Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

August 2, 2012

Ms. Deborah Perry
ONEOK Rockies Midstream, LLC.
Baker Gas Plant
P.O. Box 871
Tulsa, OK 74102-0871

RE: Baker Gas Plant Title V Final Operating Permit #OP2736-10

Dear Ms. Perry:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP2736-10, for the ONEOK Rockies Midstream, LLC -- Baker Gas Plant located in the SW¼ of the SW¼ of Section 6, Township 7 North, Range 60 East, in Fallon County, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP2736-10.

If you have any questions, please contact Craig Henrikson, the permit writer, at (406) 444-6711 or by email at chenrikson@mt.gov.

Sincerely,

Charles Homer
Manager, Air Permitting, Compliance and Registration
Air Resources Management Bureau
(406) 444-5279

Craig Henrikson, PE
Environmental Engineer
Air Resources Management Bureau
(406) 444-6711

CH: CPH:
Enclosure
Cc: Donald Law, US EPA Region VIII 8P-AR
Carson Coate, US EPA Region VIII, Montana Office

STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620

AIR QUALITY OPERATING PERMIT NUMBER OP2736-10

Issued to: **ONEOK Rockies Midstream, LLC**
Baker Gas Plant
SW¼ of the SW¼ of Section 6, Township 7 North, Range 60 East, in Fallon County, MT
P.O. Box 871
Tulsa, OK 74102-0871

Final Date: **August 2, 2012**
Expiration Date: **March 16, 2015**

Effective Date: **August 2, 2012**
Date of Decision: **July 2, 2012**

Application Deemed Technically Complete: **June 18, 2012**
Application Deemed Administratively Complete: **June 18, 2012**
ONEOK Rockies Midstream, LLC. Application Received: **June 18, 2012**
AFS Number: **030-025-0001A**

Permit Issuance and Appeal Processes: In accordance with Montana Code Annotated (MCA) Sections 75-2-217 and 218 and the Administrative Rules of Montana (ARM), ARM Title 17, Chapter 8, Subchapter 12, Operating Permit Program, this operating permit is hereby issued by the Department of Environmental Quality (Department) as effective and final on August 2, 2012. This permit must be kept on-site at the above named facility.

Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit have the meaning assigned to them in the referenced regulations.

SECTION I. GENERAL INFORMATION

The following general information is provided pursuant to ARM 17.8.1210(1).

Company Name: **ONEOK Rockies Midstream**

Mailing Address: **P.O. Box 871**

City: **Tulsa** State: **Oklahoma** Zip: **74102-0871**

Plant Location: **County Road 81 #603, SW¼ of the SW¼ of Section 6, Township 7 North, Range 60 East, in Fallon County, MT**

Responsible Official: **Geoffrey A. Sands Vice President** Phone: **(918) 588-7414**
Fax**:** **(918) 588-7844**

Alternate Responsible Official: **David R. Scharf, President** Phone: **(918) 588-7976**

Facility Contact Person: **Jeremy Horwitz, ESH Coordinator** Phone: **(701) 565-2296 ext 230**
(800) 778-7831 ext 230
Fax**:** **(701) 565-2296 ext 0**

Primary SIC Code: **1321**

Nature of Business: **Recovery of natural gas liquids**

Description of Process: Natural gas processing plants remove certain compounds from natural gas that are of considerable value by themselves and other contaminants that render the gas unsuitable for sale. The predominant constituent of natural gas is methane and ethane, with smaller amounts of other hydrocarbons.

The Baker Gas Plant receives natural gas from surrounding fields. Inlet gas flows through a separator that separates water and condensate from the gas. The water and condensate are stored in the condensate tank(s). Compressor engines accomplish initial compression of the gas. The compressed natural gas is then routed to an amine-sweetening unit, which removes any acid gases (hydrogen sulfide (H_2S) and carbon dioxide (CO_2)) present in the incoming gas stream. From the amine contactor, the rich amine flows through a pre-heater (heat exchanger) before going to the amine regenerator.

The amine regenerator uses a heater to elevate the temperature of the rich amine, driving off the acid gases. The acid gases leaving the regenerator are routed to the Acid Gas Flare for combustion/oxidation. These gases were previously sent to the Challenger Flare, which is now out of service. The facility utilizes another flare, the Self Supported Air-Assisted Flare, for the combustion of vent gases during emergency upset conditions or process venting. Both flares are continuously piloted with pipeline quality natural gas and are equipped with an auto-igniter. They are also equipped with a thermocouple and associated recorder.

Lean amine, now stripped of acid gas, flows back through the pre-heater to preheat the rich amine going to the regenerator. The compressed natural gas is then dehydrated through an ethylene glycol (EG) dehydration unit. In addition to water, some benzene, toluene, ethyl benzene, xylene (BTEX), and volatile organic compounds (VOCs) are absorbed by the glycol and removed from the natural gas. The VOCs and BTEX are then separated from the glycol in the glycol regenerator and flash tank. Off-gases

from the regenerator still column are routed to the Anderson heater for thermal destruction. The still vent has a pressure control valve that can be opened to atmosphere when the Anderson heater is down. Off-gases from the flash tank are hard-piped to the inlet condensate separator.

The plant also serves as a fractionation plant. After being dehydrated and de-sulfurized, natural gas liquids (NGLs) are separated from the natural gas. The NGL is referred to as Y-grade and the remaining natural gas is referred to as residue gas. The Y-grade can then be stored for sale or fractionation into its components of propane, butane, and natural gasoline. With the exception of residue gas, these components, along with the condensate initially separated from the inlet gas, are stored in tanks prior to removal from their tanks by tank trucks. Butane, propane, and Y-grade are stored in pressurized storage tanks whereas the condensate and natural gasoline are stored in atmospheric tanks. The pressurized tanks' loading lines have valves at the ends so any vapors are contained within a closed system. The four atmospheric condensate/natural gasoline storage tanks are all piped together for vapor balance and equipped with VOC vapor return lines. Vapor displacement resulting from loadout operations is located at the end of each transfer line, creating a closed system. Therefore, no vapors are allowed to escape during product storage or product transfers.

SECTION II. SUMMARY OF EMISSION UNITS

The emission units regulated by this permit are the following (ARM 17.8.1211):

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	448 brake-horsepower (bhp) Waukesha F-3521G Compressor Engine	Air-to-fuel ratio (AFR) controller and a non-selective catalytic reduction (NSCR) unit
EU002	800 bhp White Superior 8G-825 Compressor Engine	AFR controller and a NSCR unit
EU004	Acid Gas Flare	40 CFR 60.18
EU005	Fugitive Emissions	40 CFR 60, Subpart KKK LDAR Monitoring
EU006	1. Ethylene Glycol Regenerator Vent (8.5 MMscfd) 2. Flash Tank	1. Vent routed to the Anderson hot oil heater for thermal destruction 2. Flash tank vapors hard-piped to the inlet condensation knockout drum
EU007	Y-Grade Product Loading (TL-1) Propane Product Loading (TL-2) Butane Product Loading (TL-3) Condensate/Natural Gasoline Product Loading (TL-4)	Closed System Closed System Closed System Vapor Balance
EU008	Four (4) 400 barrel (bbl) Condensate/Natural gas storage tanks (TK-7, TK-8, TK-9, TK-10)	Vertical fixed roof, vapor balance system, submerge filled and pressure/vacuum vent
EU009	Self Supported Air-Assisted Flare	40 CFR 60.18
EU0010	1250 bhp Waukesha L-7042 GSI Compressor Engine	AFR controller and a NSCR unit
EU012	Amine Regenerator, 6.5 MMscfd	Acid Gas Flare
EU013	Two (2) Y-grade horizontal storage tanks (TK-1, TK-2)	Pressurized tanks, submerge filled and pressure relief valve
EU014	Three (3) Propane horizontal storage tanks (TK-3, TK-4, TK-11)	Pressurized tanks, submerge filled and pressure relief valve
EU015	Two (2) Butane horizontal storage tanks (TK-5, TK-6)	Pressurized tanks, submerge filled and pressure relief valve

SECTION III. PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emission units located at the facility (ARM 17.8.1211, 1212, and 1213).

A. Facility-Wide

Conditions	Rule Citation	Rule Description	Pollutant/Parameter	Limit
A.1	ARM 17.8.105	Testing Requirements	Testing Requirements	-------
A.2	ARM 17.8.304(1)	Visible Air Contaminants	Opacity	40%
A.3	ARM 17.8.304(2)	Visible Air Contaminants	Opacity	20%
A.4	ARM 17.8.308(1)	Particulate Matter, Airborne	Fugitive Opacity	20%
A.5	ARM 17.8.308(2)	Particulate Matter, Airborne	Reasonable Precautions	-------
A.6	ARM 17.8.308	Particulate Matter, Airborne	Reasonable Precaution, Construction	20%
A.7	ARM 17.8.309	Particulate Matter, Fuel Burning Equipment	Particulate Matter	$E= 0.882 * H^{-0.1664}$ or $E= 1.026 * H^{-0.233}$
A.8	ARM 17.8.310	Particulate Matter, Industrial Processes	Particulate Matter	$E= 4.10 * P^{0.67}$ or $E= 55 * P^{0.11}- 40$
A.9	ARM 17.8.322(4)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (liquid or solid fuels)	1 pound per Million Btu fired
A.10	ARM 17.8.322(5)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (gaseous)	50 grains per 100 dry standard cubic feet
A.11	ARM 17.8.324(3)	Hydrocarbon Emissions, Petroleum Products	Gasoline Storage Tanks	-------
A.12	ARM 17.8.324	Hydrocarbon Emissions, Petroleum Products	65,000 Gallon Capacity	-------
A.13	ARM 17.8.324	Hydrocarbon Emissions, Petroleum Products	Oil-effluent Water Separator	-------
A.14	ARM 17.8.340	40 CFR 60, Subpart KKK	Equipment Leaks from Onshore Natural Gas Processing Plants	As applicable
A.15	ARM 17.8.340	40 CFR 60, Subpart LLL	Onshore Natural Gas Processing: SO_2 Emissions	As applicable
A.16	ARM 17.8.342	NESHAPs General Provisions	Startup, shutdown, and Malfunction (SSM) Plans	Submittal
A.17	ARM 17.8.749	Conditions for Issuance of Permit	Production Limit	3,102.5 Million Standard Cubic Feet per rolling 12-months
A.18	ARM 17.8.749	Recordkeeping Requirement	Compliance Monitoring	-------
A.19	40 CFR 68	Chemical Accident Prevention	Risk Management Plan	-------
A.20	ARM 17.8.1211(1)(c) and 40 CFR Part 98	Greenhouse Gas Reporting	Reporting	-------
A.21	ARM 17.8.1212	Reporting Requirements	Prompt Deviation Reporting	-------
A.22	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-------
A.23	ARM 17.8.1207	Reporting Requirements	Annual Certification	-------

