,680 hp Waukesha Compressor Engine a federally enforceable permit condition to allow WBI the flexibility to “swing” 1,680-hp Waukesha compressor engines at the facility. **MAQP #2954-01** was finalized on March 4, 2004, and replaced MAQP #2954-00.

Title V Operating Permit

On June 12, 1996, WBI submitted an application for an operating permit. The emission inventory submitted with the application indicated potentials for nitrogen oxides (NO_x) and carbon monoxide (CO) at levels of greater than 100 tons per year (TPY), which required this facility to obtain an operating permit. On September 9, 1998, the Department issued **Operating Permit #OP2954-00** to WBI and this permit expired on September 9, 2003.

On February 12, 2003, WBI applied for a renewal of their Title V Operating Permit. At that time, WBI proposed to install a new 1,680-hp Waukesha compressor engine with the PTE greater than 25 tons per year. #OP2954-01 was renewed with the addition of the new Waukesha engine and updated to reflect current permit language and rule references used by the Department.

Operating Permit #OP2954-01 replaced Operating Permit #OP2954-00.

On February 2, 2008, WBI applied for a renewal of their Title V Operating Permit for the Baker Compressor Station. WBI's #OP2954-01 expired on August 9, 2008. On August 6, 2009, the Department issued **Operating Permit #OP2954-02** to WBI and this permit expires on August 6, 2014. Operating Permit #OP2954-02 replaced Operating Permit #OP2954-01.

On July 31, 2009, WBI requested that the Department amend WBI's current Title V operating permit, Operating Permit #OP2954-02, to add conditions that would allow WBI to use the "swing engine methodology" for the 1680-hp Waukesha Compressor Engine. MAQP #2954-01 allows WBI the flexibility to swap engines and was finalized on March 4, 2004. However this administrative change was not incorporated into WBI's Title V Operating Permit #OP2954-02 due to Department requesting that additional items be addressed in order to update the permit.

D. Current Permit Action

On January 11, 2010, WBI submitted a significant modification request to the Department to modify their current Title V Operating Permit, #OP2954-02. These modifications consist of:

- Adding conditions that will allow WBI to use the "swing engine methodology" for the 1680-hp Waukesha Compressor Engine.
- Updating the facility contact information.
- Changing some of the emitting unit identification names to match the names that WBI refers to them.
- Incorporating the Compliance Assurance Monitoring (CAM) for the 1,680-hp Waukesha 7044GSI unit into the operating permit which is required by the Administrative Rules of Montana (ARM) 17.8, Subchapter 15.

Operating Permit #OP2954-03 will incorporate the requested changes and replace Operating Permit #OP2954-02.

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 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.

F. Compliance Designation

On October 15, 2008, the Department conducted an inspection of WBI's Baker Station. At that time, the Department determined that WBI was in compliance with MAQP #2954-01 and Operating Permit #OP2954-01.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

The Baker Station is a natural gas pipeline booster station. It also pulls suction on storage fields as well as production fields. Field and production gas is pumped up to the required pressure in the natural gas transmission line. Compression of the gas is accomplished using the six compressor engines on site. Space heaters provide heat to various station facilities. Also, the gas is dried as it is being processed using a regenerator heater. The gas contains some moisture, which must be removed from the system prior to being sent into the transmission system. Burning natural gas in the regenerator heater generates the heat necessary to remove the moisture. The Standard Industrial Classification (SIC) for this facility is “Natural Gas Transmission” which has an SIC Code of “4922”.

B. Emission Units and Pollution Control Device Identification

Currently, the Baker Station has two 330-hp Ingersoll Rand compressor engines, three 540 hp Cooper-Bessemer compressor engines, and one 1,680-hp Waukesha compressor engine. NO_x and CO emissions from the 1,680-hp Waukesha compressor engine are controlled with a non-selective catalytic reduction (NSCR) unit and an air/fuel ratio (AFR) controller, while burning pipeline quality natural gas in this engine minimizes VOC emissions.

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	540-horsepower (hp) Cooper-Bessemer compressor engine	None
EU006	330-hp Ingersoll Rand compressor engine	None
EU007	330-hp Ingersoll Rand compressor engine	None
EU008	540-hp Cooper-Bessemer compressor engine	None
EU009	540-hp Cooper-Bessemer compressor engine	None
EB01	1,680-hp Waukesha compressor engine	Non-selective catalytic reduction (NSCR) and an air/fuel ratio controller (AFR)

C. Categorically Insignificant Sources/Activities

ARM 17.8.1201(22)(a) states that if an emitting unit has an applicable requirement, then it is not an insignificant emitting unit.

