

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

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

**Williston Basin Interstate Pipeline Company
Fort Peck Compressor Station
23 MDU Road
Nashua, MT 59248**

The following table summarizes the 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	X		#2803-02
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	
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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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 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), received by the Department on June 12, 1996; the first renewal application received on April 29, 2002; and the information received by the Department on December 19, 2007 for the current renewal application.

B. Facility Location

WBI owns and operates the Fort Peck Compressor Station. This facility is located in the SW¼ of the SE¼ of Section 28, Township 27 North, Range 41 East, in Valley County, Montana. Valley County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. The Fort Peck Compressor Station has a total property area of five acres. This facility is located approximately five miles west of the Fort Peck Indian Reservation, a PSD Class I Area.

C. Facility Background Information

The Fort Peck Compressor Station was constructed by the Montana Dakota Utilities Company, WBI's predecessor, in 1940. This facility originally had two compressor engines, and by 1947 nine low horse power natural gas fired compressor engines were operating at the site. In 1983 the facility was renovated. Nine auxiliary power engines were removed and eight Ingersoll-Rand 8XVG compressor engines were replaced by three 800-horsepower (hp) Superior 6GTL turbocharged compressor engines. By spring of 1984, all engines installed prior to 1947 were retired from service and removed from the site.

WBI's application for a Montana Air Quality permit for the Fort Peck Compressor Station was received on November 10, 1992, and was given **Permit Application #2755-00**. The application was deemed incomplete by the Montana Department of Health – Air Quality Division now Department of Environmental Quality (Department) on November 9, 1992, for lack of a Best Available Control Technology (BACT) determination, an air quality analysis, an additional impact analysis, incomplete information on the site drawing, and lack of an application fee. In this application Nitrogen Oxides (NO_x) emissions from the three 800-hp Superior compressor engines were calculated using the manufacturer's emission factor of 15 grams/hp-hr and totaled 401.6 tons per year (TPY). Prior to the 1983 renovation, total NO_x emissions were estimated to be 200.4 TPY; thus NO_x emissions increased by 201.2 TPY. Therefore, the Department determined that the facility was subject to PSD regulations and notified WBI in a letter dated December 15, 1992.

In May of 1993, WBI conducted an emissions test on one of the 800-hp Superior engines in order to accurately model air emissions. This test revealed that the NO_x emission rate was 6 grams/hp-hr. WBI re-submitted a permit application for the Fort Peck Compressor Station on September 29, 1993. The Department assigned this **Application #2803-00**. NO_x emissions for the compressor engines were calculated using a BACT value of 7.5 grams/hp-hr, and the facility total was estimated to be 227 TPY of NO_x. When compared to the pre-renovation total of 201.2 TPY,

the net NO_x emission increase from operating the three Superior engines was actually less than 26 TPY. Therefore, the Department concluded that the Fort Peck Compressor Station was not subject to PSD.

On November 4, 1993, the Department deemed Application #2803-00 incomplete due to an incomplete BACT analysis. The additional BACT information was submitted by early December 1993; however, the Department issued another incompleteness letter on January 10, 1994, citing incorrect emission rates used for the dispersion modeling. WBI revised the dispersion modeling and submitted it on February 9, 1994. The Department issued the Preliminary Decision (PD) on March 14, 1994, that required the installation and operation of air/fuel ratio (AFR) controllers on the three compressor engines and the generator engine and established NO_x, Carbon Monoxide (CO), and Volatile Organic Compounds (VOC) emission limits for each engine.

WBI's response to the PD included: a request to test only one of the three identical Superior compressor engines, a request to postpone source testing and installation of an AFR controller on the emergency generator engine until the unit it was placed into continuous service, and a request to increase the generator engine CO emission limit from 1.59 lb/hr to 8.73 lb/hr. This response also pointed out transposed numbers for CO and VOC emission limits for the compressor engines. In the draft Department Decision (DD) issued on April 6, 1994, the Department responded by correcting the transposed CO and VOC emission limits for the compressor engines, by eliminating the AFR controller and the testing requirement for the generator engine, and by raising the CO emission limit for this unit.

A second draft DD was issued on April 11, 1994, and made provisions for establishing the generator as the permanent main electrical power supply when it becomes economical; at which time an AFR controller would be installed on the generator engine and an emissions test would be required. The DD was issued on April 13, 1994, and in a letter received by the Department on April 14, 1994, WBI found these terms and conditions acceptable. The final permit for the Fort Peck Compressor Station was issued on April 28, 1994.

In May of 1994, WBI submitted the required information on the compressor engines AFR controllers. In February of 1995, WBI submitted a request to rescind the BACT determination and reduce the NO_x emissions from the compressor station by installing clean-burn kits on two compressor engines while allowing the third rich burn engine to run at best fuel economy. On May 30, 1995, the Department issued a letter stating that ARM 17.8.715 did not allow the Department to suspend a previous BACT determination; thereby the original BACT determination and emission limits were upheld.

In July of 1995, WBI requested authorization to replace the 10-inch inside diameter mufflers on the three compressor engines with mufflers having a 14-inch inside diameter in order to reduce back pressure. This modification would also increase overall stack height by 2-feet-2-inches to a total height of 30 feet. WBI's proposal anticipated changing one muffler per year over the next three years, and the Department approved the request in a September 7, 1995, letter.

On February 14, 1998, Williston Basin requested the Department to modify Permit #2803-00 to allow them to incorporate changes under ARM 17.8.705(q). **Permit #2803-01** was issued on May 8, 1998, and allowed the swing engine methodology that Williston Basin practices to ensure proper engine maintenance and operations. There was no changes expected in compression capabilities or averages as a result of the swing methodology. There was no changes expected in emissions from the facility as a result of the swing methodology. Permit #2803-01 replaced Permit #2803-00.