Conditions

A.1. Pursuant to ARM 17.8.105, any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

Compliance demonstration frequencies that list "as required by the Department" refer to ARM 17.8.105. In addition, for such sources, compliance with limits and conditions listing "as required by the Department" as the frequency, is verified annually using emission factors and engineering calculations by the Department's compliance inspectors during the annual emission inventory review; in the case of Method 9 tests, compliance is monitored during the regular inspection by the compliance inspector.

A.2. Pursuant to ARM 17.8.304(1), ORM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.3. Pursuant to ARM 17.8.304(2), ORM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.4. Pursuant to ARM 17.8.308(1), ORM shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.5. Pursuant to ARM 17.8.308(2), ORM shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter, unless otherwise specified by rule or in this permit.

A.6. Pursuant to ARM 17.8.308, ORM shall not operate a construction site or demolition project unless reasonable precautions are taken to control emissions of airborne particulate matter. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.7. Pursuant to ARM 17.8.309, unless otherwise specified by rule or in this permit, ORM 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 the maximum allowable emissions of particulate matter for existing fuel burning equipment and new fuel burning equipment calculated using the following equations:

For existing fuel burning equipment (installed before November 23, 1968): $E = 0.882 * H^{-0.1664}$

For new fuel burning equipment (installed on or after November 23, 1968): $E = 1.026 * H^{-0.233}$

Where H is the heat input capacity in million Btu (MMBtu) per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu.

A.8. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, ORM shall not cause or authorize particulate matter to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of particulate matter calculated using the following equations:

For process weight rates up to 30 tons per hour: $E = 4.10 * P^{0.67}$

For process weight rates in excess of 30 tons per hour: $E = 55.0 * P^{0.11} - 40$

Where E = rate of emissions in pounds per hour and p = process weight rate in tons per hour.

A.9. Pursuant to ARM 17.8.322(4), ORM shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per million Btu (lb/MMBtu) fired, unless otherwise specified by rule or in this permit.

A.10. Pursuant to ARM 17.8.322(5), ORM shall not burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 dry standard cubic feet (gr/dscf) of gaseous fuel, calculated as hydrogen sulfide at standard conditions, unless otherwise specified by rule or in this permit.

A.11. Pursuant to ARM 17.8.324(3), ORM shall not load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device or is a pressure tank as described in ARM 17.8.324(1), unless otherwise specified by rule or in this permit.

A.12. Pursuant to ARM 17.8.324, unless otherwise specified by rule or in this permit, ORM shall not place, store or hold in any stationary tank, reservoir or other container of more than 65,000 gallon capacity any crude oil, gasoline or petroleum distillate having a vapor pressure of 2.5 pounds per square inch absolute (psia) or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with a vapor loss control device, properly installed, in good working order and in operation.

A.13. Pursuant to ARM 17.8.324, unless otherwise specified by rule or in this permit, ORM shall not use any compartment of any single or multiple-compartment oil-effluent water separator, which compartment receives effluent water containing 200 gallons a day or more of any petroleum product from any equipment processing, refining, treating, storing or handling kerosene or other petroleum product of equal or greater volatility than kerosene, unless such compartment is equipped with a vapor loss control device, constructed so as to prevent emission of hydrocarbon vapors to the atmosphere, properly installed, in good working order and in operation.

A.14. Pursuant to ARM 17.8.340, ORM shall comply with all applicable requirements of 40 Code of Federal Regulation (CFR) 60, Subpart KKK, as they apply to the units required to comply with the Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (ARM 17.8.340 and 40 CFR 60, Subpart KKK).

A.15. Pursuant to ARM 17.8.340, ORM shall comply with all applicable requirements of 40 CFR 60, Subpart LLL, as they apply to the units required to comply with the Standards of Performance for Onshore Natural Gas Processing: SO_2 Emissions. However, because ORM has demonstrated that the design capacity of the facility is less than 2 long tons/day of H_2S in the acid gas (expressed as sulfur), only 40 CFR 60.647(c) is applicable to the facility (ARM 17.8.340 and 40 CFR 60, Subpart LLL).

A.16. Pursuant to ARM 17.8.342 and 40 CFR 63.6, ORM shall submit to the Department a copy of any SSM plan required under 40 CFR 63.6(e)(3) within 30 days of the effective date of this operating permit (if not previously submitted), within 30 days of the compliance date of any new National Emission Standard for Hazardous Air Pollutants (NESHAPs) or Maximum Achievable Control Technology (MACT) standard, and within 30 days of the revision of any such SSM plan, when applicable. The Department requests submittal of such plans in electronic form, when possible.

A.17. ORM shall be limited to a maximum production rate of 3,102.5 million standard cubic feet (MMScf) during any rolling 12-month period (ARM 17.8.749).

A.18. ORM shall document, by month, the facility throughput in MMScf. By the 25th day of each month, ORM shall calculate the amount of throughput for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.17. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

A.19. A Risk Management Plan developed in accordance with 40 CFR 68 shall be registered with the United States Environmental Protection Agency (EPA) by June 21, 1999. ORM shall submit a certification statement to the Department that states ORM is in compliance with the requirements of 40 CFR 68, including registration (40 CFR 68.160) by June 21, 1999.

A.20. Pursuant to ARM 17.8.1211(1)(c) and 40 CFR Part 98, ORM shall comply with requirements of 40 CFR Part 98 - Mandatory Greenhouse Gas Reporting, as applicable (ARM 17.8.1211(1)(c), Not an applicable requirement under Title V).

A.21. ORM shall promptly report deviations from permit requirements including those attributable to upset conditions, as upset is defined in the permit. To be considered prompt, deviations shall be reported to the Department using the schedule and content as described in section V.E (unless otherwise specified in an applicable requirement) (ARM 17.8.1212).

A.22. On or before February 15 and August 15 of each year, ORM shall submit to the Department the compliance monitoring reports required by Section V.D. These reports must contain all information required by Section V.D, as well as the information required by each individual emissions unit. For the reports due by February 15 of each year, ORM may submit a single report, provided that it contains all the information required by Section V.B & V.D. Per ARM 17.8.1207,

> *any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including semiannual monitoring reports), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that,* ***"based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete."***

A.23. By February 15 of each year, ORM shall submit to the Department the compliance certification required by Section V.B. The annual certification required by Section V.B must include a statement of compliance based on the information available which identifies any observed, documented or otherwise known instance of noncompliance for each applicable requirement. Per ARM 17.8.1207,

any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including annual certifications), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, ***"based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete."***

B. EU001 – 448 bhp Waukesha F-3521G Compressor Engine

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
B.1, B.8, B.11, B.16, B.17	Opacity	20%	Burning pipeline quality natural gas	Ongoing	Semiannual
B.2, B.8, B.11, B.16, B.17	Particulate from fuel combustion	$E=1.026*H^{-0.233}$			
B.3, B.8, B.11, B.16, B.17	Sulfur compounds in fuel (gaseous)	50 gr/ 100 dscf			
B.4, B.9, B.12, B.16, B.17	Emissions control	NSCR unit and AFR controller	Log	Ongoing	
B.5, B.10, B.13, B.14, B.15, B.16, B.17	Oxides of Nitrogen (NO_x)	1.98 pounds per hour (lb/hr)	Portable analyzer	Semiannual	
B.6, B.10, B.13, B.14, B.15, B.16, B.17	Carbon Monoxide (CO)	2.96 lb/hr			
B.7, B.8, B.11, B.16, B.17	Volatile Organic Compounds (VOC)	1.00 lb/hr	Burning pipeline quality natural gas	Ongoing	

Conditions

B.1. ORM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).

B.2. ORM 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 $E = 1.026*H^{-0.0233}$ for existing fuel burning equipment, where: H = heat input capacity in million British thermal units per hour (MMBtu/hr) and E = maximum allowable emission rate in lb/MMBtu (ARM 17.8.309).

B.3. ORM shall not burn any gaseous fuel containing sulfur compounds in excess of 50 gr/100 dscf of gaseous fuel, calculated as H_2S at standard conditions (ARM 17.8.322(5)).

B.4. The 448 bhp Waukesha compressor engine shall be operated with a NSCR unit and an AFR controller (ARM 17.8.752).

B.5. NO_X emissions from the 448 bhp Waukesha compressor engine shall be limited to 1.98 lb/hr (ARM 17.8.752).