This facility has some pieces of equipment that are insignificant emission units. They include: one three million British thermal units per hour (MMBtu/hr) direct-fired regenerator heater (dehydrator), various building heaters less than 1 MMBtu/hr, one Mueller steam boiler used for space heating, one tank heater, ten tanks and numerous process valves, flanges, open-ended lines, seals, etc.

Emissions Unit ID	Description
Armstrong space heater	150,000-Btu/hr
Armstrong space heater	150,000-Btu/hr
AO Smith water heater	65,000-Btu/hr
Gorgon Ray radiant space heater	7,500-Btu/hr
Gorgon Ray radiant space heater	7,500-Btu/hr
Gorgon Ray radiant space heater	7,500-Btu/hr
Mueller steam boiler	1,260,000-Btu/hr
Modine space heater	50,000-Btu/hr
Bruest catalytic radiant space heater	18,000-Btu/hr

Emissions Unit ID	Description
Bruest catalytic radiant space heater	18,000-Btu/hr
Bruest catalytic radiant space heater	18,000-Btu/hr
ITT Grinnell Aerothermes	125,000-Btu/hr
ITT Grinnell Aerothermes	125,000-Btu/hr
Janitrol space heater	200,000-Btu/hr
Janitrol space heater	200,000-Btu/hr
Janitrol space heater	200,000-Btu/hr
Town border station space heater	50,000-Btu/hr
Enerteck tank heater	125,000-Btu/hr
Ethylene glycol tank	1000-gal
Hydrocarbon condensate tank	13,230-gal
Produced water/slop oil	16,800-gal
Misc. tanks (5)	
Direct-fired regenerator heater (dehydrator)	3,000,000-Btu/hr
In-plant vehicle traffic	
Repair and maintenance activities	

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Emission limits for the 330-hp Ingersoll Rand engines were established under the authority of ARM 17.8.749 and the emission limits for the 1,680-hp Waukesha engine were established in a BACT determination under the authority of ARM 17.8.752. The 1,680 hp Waukesha engine has emission limits of 7.41 pounds per hour (lb/hr) NO_x, 11.11 lb/hr CO, and 3.70 lb/hr VOC. The 330 hp Ingersoll Rand engines has an emission limit of 9.10 lb/hr NO_x established under ARM 17.8.749.

The emission units at this facility are not subject to any current MACT, NESHAP, or NSPS. This facility is not subject to PSD regulations.

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 do not require the permit to impose the same level of rigor for all emission units. Furthermore, they do 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 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 *Fallon County Times* newspaper on or before June 1, 2010. The Department provided a 30-day public comment period on the draft operating permit from June 1, 2010, to June 30, 2010. 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 June 30, 2010, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to WBI so they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
No comments received		

G. Draft Permit Comments

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response
No comments received		

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response
No comments received		

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. The following table summarizes the requirements that WBI identified as non-applicable and contains the reasons that the Department did not include these requirements as non-applicable in the permit.

Requirement not Identified in the Operating Permit

Applicable Requirement	Reason
40 CFR 61, Subpart M National Emissions Standards for Hazardous Air Pollutants - Asbestos	This is a federal regulation that has specific procedural requirements that may become relevant to the major source during the permit term.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

As of the draft issuance date of Operating Permit #OP2954-03, 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines could potentially be applicable to this facility in the future.

B. NESHAP Standards

As of the draft issuance date of Operating Permit #OP2954-03, the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

C. NSPS Standards

As of the draft issuance date of Operating Permit #OP2954-03, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines could potentially be applicable to this facility in the future.

D. Risk Management Plan

As of the draft issuance date of Operating Permit #OP2954-03, 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.

E. 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;
- 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 is greater than major source thresholds.

EB01 at the Baker Compressor Station meets the criteria listed in ARM 17.8.1503 and therefore requires a CAM plan. Unit EB01 uses an NSCR pollution control device to reduce its NO_x and CO emissions and potential pre-control CO emissions are greater than the major emitting unit threshold of 100 tons per year. The CAM plan supplied by WBI can be found in Appendix E of Operating Permit #OP2954-03.