

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

**Permitting and Compliance Division
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WBI Energy Transmission, Inc.
Baker Booster and Sandstone Creek Compressor Station
Section 2, Township 7 North, Range 59 East - Fallon County
2010 Montana Avenue
Glendive, Montana 59330

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		Portable Analyzer
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As Required
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
Administrative Rules of Montana (ARM) Subchapter 7 – Montana Air Quality Permit (MAQP)	X		MAQP #3301-04
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	Except for 40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart ZZZZ and Subpart HH
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 (CAM)	X		
State Implementation Plan (SIP)	X		

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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 emissions 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 initial Title V application submitted by WBI Energy Transmission, Inc. (WBI) on January 18, 2012. Information was also taken from Montana Air Quality Permits (MAQP) for the Baker Booster and Sandstone Creek Compressor Station issued April 27, 2004; June 6, 2007; May 9, 2011; and April 5, 2012. Additional correspondence was received October 17, 2013.

B. Facility Location

WBI owns and operates the Baker Booster and Sandstone Creek Compressor Station. This facility is sited approximately 1.5 miles North of Baker, Montana and immediately East of Pennel Road. Northeast ¼ of Section 2, Township 7 North, Range 59 East - Fallon County. Fallon County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

C. Facility Background Information

Montana Air Quality Permit

On April 27, 2004, Williston Basin Interstate Pipeline Company (WBIPC) was issued MAQP #3301-00 for the construction and operation of five (5) 1,680 brake-horsepower (bhp) compressor engines, a single 0.75 million British thermal units per hour (MMBtu/hr) triethylene glycol dehydration unit, and miscellaneous natural gas-fired heaters. The permitted facility was constructed and operated for the purpose of natural gas gathering activities under Standard Industrial Classification (SIC) Code 1311 and North American Industry Classification System (NAICS) Code 211111.

On March 22, 2007, the Montana Department of Environmental Quality-Air Resources Management Bureau (Department) received a request from WBIPC to administratively amend MAQP #3301-00. Specifically, WBIPC permitted five, 1680-bhp capacity Waukesha compressor engines for the purpose of providing natural gas gathering services at the Baker Booster Compressor Station. WBIPC proposed to continue to maintain the five previously permitted engines; however, WBIPC dedicated two of the engines for the purpose of natural gas transmission services under SIC 4922 and NAICS Code 486210. The two engines used for transmission services are located within the Baker Booster Tract and adjacent to the existing Baker Booster Compressor Station. The new adjacent station was designated the Sandstone Creek Compressor Station and the affected engines were named Sandstone Creek Unit #1 and Sandstone Creek Unit #2. The overall permitted facility is referred to as the WBIPC Baker Booster and Sandstone Creek Compressor Stations. All limits and conditions established under MAQP #3301-00 and applicable to the affected Waukesha engines remained the same. **MAQP #3301-01** replaced MAQP #3301-00.

On January 10, 2011, the Department received a permit modification request from WBIPC with additional information received on February 25, 2011. With this permit action, WBIPC proposed to add one additional 1,680 bhp Waukesha compressor engine to five existing 1,680 bhp compressor engines. The new engine was added to the Sandstone Creek Compressor Station and the affected engine was named Sandstone Creek Unit #3. **MAQP #3301-02** replaced MAQP #3301-01. With the

installation of the Sandstone Creek Unit #3 compressor engine, potential emissions for carbon monoxide (CO) exceeded the Title V major source threshold. WBIPC was required to submit a Title V Operating Permit application within 12 months after the source (Sandstone Creek Unit #3) became subject to the program pursuant to ARM 17.8.1205.

On January 18, 2012, the Department received an MAQP modification application and the initial Title V Operating Permit application congruently. With the MAQP application, WBIPC proposed the installation of one additional 1,680 bhp capacity Waukesha compressor engine to the Baker Booster Station for the purpose of providing natural gas gathering services. The affected engine was identified as Booster LP1a. **MAQP #3301-03** replaced MAQP #3301-02.

On December 10, 2012, the Department received an Administrative Amendment (AA) request from WBI to change the official name of the company from Williston Basin Interstate Pipeline Company to WBI Energy Transmission, Inc. **MAQP #3301-04** replaced MAQP #3301-03.

Title V Operating Permit

On January 18, 2012, WBI submitted the initial Title V Operating Permit application for the Baker Booster and Sandstone Creek Compressor Station. The Title V Operating Permit application, assigned permit number **#OP3301-00**, was deemed administratively and technically complete on February 15, 2012. A subsequent correspondence was received requesting a change in the name of the facility from Williston Basin Interstate Pipeline Company to WBI Energy Transmission, Inc.