B.6. CO emissions from the 448 bhp Waukesha compressor engine shall be limited to 2.96 lb/hr (ARM 17.8.752).

B.7. VOC emissions from the 448 bhp Waukesha compressor engine shall be limited to 1.00 lb/hr (ARM 17.8.752).

Compliance Demonstration

B.8. Compliance with the opacity, particulate from fuel combustion, sulfur compounds in fuel (gaseous), and VOC limitation requirements (Sections III.B.1, III.B.2, III.B.3, and III.B.7) may be satisfied by burning pipeline quality natural gas (as defined by ORM's Federal Energy Regulatory Commission (FERC) Gas Tariff), on an ongoing basis (ARM 17.8.1213).

B.9. Compliance with the emission control requirements (Section III.B.4) shall be satisfied by operating and maintaining a NSCR unit and an AFR controller within the parameters recommended by the equipment manufacturer (ARM 17.8.1213).

B.10. Semiannually, or whenever changes occur that may cause the emissions to exceed permitted levels, ORM shall conduct an emissions test with a portable analyzer in order to monitor the NO_X and CO emissions from the 448 bhp Waukesha compressor engine. The portable analyzer shall be capable of achieving performance specifications equivalent to Environmental Protection Agency (EPA) traditional methods defined in 40 CFR 60, Appendix A, or shall be capable of meeting the requirements of EPA Conditional Test Method 030 (or American Society for Testing and Materials (ASTM) Method D6522-00) for the "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers." ORM 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). ORM shall monitor compliance with the NO_X and CO emission limitations in Sections III.B.5 and III.B.6, respectively, by converting the emissions test results (parts per million (ppm)) to a mass emissions rate (lb/hr). Stack gas flow rates shall be determined using EPA Test Methods in 40 CFR 60, Appendix A (ARM 17.8.1213).

Recordkeeping

B.11. ORM shall maintain, on site, a record noting any instance in which any fuel other than pipeline quality natural gas was used in the 448 bhp Waukesha compressor engine to monitor compliance with Sections III.B.1, III.B.2, III.B.3, and III.B.7. The record shall include emitting unit number, date, time, duration, type of fuel used, reason for other fuel use, and operator's initials (ARM 17.8.1212).

B.12. ORM shall maintain, on site, a record verifying that the NSCR unit and AFR controller on the 448 bhp Waukesha compressor engine were operated and maintained to monitor compliance with Section III.B.4. The record shall include the following information (ARM 17.8.1212):

a. Name, company, and signature of the individual(s) performing the maintenance;

b. Maintenance activities that were performed;

c. Date that the maintenance occurred; and

d. Any instance in which the 448 bhp Waukesha compressor engine was operated when the NSCR unit and AFR controller were inoperable, including time, date, duration, and operator's name, company, and signature.

B.13. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual, and shall be maintained on site (*or under facility's control)* (ARM 17.8.106 and ARM 17.8.1212).

B.14. During each emissions test with the portable analyzer, monitoring compliance with Sections III.B.5 and III.B.6, ORM shall record, at a minimum, the following information for the compressor engine(s) and the portable analyzer (ARM 17.8.1212):

a. Facility name and location;

b. Test date;

c. Name, company, and signature of individual(s) performing the test;

d. Emissions unit number;

e. Engine make, model and serial number;

f. Rated bhp;

g. Fuel consumption rate (metered or estimated);

h. Engine operating parameters;

i. Compressor make, model and serial number;

j. Suction pressure and temperature;

k. Discharge pressure and temperature;

l. Portable analyzer make, model, and serial number;

m. Calibration procedure and data;

n. Test procedure and data;

o. Original test strip-chart and/or original data print out; and

p. EPA Test Method calculations.

Reporting

B.15. Any compliance source test reports must be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).

B.16. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

B.17. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during that semiannual period;

b. A summary of the information required under Section III.B.11 for any instance of fuel use other than pipeline quality natural gas;

c. A summary of the emissions test data and emission calculations as required by Sections III.B.10 and III.B.14 for the compressor engine(s);

d. A summary of information required under Section III.B.12.d.

C. EU002 – 800 bhp White-Superior 8G-825 Compressor Engine

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
C.1, C.8, C.11, C.16, C.17	Opacity	20%	Burning pipeline quality natural gas	Ongoing	Semiannual
C.2, C.8, C.11, C.16, C.17	Particulate from fuel combustion	$E=1.026*H^{-0.233}$			
C.3, C.8, C.11, C.16, C.17	Sulfur compounds in fuel (gaseous)	50 gr/ 100 dscf			
C.4, C.9, C.12, C.16, C.17	Emissions control	NSCR unit and AFR controller	Log	Ongoing	
C.5, C.10, C.13, C.14, C.15, C.16, C.17	NO_x	3.53 lb/hr	Portable analyzer	Semiannual	
C.6, C.10, C.13, C.14, C.15, C.16, C.17	CO	5.29 lb/hr			
C.7, C.8, C.11, C.16, C.17	VOC	1.76 lb/hr	Burning pipeline quality natural gas	Ongoing	

Conditions

C.1. ORM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).

C.2. ORM 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 $E = 1.026*H^{-0.0233}$ for existing fuel burning equipment, where: H = heat input capacity in MMBtu/hr and E = maximum allowable emission rate in lb/MMBtu (ARM 17.8.309).

C.3. ORM shall not burn any gaseous fuel containing sulfur compounds in excess of 50 gr/100 dscf of gaseous fuel, calculated as H_2S at standard conditions (ARM 17.8.322(5)).

C.4. The 800 bhp White-Superior compressor engine shall be operated with an NSCR unit and an AFR controller (ARM 17.8.752).

C.5. NO_X emissions from the 800 bhp White-Superior compressor engine shall be limited to 3.53 lb/hr (ARM 17.8.752).

C.6. CO emissions from the 800 bhp White-Superior compressor engine shall be limited to 5.29 lb/hr (ARM 17.8.752).

C.7. VOC emissions from the 800 bhp White-Superior compressor engine shall be limited to 1.76 lb/hr (ARM 17.8.752).

Compliance Demonstration

C.8. Compliance with the opacity, particulate from fuel combustion, sulfur compounds in fuel (gaseous), and VOC limitation requirements (Sections III.C.1, III.C.2, III.C.3, and III.C.7) may be satisfied by burning pipeline quality natural gas (as defined by ORM's FERC Gas Tariff), on an ongoing basis (ARM 17.8.1213).

C.9. Compliance with the emission control requirements (Section III.C.4) shall be satisfied by operating and maintaining an NSCR unit and an AFR controller within the parameters recommended by the equipment manufacturer (ARM 17.8.1213).

C.10. Semiannually, or whenever changes occur that may cause the emissions to exceed permitted levels, ORM shall conduct an emissions test with a portable analyzer in order to monitor the NO_X and CO emissions from the 800 bhp White-Superior compressor engine. The portable analyzer shall be capable of achieving performance specifications equivalent to EPA traditional methods defined 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." ORM 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). ORM shall monitor compliance with the NO_X and CO emission limitations in Sections III.C.5 and III.C.6, respectively, by converting the emissions test results (ppm) to a mass emissions rate (lb/hr). Stack gas flow rates shall be determined using EPA Test Methods in 40 CFR 60, Appendix A (ARM 17.8.1213).

Recordkeeping

C.11. ORM shall maintain, on site, a record noting any instance in which any fuel other than pipeline quality natural gas was used in the 800 bhp White-Superior compressor engine to monitor compliance with Sections III.C.1, III.C.2, III.C.3, and III.C.7. The record shall include emitting unit number, date, time, duration, type of fuel used, reason for other fuel use, and operator's initials (ARM 17.8.1212).

C.12. ORM shall maintain, on site, a record verifying that the NSCR unit and AFR controller on the 800 bhp White-Superior compressor engine was operated and maintained to monitor compliance with Section III.C.4. The record shall include the following information (ARM 17.8.1212):

a. Name, company, and signature of the individual(s) performing the maintenance;

b. Maintenance activities that were performed; and

c. Date that the maintenance occurred; and

d. Any instance in which the 800 bhp White Superior compressor engine was operated when the NSCR unit and AFR controller were inoperable, including time, date, duration, and operator's name, company and signature.

C.13. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual, and shall be maintained on site (*or under facility's control)* (ARM 17.8.106 and ARM 17.8.1212).

C.14. During each emissions test with the portable analyzer, monitoring compliance with Sections III.C.5 and III.C.6, ORM shall record, at a minimum, the following information for the compressor engine(s) and the portable analyzer (ARM 17.8.1212):

a. Facility name and location;

b. Test date;

c. Name, company, and signature of technician(s) performing the test;

d. Emissions unit number;

e. Engine make, model and serial number;

f. Rated bhp;

g. Fuel consumption rate (metered or estimated);

h. Engine operating parameters;

i. Compressor make, model and serial number;

j. Suction pressure and temperature;

k. Discharge pressure and temperature;

l. Portable analyzer make, model, and serial number;

m. Calibration procedure and data;

n. Test procedure and data;

o. Original test strip-chart and/or original data print out; and

p. EPA Test Method calculations.

Reporting

C.15. Any compliance source test reports must be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).

C.16. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

C.17. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during that semiannual period;

b. A summary of the information required under Section III.C.11 for any instance of fuel use other than pipeline quality natural gas;

c. A summary of the emissions test data and emission calculations as required by Sections III.C.10 and III.C.14 for the compressor engine(s);

d. A summary of information required under Section III.C.12.d.