On April 25, 2002, the Department of Environmental Quality (Department) received a letter from WBI requesting to modify Permit #2803-01. In the letter, WBI requested to remove the every 4-year testing requirements for Units #1, #2, and #3 from Permit #2803-01 because WBI's operating permit (#OP2803-00) requires the units to be tested every 6 months. This permit action removed the every 4-year testing requirements from the permit. In addition, the permit format and the permit language were updated. **Permit #2803-02** replaced Permit #2803-01. **Operating Permit #OP2803-00** was issued final and effective on November 10, 1997.

The Department issued the renewal of WBI's Title V Operating Permit #OP2803-00 for the Fort Peck Compressor Station final and effective on June 21, 2003. WBI's Operating Permit #OP2803-00 was applicable for 5 years and expired on November 11, 2002. WBI applied for a renewal of their Title V Operating Permit on April 29, 2002. **Operating Permit #OP2803-01** replaced Operating Permit #OP2803-00.

D. Current Permit Action

The current permit action is a renewal of WBI's Title V Operating Permit #OP2803-02 for the Fort Peck Compressor Station. The Department received the renewal application on December 19, 2007. **Title V Operating Permit #OP2803-02** replaces Operating Permit #OP2803-01.

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

The WBI Fort Peck Compressor Station was inspected by the Department on October 17, 2008. The inspection findings and all material reviewed in the Department's files indicates that the facility is in compliance with the limits and conditions of the Montana Air Quality Permit #2803-02 and Title V Operating Permit #OP2803-02. Through source testing by EPA Methods, all three of the 800-hp Superior 6GTL compressor engines have successfully demonstrated compliance.

II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

The Fort Peck Compressor Station serves as a natural gas pipeline booster station. It receives 20 to 25-million standard cubic feet (MMscf) per day of compressed natural gas from WBI's Saco Compressor Station and delivers it to WBI's Vida Compressor Station. The maximum daily compression capability of the Fort Peck Compressor Station is 30-MMscf per day. 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 Fort Peck Compressor Station has three 800-hp Superior 6GTL turbocharged compressor engines. NO_x, and CO emissions from each engine are controlled with an electronic AFR controller, while burning pipeline quality natural gas in these engines minimizes VOC emissions. The facility has an uncontrolled 360-hp Waukesha F2895GU emergency generator engine that operates only when purchased electrical power is unavailable or during periods of maintenance. WBI has considered placing the generator into continuous service if it becomes more economical than purchasing electricity from the utility company. When this conversion occurs, WBI will be required to install, operate and properly maintain an AFR controller on the generator engine.

C. Categorically Insignificant Sources/Activities

This facility has several pieces of equipment that are insignificant emission units. They include: one 1.35-MMBtu/hr Eclipse boiler; one 40,000-Btu per hour (MBtu/hr) Rudd water heater; one 16-MBtu/hr Magic Chef space heater; one 1,000-gallon slop tank; fugitive emissions from valves, flanges, open-ended lines, etc.; and emissions from equipment blowdowns prior to maintenance activities.

III. PERMIT TERMS

A. Emission Limits and Standards

Emission limits for the three compressor engines and the generator engine were established by a BACT determination under the authority of ARM 17.8.752. Each compressor engine has an emission limit of 13.23 lb/hr NO_x, 5.29 lb/hr CO, and 2.12 lb/hr VOC. The emergency generator engine is limited to 500 hours of operation per year in order to comply with the EPA definition of an "emergency back up generator." If WBI operates the generator continuously, then WBI will be required to install, operate and properly maintain an AFR controller on the generator engine. The unit will have emission limits of 8.73 lb/hr NO_x, 8.73 lb/hr CO, and 3.97 lb/hr VOC.

The emission units at this facility are not subject to any current MACT, NESHAP, or NSPS standards. 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 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 a 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 Glasgow Courier* newspaper on or before February 27, 2009. The Department provided a 30-day public comment period from February 27, 2009, to March 30, 2009, on the draft operating permit. ARM 17.8.1232 required the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by March 30, 2009, will be summarized, along with the Departmental response, in the following table. Furthermore, all comments received during the public comment period will be forwarded to WBI so that they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Identity of Commenter	Comment	Department Response
No Comments		

G. Draft Permit Comments

Summary of Permittee Comments

Permit Location	Permittee Comment	Department Response
Section I – General Information	Please list the facility contact person as Stacy Aguirre with the phone number being (406) 359-7349 and Brian Wurm with the phone number being (406) 359-7355.	The Department made the changes as requested
Section II – Summary of Emissions Units and Section III.B	Please do an administrative change to reference EU1, EU2, and EU3 as 6GTLE instead of 6GTL.	The Department made the changes as requested
Appendix A – Insignificant Emissions Units	Please update to show the Reliance water heater as a Rudd water heater with 32,000 Btu/hr. Also please add a Modine Heater with 100,000 Btu/hr	The Department made the changes as requested

H. EPA Comments:

Summary of EPA Comments

Permit Location	EPA Comment	Department Response
No Comments		

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 60, Subpart A - General Provisions	This federal regulation consists of an applicability statement. These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.

V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

As of the issuance of Operating Permit #OP2803-02, 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 of Operating Permit #OP2803-02, 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 of Operating Permit #OP2803-02, 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 of Operating Permit #OP2803-02, this facility does not have any substance listed in 40 CFR 68.115 or 40 CFR 68.130, which exceeds the minimum threshold quantities. Also, this facility is subject to DOT regulations for accidental release prevention; 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 pollutants that are greater than major source thresholds.

WBI 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.