D. Current Permit Action

On October 17, 2013, the Department received a letter from WBI requesting a Responsible Official change in which Mr. Marc Dempewolf replaces Mr. Scott Fradenburgh. Mr. Fradenburgh is now the Alternate Responsible Official for WBI facilities in the State of Montana. As such, **Operating Permit #OP3301-01** replaces Operating Permit #OP3301-00.

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 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?

YES	NO	
		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

The Department conducted an inspection of the Baker Booster and Sandstone Compressor Station on October 15, 2008. No outstanding compliance issues were identified at the time of the inspection. All emitting units at the facility appeared to be in compliance during the Field Compliance Inspection. In addition to the on-site inspection, the Department conducted a review of reports/records submitted by WBI during the period from October 27, 2006, through November 14, 2008, to encompass a Full Compliance Evaluation (FCE).

No warning or violation letters were issued and no air quality enforcement activities have occurred during the compliance monitoring time period. Based on findings at the time of the facility inspection and review of reports and records, the Department, determined that WBI was in compliance with applicable permit conditions.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

The Baker Booster and Sandstone Creek Compressor Station is used to draw natural gas directly from the production field and subsequently compress gas for transmission through long-haul pipelines for transport to natural gas markets. The Standard Industrial Classification (SIC) for this facility is “Natural Gas Gathering” under SIC Code 1311 and “Natural Gas Transmission” which has an SIC Code of “4922”.

B. Emission Units and Pollution Control Device Identification

The following table summarizes the permitting equipment at the Baker Booster and Sandstone Creek Compressor Station.

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	1,680 brake-horsepower (bhp) Waukesha L7044 GSI Four-Stroke Rich-Burn (4SRB) Reciprocating Compressor Engine (Booster #1)	Non-Selective Catalytic Reduction (NSCR) Unit / Air-to-Fuel (AFR) Ratio Controller
EU002	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Booster #2)	NSCR Unit / AFR Controller
EU003	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Booster #3)	NSCR Unit / AFR Controller
EU004	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Booster LP #1a)	NSCR Unit / AFR Controller
EU005	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Sandstone #1)	NSCR Unit / AFR Controller
EU006	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Sandstone #2)	NSCR Unit / AFR Controller
EU007	1,680 bhp Waukesha L7044 GSI 4SRB Reciprocating Compressor Engine (Sandstone #3)	NSCR Unit / AFR Controller
EU008	0.75 Million British Thermal Unit per Hour (MMBtu/hr) Triethylene glycol Dehydration Unit	None

C. Categorically Insignificant Sources/Activities

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 (HAP), and is not regulated by any applicable requirement other than a generally applicable requirement.

Emissions Unit ID	Description
IEU01	Modine 0.2 MMBtu/hr N.G. Shop Heater
IEU02	AO Smith 0.032 MMBtu/hr N.G. Water Heater
IEU03	Weil-McLain 0.155 MMBtu/hr N.G. Boiler
IEU04	Mr. Heater MHU45 0.045 MMBtu/hr N.G. Shop Heater
MISC1	Fugitive emissions from valves, flanges, open-ended lines, compressor seals, etc.

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The 1,680 bhp Waukesha Compressor Engines are limited to 3.70 lb/hr for NO_x, 4.44 lb/hr for CO, and 1.85 lb/hr for VOC. The emission limits are based on ARM 17.8.752 Best Available Control Technology (BACT) determinations that were established by the Department. Emissions from each of the compressor engines are required to be controlled by a NSCR unit and AFR controller. The pound per hour limits were established as BACT in the initial MAQP application using 1.0 gram per horsepower-hour (g/Hp-hr) for NO_x and 0.5 g/Hp-hr for VOC. Further, WBI proposed a 1.2 g/Hp-hr CO limit for the purpose of meeting the requirements of a Title V synthetic minor source to initially avoid the need to obtain a Title V operating permit.

In addition, emissions from each of the engines are limited to 20% opacity averaged over 6 consecutive minutes and particulate matter caused by the combustion of fuel is limited to $E=1.026 \cdot H^{0.233}$. Further, fuel burned in the engines must not contain sulfur compounds in excess of 50 grains per 100 standard cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.