D. EU004 and EU009 – Acid Gas Flare and Self Supported Air-Assisted Flare

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
D.1, D.6, D.10, D.13, D.14, D,15	Opacity	10%	Method 9	Every 2 years	Semiannual
D.2, D.7, D.10, D.13, D.14, D.15	Particulate	0.10 gr/dscf corrected to 12% Carbon Dioxide ($CO_{2)}$	Method 5	As required by the Department and Section III.A.1	
D.3, D.8, D.11, D.14, D.15	Auto-igniting device and associated recorder	Install and operate	Inspection and maintenance log	Weekly or after any upset that may cause a change in the gas stream	
D.4, D.8, D.9, D.11, D.12, D.14, D.15	Acid Gas Flare and ratio of natural gas to acid gas prior to flaring	20% natural gas	Measure and log the ratio of natural gas to acid gas that is sent to the acid gas flare	Ongoing measurement and weekly log	
D.5, D.8, D.11, D.14, D.15	Self Supported Air-Assisted Flare Operations	Limited to 300 hours of total plant equipment downtime during planned maintenance activities	Log	Ongoing	

Conditions

D.1. ORM shall not cause or authorize to be discharged into the atmosphere, from either flare, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.316 and ARM 17.8.749).

D.2. ORM shall not cause or authorize to be discharged into the atmosphere, from either flare, any particulate emissions in excess of 0.10 gr/dscf corrected to 12% CO_2 (ARM 17.8.316 and ARM 17.8.749).

D.3. ORM shall install and continuously operate a thermocouple and an associated recorder or any equivalent device to detect the presence of a flame (ARM 17.8.752 and 40 CFR 60, Subpart KKK and 40 CFR 60, Subpart LLL, as applicable).

D.4. ORM shall route all stack emissions from the amine regenerator to the Acid Gas Flare and shall add natural gas to the acid gas stream prior to flaring. Natural gas shall be added to achieve 20% natural gas in the total gas stream flared (ARM 17.8.749 and ARM 17.8.752).

D.5. ORM's Self Supported Air-Assisted Flare is limited to 300 hours of total plant equipment downtime during planned maintenance activities during any rolling 12-month period (ARM 17.8.749).

Compliance Demonstration

D.6. An EPA Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60, Subpart KKK must be performed on the flares at the facility on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department, to demonstrate compliance with emission limitations contained in Section III.D.1 (ARM 17.8.105, ARM 17.8.749, ARM 17.8.1213, and 40 CFR 60, Subpart KKK).

D.7. As required by the Department and Section III.A.1, a Method 5 particulate test and/or other Department approved methods and procedures must be performed on the flares at the facility to monitor compliance with emission limitations contained in Section III.D.2 (ARM 17.8.105, ARM 17.8.749, and ARM 17.8.1212).

D.8. ORM shall maintain, on site, a log of all weekly inspections and any maintenance activities associated with either flare. Each weekly log shall contain an entry for at least the following (ARM 17.8.1213):

a. Date of entry;

b. Time of entry;

c. Name, company, and signature of the individual(s) entering information in the log;

d. List of all equipment checked and condition;

e. Hours of Self Supported Air-Assisted Flare operation;

f. Summary of any maintenance performed; and

g. Summary of inspection results.

D.9. ORM shall measure the ratio of natural gas to acid gas that is flared by a method to be approved by the Department. ORM shall maintain, on site, a weekly log of the ratio of natural gas to acid gas that is flared. Each weekly log shall contain an entry with at least the following information (ARM 17.8.1213):

a. Date of entry;

b. Time of entry;

c. Name, company, and signature of individual(s) entering information in the log;

d. Amount of acid gas routed to the flare;

e. Amount of natural gas added to the acid gas stream prior to flaring; and

f. The ratio of natural gas to acid gas that was flared.

Recordkeeping

D.10. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual, and shall be maintained on site (*or under facility's control*) (ARM 17.8.106 and ARM 17.8.1212).

D.11. ORM shall maintain, on site, the weekly inspection and maintenance log required by Section III.D.8 (including the hours of operation for the Self Supported Air-Assisted Flare) and submit the log to the Department upon request (ARM 17.8.1212).

D.12. ORM shall maintain, on site, the weekly gas measurement log required by Section III.D.9 and submit the log to the Department upon request (ARM 17.8.1212).

Reporting

D.13. Any compliance source test reports must be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).

D.14. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

D.15. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the semiannual period;

b. A summary of hours of operation of the Self Supported Air-Assisted Flare during the semiannual period (and the previous period); and

c. Any instance that the natural gas ratio varied from 20%.

E. EU005 - Fugitive Emissions Subject to 40 CFR 60, Subpart KKK LDAR Monitoring

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
E.1, E.2, E.3, E.4, E.5	VOC	LDAR monitoring as per 40 CFR 60, Subpart KKK	LDAR monitoring as per 40 CFR 60, Subpart KKK	LDAR monitoring as per 40 CFR 60, Subpart KKK	Semiannual

Conditions

E.1. ORM shall use a Leak Detection and Repair (LDAR) program, as described in 40 CFR 60, Subpart KKK, for each affected process unit (ARM 17.8.340).

Compliance Demonstration

E.2. ORM shall use a LDAR program, as described in 40 CFR 60, Subpart KKK, for each affected process unit (ARM 17.8.1213).

Recordkeeping

E.3. ORM shall use a LDAR program, as described in 40 CFR 60, Subpart KKK, for each affected process unit (ARM 17.8.1212).

Reporting

E.4. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

E.5. The semiannual monitoring report shall reference the date and subject of any required reporting submitted during the semiannual period pursuant to 40 CFR 60, Subpart KKK (ARM 17.8.1212).

F. EU006 – 8.5 MMscfd Ethylene Glycol Dehydration/Regenerator Unit, Vent and Flash Tank

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
F.1, F.2, F.3, F.4, F.5	Off gases	Vent routed to Anderson Hot Oil Heater; and flash tank vapors routed to inlet condensation knockout drum	Log	Weekly	Semiannual

Conditions

F.1. ORM shall route the dehydrator regenerator off gases to the Anderson Hot Oil heater for thermal destruction at all times, except when the heater is not operating. The flash tank off gases shall be routed to the inlet condensate knockout drum (ARM 17.8.752).

Compliance Demonstration

F.2. ORM shall maintain, on site, a log containing weekly summaries of off gas routings. Each weekly log shall contain an entry for at least the following (ARM 17.8.1213):

a. Date of entry;

b. Time of entry;

c. Name, company, and signature of the individual(s) entering information in the log; and

d. Summary of weekly routings of the off gases, to include where the gases were routed to and for how long.

Recordkeeping

F.3. ORM shall maintain, on site, the log required by Section III.F.2 and submit the log to the Department upon request (ARM 17.8.1212).

Reporting

F.4. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

F.5. The semiannual monitoring report shall provide a summary of any instance during heater operation in which the off-gases were not routed to the heater for destruction, including time, date, duration and operator's initials (ARM 17.8.1212).

G. EU007 – Product Loading

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
G.1, G.2, G.3, G.4, G.5	Condensate/ natural gasoline loading and receiving	Operation of vapor balance system/ closed system	Maintaining Records (bill of lading (ticket))	Ongoing	Semiannual
G.1, G.2, G.3, G.4, G.5	Y-grade product loading and receiving	Operation of vapor balance system/ pressurized closed system	Maintaining Records (bill of lading (ticket))	Ongoing	Semiannual
G.1, G.2, G.3, G.4, G.5	Propane/ butane product loading and receiving	Operation of vapor balance system / Pressurized closed system	Maintaining Records (bill of lading (ticket))	Ongoing	Semiannual

Conditions

G.1. The condensate/ natural gasoline/Y-grade/propane/butane loading and receiving at the Baker Plant shall be operated under a vapor balance system. All condensate/ natural gasoline/Y-grade product/propane/butane loading to tank trucks shall be conducted using submerged/ dedicated loading. Vapor flash resulting from loadout operations shall be returned to the associated storage vessel to maintain vapor balanced emissions control. The Y-grade/ propane/ butane products are stored in pressurized storage tanks. All condensate/ natural gasoline/Y-grade/propane/butane loading lines have a valve at their ends; therefore, any vapors associated with loading are contained within a closed system (ARM 17.8.324 and ARM 17.8.752).

Compliance Demonstration

G.2. Compliance with Section III.G.1 shall be satisfied by maintaining, on site, records (bill of lading (ticket)) on an ongoing basis that indicate, at a minimum, the following information (ARM 17.8.1213):

a. Date of loading and receiving;

b. Type of product being loaded or received;

c. Any loading or receiving that takes place outside the vapor balance system.

Recordkeeping

G.3. ORM shall maintain, on site, the records required by Section III.G.2 and submit the records to the Department upon request (ARM 17.8.1212).

Reporting

G.4. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

G.5. The semiannual monitoring report shall provide a summary of records associated with any loading that takes place outside the vapor balance system.

H. EU008 – Condensate/Natural gasoline storage tanks, EU013 - Y-grade horizontal storage tanks, EU014 - Propane horizontal storage tanks, EU015 - Butane horizontal storage tanks

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
H.1, H.2, H.3, H.4, H.5	Condensate/natural gasoline storage tanks	Fixed roof tanks, vapor balance system, submerge filled and pressure/ vacuum vent	Inspection and maintenance	Annually and as necessary	Semiannual
H.1, H.2, H.3, H.4, H.5	Y-grade horizontal storage tanks Propane horizontal storage tanks Butane horizontal storage tanks	Pressurized tanks, submerge filled and pressure relief valve	Inspection and maintenance	Annually and as necessary	Semiannual

Conditions

H.1. ORM shall use fixed roof tanks for storage of condensate/natural gasoline; and pressurized tanks for storage of Y-grade, propane, and butane. Condensate/natural gasoline tanks shall be vapor balance system, submerge filled and equipped with a pressure/vacuum vent. Y-grade, propane, and butane horizontal storage tanks shall be pressurized tanks, submerge filled and equipped with a pressure relief valve (ARM 17.8.324 and ARM 17.8.752).

Compliance Demonstration

H.2. Compliance with Section III.H.1 shall be satisfied by inspecting the tanks, vapor balance systems, submerge fill systems, pressure relief valves, and the pressure/vacuum vents annually or when problems are suspected. Maintenance shall be performed in accordance with Good Engineering Practice as necessary (ARM 17.8.1213).

Recordkeeping

H.3. ORM shall maintain, on site, a log of the annual inspections and any maintenance activities as required by Section III.H.2. The log shall include the following information (ARM 17.8.1213):

a. Name, company, and signature of the individual(s) performing the inspection or maintenance;

b. Date and Time of the inspection or maintenance;

c. Condition of the inspected systems; and

d. Any maintenance activities that were performed.

Reporting

H.4. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

H.5. The semiannual monitoring report shall provide a summary of any maintenance needed to comply with Section III.H.1 including when the maintenance was performed (ARM 17.8.1212).

I. EU010 – 1250 bhp Waukesha L-7042 GSI Compressor Engine

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
I.1, I.9, I.13, I.16, I.19, I.20	Opacity	20%	Burning pipeline quality natural gas	Ongoing	Semiannual
I.2, I.9, I.13, I.19, I.20	Particulate from fuel combustion	$E=1.026*H^{-0.233}$			
I.3, I.9, I.13, I.19, I.20	Sulfur compounds in fuel (gaseous)	50 gr/100 dscf			
I.4, I.10, I.14, I.19, I.20	Emissions Control - Johnson Mathey or equivalent catalytic converter	Operate	Log	Ongoing	
I.5, I.11, I.15, I.16, I.18, I.19, I.20	NO_X	5.51 lb/hr	Portable analyzer	Semiannual	
I.6, I.11, I.15, I.16, I.18, I.19, I.20	CO	5.51 lb/hr			
I.7, I.9, I.13, I.19, I.20	VOC	2.76 lb/hr	Burning pipeline quality natural gas	Ongoing	
I.8, I.12, I.17, I.18, I.19, I.20	NO_X and CO CAM Plan	CAM Plan Appendix E	CAM Plan Appendix E	Ongoing	

Conditions

I.1. ORM shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).

I.2. ORM 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 $E = 1.026*H^{-0.0233}$ for existing fuel burning equipment, where: H = heat input capacity in MMBtu/hr and E = maximum allowable emission rate in lb/MMBtu (ARM 17.8.309).

I.3. ORM shall not burn any gaseous fuel containing sulfur compounds in excess of 50 gr/100 dscf of gaseous fuel, calculated as H_2S at standard conditions (ARM 17.8.322(5)).

I.4. The 1250 bhp compressor engine(s) shall be controlled by a catalytic converter(s) (ARM 17.8.749 and ARM 17.8.752).

I.5. NO_X emissions from the 1250 bhp compressor engine(s) shall be limited to 5.51 lb/hr (ARM 17.8.752).

I.6. CO emissions from the 1250 bhp compressor engine(s) shall be limited to 5.51 lb/hr (ARM 17.8.752).

I.7. VOC emissions for the 1250 bhp compressor engine(s) shall be limited to 2.76 lb/hr (ARM 17.8.752).

I.8. ORM shall provide reasonable assurance of compliance with the emissions limitations in Sections III.I.5 and III.I.6 for the operation of EU010 by following the CAM Plan contained in Appendix E of this permit (ARM 17.8.1504).

Compliance Demonstration

I.9. Compliance with the opacity, particulate from fuel combustion, sulfur compounds in fuel (gaseous), and VOC limitation requirements (Sections III.I.1, III.I.2, III.I.3, and III.I.7) may be satisfied by burning pipeline quality natural gas (as defined by ORM's FERC Gas Tariff) (ARM 17.8.1213).

I.10. Compliance with the emission control requirements (Section III.I.4) shall be satisfied by operating and maintaining catalytic converter(s) on the 1250 bhp compressor engine(s), within the parameters recommended by the equipment manufacturer (ARM 17.8.1213).

I.11. Semiannually, or whenever changes occur that may cause the emissions to exceed permitted levels, ORM shall conduct an emissions test with a portable analyzer in order to monitor the NO_X and CO emissions from the 1250 bhp compressor engine(s). The portable analyzer shall be capable of achieving performance specifications equivalent to EPA traditional methods defined in 40 CFR 60, Appendix A, or shall be capable of meeting the requirements of EPA Conditional Test Method 030 (or ASTM Method D6522-00) for the "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers." ORM 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). ORM shall monitor compliance with the NO_X and CO emission limitations in Sections III.I.5 and III.I.6, respectively, by converting the emissions test results (ppm) to a mass emissions rate (lb/hr). Stack gas flow rates shall be determined using EPA Test Methods in 40 CFR 60, Appendix A (ARM 17.8.1213).

I.12. ORM shall monitor compliance with Sections III.I.5, III.I.6, and III.I.8 by monitoring the indicators according to the CAM plan contained in Appendix E of this permit (ARM 17.8.1503 and ARM 17.8.1213).

Recordkeeping

I.13. ORM shall maintain, on site, a record noting any instance in which any fuel other than pipeline quality natural gas was used in the 1250 bhp compressor engine(s) to monitor compliance with Sections III.I.1, III.I.2, III.I.3, and III.I.7. The record shall include emitting unit number, date, time, duration, fuel type used, reason for other fuel use, and operator's initials (ARM 17.8.1212).

I.14. ORM shall maintain, on site, a record verifying that the catalytic converter(s) on the 1250 bhp compressor engine(s) were operated and maintained to monitor compliance with Section III.I.4. The record shall include the following information (ARM 17.8.1212):

a. Name, company, and signature of the individual(s) performing the maintenance;

b. Maintenance activities that were performed; and

c. Date that the maintenance occurred; and

d. Any instance in which the 1250 bhp compressor engine(s) were operated when the catalytic converter(s) were inoperable, including time, date, duration, and operator's initials

I.15. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual, and shall be maintained on site (*or under facility's control*) (ARM 17.8.106 and ARM 17.8.1212).

I.16. During each emissions test with the portable analyzer, monitoring compliance with Sections III.I.5 and III.I.6, ORM shall record, at a minimum, the following information for the compressor engine(s) and the portable analyzer (ARM 17.8.1212):

a. Facility name and location;

b. Test date;

c. Name, company, and signature of technician(s) performing the test;

d. Emissions unit number;

e. Engine make, model, and serial number;

f. Rated bhp;

g. Fuel consumption rate (metered or estimated);

h. Engine operating parameters;

i. Compressor make, model, and serial number;

j. Suction pressure and temperature;

k. Discharge pressure and temperature;

l. Portable analyzer make, model, and serial number;

m. Calibration procedure and data;

n. Test procedure and data;

o. Original test strip-chart and/or original data print out; and

p. EPA Test Method calculations.

I.17. ORM shall maintain CAM applicable requirements in accordance with ARM 17.8.1513 and the CAM Plan contained in Appendix E of this permit (ARM 17.8.1212 and ARM 17.8.1513).

Reporting

I.18. Any compliance source test reports must be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).

I.19. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

I.20. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during that semiannual period;

b. A summary of the information required under Section III.I.11 for any instance of fuel use other than pipeline quality natural gas;

c. A summary of the emissions test data and emission calculations as required by Sections III.I.13 and III.I.16 for the compressor engine(s); and

d. A summary of information required under Section III.I.14.d.

J. EU012 – 6.5 MMscfd Amine Regenerator

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
J.1, J.3, J.5, J.7, J.8	Off gases (Acid Gas)	Routed to the Acid Gas flare	Flare Log (Section III.D.11)	Weekly	Semiannual
J.2, J.4, J.6, J.7, J.8	Natural Gas Processing: SO_2 Emissions	40 CFR 60, Subpart LLL - exempt (< 2 Long tons/day)	40 CFR 60, Subpart LLL - exempt (< 2 Long Tons/day)	40 CFR, Subpart LLL - exempt (< 2 Long Tons/day)	

Conditions

J.1. ORM shall route the Amine Regenerator off gases (Acid Gas) to the Acid Gas flare for thermal destruction at all times (ARM 17.8.752).

J.2. ORM shall comply with all applicable standards, limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart LLL included in Appendix F, as it applies to the amine unit. Because ORM demonstrated having a design capacity less than 2 long tons per day of hydrogen sulfide in the acid gas (expressed as sulfur), ORM is only required to comply with 40 CFR Part 60.647(c) (ARM 17.8.340 and 40 CFR Part 60).

Compliance Demonstration

J.3. Compliance with the requirement to route the Amine Regenerator off gases (Acid Gas) to the Acid Gas flare for thermal destruction at all times (Section III.J.1) shall be satisfied by maintaining the weekly log associated with the flare(s). Each weekly log shall contain an entry for at least the following (ARM 17.8.1213):

a. Date of entry;

b. Time of entry;

c. Name, company, and signature of individual(s) entering information in the log;

d. List of all equipment checked and condition;

e. Summary of any maintenance performed; and

f. Summary of inspection results.

J.4. ORM shall monitor compliance with 40 CFR 60, Subpart LLL according to the provisions of 40 CFR 60, Subpart LLL (ARM 17.8.340 and 40 CFR 60, Subpart LLL).

Recordkeeping

J.5. ORM shall maintain, on site, the flare log(s) required by Sections III.D.11 and III.D.12 and submit the log(s) to the Department upon request (ARM 17.8.1212).