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

Compliance with the opacity, particulate from fuel combustion, sulfur compounds in fuel (gaseous), and VOC limitations in the permit may be demonstrated by burning pipeline quality natural gas (as defined by WBI's Federal Energy Regulatory Commission (FERC) gas tariff) on an ongoing basis.

Title V Operating Permit #OP3301-00 contains requirements for semiannual testing with a portable analyzer for NO_x and CO on the compressor engines (EU001-EU007). The permit stipulates that the portable analyzer shall be capable of achieving performance specifications equivalent to the traditional test methods in 40 CFR 60, Appendix A, or shall be capable of meeting the requirements of EPA Conditional Test Method 030 for the "Determination of Nitrogen Oxides, Carbon Monoxide,

and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers.” WBI may use another testing procedure as approved in advance by the Department. All compliance source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106). WBI will then convert the NO_x and CO emissions test results from a parts per million (ppm) concentration to a lb/hr and g/bhp-hr emission rate as necessary. Stack gas flow rates shall be determined using EPA Test Methods in 40 CFR 60, Appendix A in order to monitor compliance with the emissions limitations in the permit.

The Department will use the portable analyzer testing results as a direct measure of compliance. 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 WBI 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

As an administrative action, no public notice was required.

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Section IV of the Operating Permit #OP3301-01 "Non-applicable Requirements" contains the requirements that the Department determined were non-applicable. WBI did not identify any Air Quality ARM or Federal Regulations as non-applicable to the facility or to any specific emissions unit under the current operating permit application (ARM 17.8.1214). WBI shall comply with any new requirements that may become applicable during the permit term.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (HAP) for Stationary Reciprocating Internal Combustion Engines was updated in 2010 with varied compliance dates established for affected units at area sources. The Baker Booster and Sandstone Creek Station is considered an area source for HAP emissions. Units EU001 through EU004 are considered existing sources since their initial construction commenced before June 12, 2006; therefore, as affected units they must demonstrate compliance with these standards by October 19, 2013. EU005 through EU007 are considered new sources since their initial construction commenced after June 12, 2006. An affected new source located at an area source of HAP must meet the requirement of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ (See Section V.C). 40 CFR 63 Subpart ZZZZ may have applicability on future engine replacements or installations as well.

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities applies to each TEG Dehydration Unit located at an area source natural gas production facility that processes, upgrades, or stores natural gas prior to the point at which the natural gas enters the transmission and storage source category or is delivered to a final end user. The TEG dehydration unit at the Baker Booster and Sandstone Creek Compressor Station receives natural gas directly from the production field prior to processing and is therefore subject to the area source requirements in 40 CFR 63, Subpart HH.

B. NESHAP Standards

As of the issuance date of Title V Operating Permit #OP3301-01, the Department is unaware of any future NESHAP rules that may be promulgated that will affect this facility.

C. NSPS Standards

Under 40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE) affected engines at the Baker Booster and Sandstone Creek Compressor Station are those stationary SI ICE with a maximum engine power greater than or equal to 500 hp that commenced construction after June 12, 2006, where the engines were manufactured on or after July 1, 2007. For the purpose of Subpart JJJJ, commence construction is the date the engine is ordered and the date of manufacture means the date the engine was originally produced.

EU001 through EU004 are not affected sources under Subpart JJJJ as they were constructed prior to June 12, 2006. Unit EU005 through EU007 were constructed after June 12, 2006, but manufactured prior to July 1, 2007, and therefore not subject to 40 CFR Subpart JJJJ. 40 CFR 60 Subpart JJJJ may have applicability on future engine replacements or installations.

D. Risk Management Plan

As of issuance date of Title V Operating Permit #OP3301-01, 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; three 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 emissions of an applicable regulated air pollutant that is greater than the major source threshold.

Units EU001 through EU007 meet the criteria listed in ARM 17.8.1503 and therefore require a CAM plan. These emitting units have potential pre-control device emissions greater than 100 tons per year and for NO_x and CO and employ an NSCR unit and AFR controller to maintain emissions below the respective applicable emission limit for these pollutants. The CAM plan supplied by WBI can be found in Appendix E of Title V Operating Permit #OP3301-01.

F. PSD and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the “light duty vehicle rule” (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG “Tailoring Rule” (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011, would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO₂e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO₂e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO₂e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO₂e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

Based on information provided by WBI, Baker Booster and Sandstone Creek Compressor Station’s potential emissions fall below the GHG major source threshold of 100,000 TPY of CO₂e for both Title V and PSD under the Tailoring Rule.