J.6. ORM shall maintain all recordkeeping requirements as required by 40 CFR 60.647(c), Subpart LLL (ARM 17.8.340, 40 CFR Part 60, and ARM 17.8.1212).

Reporting

J.7. The annual compliance certification required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

J.8. The semiannual monitoring report shall reference the date and subject of any required reporting submitted during the semiannual period pursuant to 40 CFR 60, Subpart LLL (ARM 17.8.1212).

SECTION IV. NON-APPLICABLE REQUIREMENTS

ORM did not identify any Air Quality Administrative Rules of Montana (ARM) or Federal Regulations as non-applicable to the facility or to any specific emissions unit under the current operating permit renewal application (ARM 17.8.1214). ORM shall comply with any new requirements that may become applicable during the permit term.

SECTION V. GENERAL PERMIT CONDITIONS

A. Compliance Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(a)-(c)&(e), §1206(6)(c)&(b)

1. The permittee must comply with all conditions of the permit. Any noncompliance with the terms or conditions of the permit constitutes a violation of the Montana Clean Air Act, and may result in enforcement action, permit modification, revocation and reissuance, or termination, or denial of a permit renewal application under ARM Title 17, Chapter 8, Subchapter 12.

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. If appropriate, this factor may be considered as a mitigating factor in assessing a penalty for noncompliance with an applicable requirement if the source demonstrates that the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations, and that such health, safety or environmental impacts were unforeseeable and could not have otherwise been avoided.

4. The permittee shall furnish to the Department, within a reasonable time set by the Department (not to be less than 15 days), any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of those records that are required to be kept pursuant to the terms of the permit. This subsection does not impair or otherwise limit the right of the permittee to assert the confidentiality of the information requested by the Department, as provided in 75-2-105, MCA.

5. Any schedule of compliance for applicable requirements with which the source is not in compliance with at the time of permit issuance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it was based.

6. For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis unless a more detailed plan or schedule is required by the applicable requirement or the Department.

B. Certification Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1207 and §1213(7)(a)&(c)-(d)

1. Any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12, shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

2. Compliance certifications shall be submitted by February 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. Each certification must include the required information for the previous calendar year (i.e., January 1 – December 31).

3. Compliance certifications shall include the following:

   a. The identification of each term or condition of the permit that is the basis of the certification,

   b. The identification of the method(s) or other means used by the owner or operator for determining the status of compliance with each term and condition during the certification period, consistent with ARM 17.8.1212,

   c. The status of compliance with each term and condition for the period covered by the certification, *including whether compliance during the period was continuous or intermittent* (based on the method or means identified in ARM 17.8.1213(7)(c)(ii), as described above), and

   d. Such other facts as the Department may require to determine the compliance status of the source.

4. All compliance certifications must be submitted to the Environmental Protection Agency, as well as to the Department, at the addresses listed in the Notification Addresses Appendix of this permit.

C. Permit Shield
ARM 17.8, Subchapter 12, Operating Permit Program §1214(1)-(4)

1. The applicable requirements and non-federally enforceable requirements are included and specifically identified in this permit and the permit includes a precise summary of the requirements not applicable to the source. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements and any non-federally enforceable requirements as of the date of permit issuance.

2. The permit shield described in 1 above shall remain in effect during the appeal of any permit action (renewal, revision, reopening, or revocation and reissuance) to the Board of Environmental Review (Board), until such time as the Board renders its final decision.

3. Nothing in this permit alters or affects the following:

   a. The provisions of Sec. 7603 of the FCAA, including the authority of the administrator under that section,

   b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance,

   c. The applicable requirements of the Acid Rain Program, consistent with Sec. 7651g(a) of the FCAA,

   d. The ability of the administrator to obtain information from a source pursuant to Sec. 7414 of the FCAA,

   e. The ability of the Department to obtain information from a source pursuant to the Montana Clean Air Act, Title 75, Chapter 2, MCA,

   f. The emergency powers of the Department under the Montana Clean Air Act, Title 75, Chapter 2, MCA, and

g. The ability of the Department to establish or revise requirements for the use of Reasonably Available Control Technology (RACT) as defined in ARM Title 17, Chapter 8. However, if the inclusion of a RACT into the permit pursuant to ARM Title 17, Chapter 8, Subchapter 12, is appealed to the Board, the permit shield, as it applies to the source's existing permit, shall remain in effect until such time as the Board has rendered its final decision.

4. Nothing in this permit alters or affects the ability of the Department to take enforcement action for a violation of an applicable requirement or permit term demonstrated pursuant to ARM 17.8.106, Source Testing Protocol.

5. Pursuant to ARM 17.8.132, for the purpose of submitting a compliance certification, nothing in these rules shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance. However, when compliance or noncompliance is demonstrated by a test or procedure provided by permit or other applicable requirements, the source shall then be presumed to be in compliance or noncompliance unless that presumption is overcome by other relevant credible evidence.

6. The permit shield will not extend to minor permit modifications or changes not requiring a permit revision (see Sections I & J).

7. The permit shield will extend to significant permit modifications and transfer or assignment of ownership (see Sections K & O).

D. Monitoring, Recordkeeping, and Reporting Requirements
ARM 17.8, Subchapter 12, Operating Permit Program §1212(2)&(3)

1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:

   a. The date, place as defined in the permit, and time of sampling or measurement;

   b. The date(s) analyses were performed;

   c. The company or entity that performed the analyses;

   d. The analytical techniques or methods used;

   e. The results of such analyses; and

   f. The operating conditions at the time of sampling or measurement.

2. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. All monitoring data, support information, and required reports and summaries may be maintained in computerized form at the plant site if the information is made available to Department personnel upon request, which may be for either hard copies or computerized format. Strip-charts must be maintained in their original form at the plant site and shall be made available to Department personnel upon request.

3. The permittee shall submit to the Department, at the addresses located in the Notification Addresses Appendix of this permit, reports of any required monitoring by February 15 and August 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. The monitoring report submitted on February 15 of each year must include the required monitoring information for the period of July 1 through December 31 of the previous year. The monitoring report submitted on August 15 of each year must include the required monitoring information for the period of January 1 through June 30 of the current year. All instances of deviations from the permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official, consistent with ARM 17.8.1207.

E. Prompt Deviation Reporting
ARM 17.8, Subchapter 12, Operating Permit Program §1212(3)(c)

The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. To be considered prompt, deviations shall be reported to the Department within the following timeframes (unless otherwise specified in an applicable requirement):

1. For deviations which may result in emissions potentially in violation of permit limitations:

   a. An initial phone notification (or faxed or electronic notification) describing the incident within 24 hours (or the next business day) of discovery; and,

   b. A follow-up written, faxed, or electronic report within 30 days of discovery of the deviation that describes the probable cause of the reported deviation and any corrective actions or preventative measures taken.

2. For deviations attributable to malfunctions, deviations shall be reported to the Department in accordance with the malfunction reporting requirements under ARM 17.8.110; and

3. For all other deviations, deviations shall be reported to the Department via a written, faxed, or electronic report within 90 days of discovery (as determined through routine internal review by the permittee).

Prompt deviation reports do not need to be resubmitted with regular semiannual (or other routine) reports, but may be referenced by the date of submittal.

F. Emergency Provisions
ARM 17.8, Subchapter 12, Operating Permit Program §1201(13) and §1214(5), (6)&(8)

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and causes the source to exceed a technology-based emission limitation under this permit due to the unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of reasonable preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates through properly signed, contemporaneous logs, or other relevant evidence, that:

a. An emergency occurred and the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and

d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(c). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

3. These emergency provisions are in addition to any emergency, malfunction or upset provision contained in any applicable requirement.

G. Inspection and Entry

ARM 17.8, Subchapter 12, Operating Permit Program §1213(3)&(4)

1. Upon presentation of credentials and other requirements as may be required by law, the permittee shall allow the Department, the administrator, or an authorized representative (including an authorized contractor acting as a representative of the Department or the administrator) to perform the following:

   a. Enter the premises where a source required to obtain a permit is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   c. Inspect at reasonable times any facilities, emission units, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   d. As authorized by the Montana Clean Air Act and rules promulgated thereunder, sample or monitor, at reasonable times, any substances or parameters at any location for the purpose of assuring compliance with the permit or applicable requirements.

2. The permittee shall inform the inspector of all workplace safety rules or requirements at the time of inspection. This section shall not limit in any manner the Department's statutory right of entry and inspection as provided for in 75-2-403, MCA.

H. Fee Payment

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(f) and ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees §505(3)-(5) (STATE ONLY)

1. The permittee must pay application and operating fees, pursuant to ARM Title 17, Chapter 8, Subchapter 5.

2. Annually, the Department shall provide the permittee with written notice of the amount of the fee and the basis for the fee assessment. The air quality operation fee is due 30 days after receipt of the notice, unless the fee assessment is appealed pursuant to ARM 17.8.511. If any

portion of the fee is not appealed, that portion of the fee that is not appealed is due 30 days after receipt of the notice. Any remaining fee, which may be due after the completion of an appeal, is due immediately upon issuance of the Board's decision or upon completion of any judicial review of the Board's decision.

3. If the permittee fails to pay the required fee (or any required portion of an appealed fee) within 90 days of the due date of the fee, the Department may impose an additional assessment of 15% of the fee (or any required portion of an appealed fee) or $100, whichever is greater, plus interest on the fee (or any required portion of an appealed fee), computed at the interest rate established under 15-31-510(3), MCA.

I. Minor Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1226(3)&(11)

1. An application for a minor permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation, or deletion, and may reference any required information that has been previously submitted.

2. The permit shield under ARM 17.8.1214 will not extend to any minor modifications processed pursuant to ARM 17.8.1226.

J. Changes Not Requiring Permit Revision

ARM 17.8, Subchapter 12, Operating Permit Program §1224(1)-(3), (5)&(6)

1. The permittee is authorized to make changes within the facility as described below, provided the following conditions are met:

   a. The proposed changes do not require the permittee to obtain a Montana Air Quality Permit under ARM Title 17, Chapter 8, Subchapter 7;

   b. The proposed changes are not modifications under Title I of the FCAA, or as defined in ARM Title 17, Chapter 8, Subchapters 8, 9, or 10;

   c. The emissions resulting from the proposed changes do not exceed the emissions allowable under this permit, whether expressed as a rate of emissions or in total emissions;

   d. The proposed changes do not alter permit terms that are necessary to enforce applicable emission limitations on emission units covered by the permit; and

   e. The facility provides the administrator and the Department with written notification at least 7 days prior to making the proposed changes.

2. The permittee and the Department shall attach each notice provided pursuant to 1.e above to their respective copies of this permit.

3. Pursuant to the conditions above, the permittee is authorized to make Sec. 502(b)(10) changes, as defined in ARM 17.8.1201(30), without a permit revision. For each such change, the written notification required under 1.e above shall include a description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

4. The permittee may make a change not specifically addressed or prohibited by the permit terms and conditions without requiring a permit revision, provided the following conditions are met:

a. Each proposed change does not weaken the enforceability of any existing permit conditions;

b. The Department has not objected to such change;

c. Each proposed change meets all applicable requirements and does not violate any existing permit term or condition; and

d. The permittee provides contemporaneous written notice to the Department and the administrator of each change that is above the level for insignificant emission units as defined in ARM 17.8.1201(22) and 17.8.1206(3), and the written notice describes each such change, including the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

5. The permit shield authorized by ARM 17.8.1214 shall not apply to changes made pursuant to ARM 17.8.1224(3) and (5), but is applicable to terms and conditions that allow for increases and decreases in emissions pursuant to ARM 17.8.1224(4).

K. Significant Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1227(1), (3)&(4)

1. The modification procedures set forth in 2 below must be used for any application requesting a significant modification of this permit. Significant modifications include the following:

   a. Any permit modification that does not qualify as either a minor modification or as an administrative permit amendment;

   b. Every significant change in existing permit monitoring terms or conditions;

   c. Every relaxation of permit reporting or recordkeeping terms or conditions that limit the Department's ability to determine compliance with any applicable rule, consistent with the requirements of the rule; and

   d. Any other change determined by the Department to be significant.

2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.

3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening for Cause

ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)

This permit may be reopened and revised under the following circumstances:

1. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed no later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);

2. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;

3. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or

4. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

M. Permit Expiration and Renewal

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(g), §1220(11)&(12), and §1205(2)(d)

1. This permit is issued for a fixed term of 5 years.

2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.

3. Expiration of this permit terminates the permittee's right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.

4. For renewal, the permittee shall submit a complete air quality operating permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

N. Severability Clause

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(i)&(l)

1. The administrative appeal or subsequent judicial review of the issuance by the Department of an initial permit under this subchapter shall not impair in any manner the underlying applicability of all applicable requirements, and such requirements continue to apply as if a final permit decision had not been reached by the Department.

2. If any provision of a permit is found to be invalid, all valid parts that are severable from the invalid part remain in effect. If a provision of a permit is invalid in one or more of its applications, the provision remains in effect in all valid applications that are severable from the invalid applications.

O. Transfer or Assignment of Ownership

ARM 17.8, Subchapter 12, Operating Permit Program §1225(2)&(4)

1. If an administrative permit amendment involves a change in ownership or operational control, the applicant must include in its request to the Department a written agreement containing a specific date for the transfer of permit responsibility, coverage and liability between the current and new permittee.

2. The permit shield provided for in ARM17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives
ARM 17.8, Subchapter 12, Operating Permit Program §1226(2)

Notwithstanding ARM 17.8.1226(1) and (7), minor air quality operating permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in the Montana State Implementation Plan or in applicable requirements promulgated by the administrator.

Q. No Property Rights Conveyed
ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(d)

This permit does not convey any property rights of any sort, or any exclusive privilege.

R. Testing Requirements
ARM 17.8, Subchapter 1, General Provisions §105

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol
ARM 17.8, Subchapter 1, General Provisions §106

The permittee shall comply with ARM 17.8.106.

T. Malfunctions
ARM 17.8, Subchapter 1, General Provisions §110

The permittee shall comply with ARM 17.8.110.

U. Circumvention
ARM 17.8, Subchapter 1, General Provisions §111

The permittee shall comply with ARM 17.8.111.

V. Motor Vehicles
ARM 17.8, Subchapter 3, Emission Standards §325

The permittee shall comply with ARM 17.8.325.

W. Annual Emissions Inventory
ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees §505 (STATE ONLY)

The permittee shall supply the Department with annual production and other information for all emission units necessary to calculate actual or estimated actual amount of air pollutants emitted during each calendar year. Information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request, unless otherwise specified in this permit. Information shall be in the units required by the Department.

X. Open Burning
ARM 17.8, Subchapter 6, Open Burning §604, 605 and 606

The permittee shall comply with ARM 17.8.604, 605 and 606.

Y. Montana Air Quality Permits

ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources §745 and 764 (ARM 17.8.745(1) and 764(1)(b) are STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP)

1. Except as specified, no person shall construct, install, modify, or use any air contaminant source or stack associated with any source without first obtaining a permit from the Department or Board. A permit is not required for those sources or stacks as specified by ARM 17.8.744(1)(a)-(k).

2. The permittee shall comply with ARM 17.8.743, 744, 745, 748, and 764.

3. ARM 17.8.745(1) specifies de minimis changes as construction or changed conditions of operation at a facility holding a Montana Air Quality Permit (MAQP) issued under Chapter 8 that does not increase the facility's potential to emit by more than 5 tons per year of any pollutant, except (STATE ENFORCEABLE ONLY until approved by the EPA as part of the SIP):

   a. Any construction or changed condition that would violate any condition in the facility's existing MAQP or any applicable rule contained in Chapter 8 is prohibited, except as provided in ARM 17.8.745(2);

   b. Any construction or changed conditions of operation that would qualify as a major modification under Subchapters 8, 9 or 10 of Chapter 8;

   c. Any construction or changed condition of operation that would affect the plume rise or dispersion characteristic of emissions that would cause or contribute to a violation of an ambient air quality standard or ambient air increment as defined in ARM 17.8.804;

   d. Any construction or improvement project with a potential to emit more than 5 tons per year may not be artificially split into smaller projects to avoid Montana Air Quality Permitting; and

   e. Emission reductions obtained through offsetting within a facility are not included when determining the potential emission increase from construction or changed conditions of operation, unless such reductions are made federally enforceable.

4. Any facility making a de minimis change pursuant to ARM 17.8.745(1) shall notify the Department if the change would include a change in control equipment, stack height, stack diameter, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1) (STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP).

Z. National Emission Standard for Asbestos

40 CFR, Part 61, Subpart M

The permittee shall not conduct any asbestos abatement activities except in accordance with 40 CFR 61, Subpart M (National Emission Standard for Hazardous Air Pollutants for Asbestos).

AA. Asbestos

ARM 17.74, Subchapter 3, General Provisions and Subchapter 4, Fees

The permittee shall comply with ARM 17.74.301, *et seq*., and ARM 17.74.401, *et seq*. (State only).

BB. Stratospheric Ozone Protection – Servicing of Motor Vehicle Air Conditioners

40 CFR, Part 82, Subpart B

If the permittee performs a service on motor vehicles and this service involves ozone-depleting substance/refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR 82, Subpart B.

CC. Stratospheric Ozone Protection – Recycling and Emission Reductions

40 CFR, Part 82, Subpart F

The permittee shall comply with the standards for recycling and emission reductions in 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B:

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156;

2. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158;

3. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technical certification program pursuant to §82.161;

4. Persons disposing of small appliances, MVACs and MVAC-like (as defined at §82.152) appliances must comply with recordkeeping requirements pursuant to §82.166;

5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156; and

6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

DD. Emergency Episode Plan

The permittee shall comply with the requirements contained in Chapter 9.7 of the State of Montana Air Quality Control Implementation Plan.

Each major source emitting 100 tons per year located in a Priority I Air Quality Control Region, shall submit to the Department a legally enforceable Emergency Episode Action Plan (EEAP) that details how the source will curtail emissions during an air pollutant emergency episode. The industrial EEAP shall be in accordance with the Department's EEAP and shall be submitted according to a timetable developed by the Department, following Priority I reclassification.

EE. Definitions

Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit, shall have the meaning assigned to them in the referenced regulations.

APPENDICES

Appendix A INSIGNIFICANT EMISSION UNITS

Disclaimer: The information in this appendix is not State or federally enforceable, but is presented to assist ORM, the permitting authority, inspectors, and the public.

Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emissions unit located within a source that: (i) has a potential to emit less than 5 tons per year of any regulated pollutant; (ii) has a potential to emit less than 500 pounds per year of lead; (iii) has a potential to emit less than 500 pounds per year of hazardous air pollutants listed pursuant to Section 7412 (b) of the FCAA; and (iv) is not regulated by an applicable requirement, other than a generally applicable requirement that applies to all emission units subject to Subchapter 12.

List of Insignificant Activities:

The following table of insignificant sources and/or activities were provided by ORM.

Emissions Unit ID	Description
IEU01	Anderson-Baird Hot Oil Heater, 6.5 MMBtu/hr
IEU02	Amine Regenerator Heater, 2.0 MMBtu/hr
IEU03	Methyl Mercaptan Storage Tank, 67 gal
IEU04	Depropanizer Unit
IEU05	Two Heat Exchangers
IEU06	Glycol Line Heater, 0.5 MMBtu/hr

Appendix B DEFINITIONS and ABBREVIATIONS

"Act" means the Clean Air Act, as amended, 42 U.S. 7401, *et seq*.

"Administrative permit amendment" means an air quality operating permit revision that:

(a) corrects typographical errors;

(b) identifies a change in the name, address or phone number of any person identified in the air quality operating permit, or identifies a similar minor administrative change at the source;

(c) requires more frequent monitoring or reporting by ORM;

(d) requires changes in monitoring or reporting requirements that the Department deems to be no less stringent than current monitoring or reporting requirements;

(e) allows for a change in ownership or operational control of a source if the Department has determined that no other change in the air quality operating permit is necessary, consistent with ARM 17.8.1225; or

(f) incorporates any other type of change that the Department has determined to be similar to those revisions set forth in (a)-(e), above.

"Applicable requirement" means all of the following as they apply to emission units in a source requiring an air quality operating permit (including requirements that have been promulgated or approved by the Department or the administrator through rule making at the time of issuance of the air quality operating permit, but have future-effective compliance dates, provided that such requirements apply to sources covered under the operating permit):

(a) any standard, rule, or other requirement, including any requirement contained in a consent decree or judicial or administrative order entered into or issued by the Department, that is contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) any federally enforceable term, condition or other requirement of any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter, or pursuant to regulations approved or promulgated through rule making under Title I of the FCAA, including parts C and D;

(c) any standard or other requirement under Section 7411 of the FCAA, including Section 7411(d);

(d) any standard or other requirement under Section 7412 of the FCAA, including any requirement concerning accident prevention under Section 7412(r)(7), but excluding the contents of any risk management plan required under Section 7412(r);

(e) any standard or other requirement of the acid rain program under Title IV of the FCAA or regulations promulgated thereunder;

(f) any requirements established pursuant to Section 7661c(b) or Section 7414(a)(3) of the FCAA;

(g) any standard or other requirement governing solid waste incineration, under Section 7429 of the FCAA;

(h) any standard or other requirement for consumer and commercial products, under Section 7511b(e) of the FCAA;

(i) any standard or other requirement for tank vessels, under Section 7511b(f) of the FCAA;

(j) any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the administrator determines that such requirements need not be contained in an air quality operating permit;

(k) any national ambient air quality standard or increment or visibility requirement under Part C of Title I of the FCAA, but only as it would apply to temporary sources permitted pursuant to Section 7661c(e) of the FCAA; or

(l) any federally enforceable term or condition of any air quality open burning permit issued by the Department under Subchapter 6.

"Department" means the Montana Department of Environmental Quality.

"Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 7412(b) of the FCAA. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the FCAA.

"FCAA" means the Federal Clean Air Act, as amended.

"Federally enforceable" means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within the Montana state implementation plan, and any permit requirement established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51, Subpart I, including operating permits issued under an EPA approved program that is incorporated into the Montana state implementation plan and expressly requires adherence to any permit issued under such program.

"Fugitive emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"General air quality operating permit" or **"general permit"** means an air quality operating permit that meets the requirements of ARM 17.8.1222, covers multiple sources in a source category, and is issued in lieu of individual permits being issued to each source.

"Hazardous air pollutant" means any air pollutant listed as a hazardous air pollutant pursuant to Section 112(b) of the FCAA.

"Non-federally enforceable requirement" means the following as they apply to emission units in a source requiring an air quality operating permit:

(a) any standard, rule, or other requirement, including any requirement contained in a consent decree, or judicial or administrative order entered into or issued by the Department, that is not contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) any term, condition or other requirement contained in any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter that is not federally enforceable;

(c) does not include any Montana ambient air quality standard contained in Subchapter 2 of this chapter.

"Permittee" means the owner or operator of any source subject to the permitting requirements of this subchapter, as provided in ARM 17.8.1204, that holds a valid air quality operating permit or has submitted a timely and complete permit application for issuance, renewal, amendment, or modification pursuant to this subchapter.

"Regulated air pollutant" means the following:

(a) nitrogen oxides or any volatile organic compounds;

(b) any pollutant for which a national ambient air quality standard has been promulgated;

(c) any pollutant that is subject to any standard promulgated under Section 7411 of the FCAA;

(d) any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA; or

(e) any pollutant subject to a standard or other requirement established or promulgated under Section 7412 of the FCAA, including but not limited to the following:

i. any pollutant subject to requirements under Section 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Section 7412(e) of the FCAA, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established in Section 7412(e) of the FCAA;

ii. any pollutant for which the requirements of Section 7412(g)(2) of the FCAA have been met but only with respect to the individual source subject to Section 7412(g)(2) requirement.

"Responsible official" means one of the following:

(a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

i. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

ii. The delegation of authority to such representative is approved in advance by the Department.

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(c) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the environmental protection agency).

(d) For affected sources: the designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated thereunder are concerned, and the designated representative for any other purposes under this subchapter.

Abbreviations:

ARM	Administrative Rules of Montana
ASTM	American Society of Testing Materials
BACT	Best Available Control Technology
BDT	bone dry tons
bhp	brake horsepower
BTU	British thermal unit
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic foot
dscfm	dry standard cubic foot per minute
EEAP	Emergency Episode Action Plan
EPA	U.S. Environmental Protection Agency
EPA Method	Test methods contained in 40 CFR 60, Appendix A
EU	emissions unit
FCAA	Federal Clean Air Act
FERC	Federal Energy Regulatory Commission
gr	grains
HAP	hazardous air pollutant
hr	hour
hr/yr	hours per year
IEU	insignificant emissions unit
lb/hr	pound(s) per hour
Mbdft	thousand board feet
MCA	Montana Code Annotated
Method 5	40 CFR 60, Appendix A, Method 5
Method 9	40 CFR 60, Appendix A, Method 9
MMbdft	million board feet
MMBTU	million British Thermal Units
MMscf	million standard cubic feet
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NG	natural gas
NO_X	oxides of nitrogen
NO_2	nitrogen dioxide
NSPS	New Source Performance Standards
O_2	oxygen
Pb	lead
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
ppm	parts per million
psi	pounds per square inch
scf	standard cubic feet
rpm	revolutions per minute
SIC	Source Industrial Classification
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TPY	tons per year
U.S.C.	United States Code
VE	visible emissions
VOC	volatile organic compound

Appendix C NOTIFICATION ADDRESSES

Compliance Notifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

United States EPA
Air Program Coordinator
Region VIII, Montana Office
10 W. 15th Street, Suite 3200
Helena, MT 59626

Permit Modifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

Office of Partnerships and Regulatory Assistance
Air and Radiation Program
US EPA Region VIII 8P-AR
1595 Wynkoop Street
Denver, CO 80202-1129

Appendix D AIR QUALITY INSPECTOR INFORMATION

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist ORM, the permitting authority, inspectors, and the public.

Direction to Plant: The Baker Gas Plant is located approximately one mile northeast of Baker, Montana in Fallon County. Traveling North out of Baker on Highway 7, turn east on county road 81 #603. The facility is located on the left side of the road approximately 1/4 of a mile down county road 81.

Safety Equipment Required: Visitors are expected to have hardhats, eye protection, steel toed boots, and flame resistant clothing. ORM will provide ear protection. A safety briefing is required before entering the plant area.

Facility Plot Plan: A facility plot plan was submitted on December 15, 1999, along with the Title V original Operating Permit Application.

Appendix E COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

ONEOK Rockies Midstream, LLC
Baker Gas Plant Unit (EU010)
Non-Selective Catalytic Reduction

I. Background

A. Emissions Unit

Description: Rich Burn Natural Gas Compressor Engine
Unit ID: EU010 (C-3.3)
Facility: Baker Gas Plant
Fallon County, MT

B. Applicable Requirement, Emission Limits, and Monitoring Requirements

Regulation: Montana Air Quality Operating Permit Number OP2736-10

Emission Limits: NO_x: 5.51 lb/hr
CO: 5.51 lb/hr

Monitoring Requirements: Administrative Rules of Montana Chapter 17.8, Air Quality, Subchapter 15 - Compliance Assurance Monitoring
Temperature of exhaust gas into catalyst bed, differential pressure across the catalyst, inspection and preventative maintenance (I/PM) program

C. Control Technology, Capture System, Bypass, PTE

Controls: Non-selective reduction catalyst (NSCR)
Capture System: N/A
Bypass: None
PTE before controls: NOx: 120.70 tpy CO: 120.70 tpy
PTE after controls: NOx: 24.14 tpy CO: 24.14 tpy

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table A:

Table A. Engine Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator	Temperature of exhaust gas into the catalyst.	Pressure differential across the catalyst.	Inspection/Preventative Maintenance (I/PM) in accordance with I/PM plan.
Measurement Approach	Exhaust gas temperature into the catalyst is measured continuously using a thermocouple.	The pressure differential across the inlet and outlet of the catalyst is measured with a manometer or a differential pressure gauge.	Periodic inspections are performed according to I/PM checklist. Maintenance is performed as needed or as specified.
II. Indicator Range	Temperature of the exhaust gas at the inlet of the catalyst shall be maintained between 750 °F and 1250 °F except during startup. The engine is equipped with an automatic shutdown system that will shut down the engine automatically if the temperature exiting the catalyst approaches 1250 °F.	The pressure differential across the catalyst shall not change by more than 2 inches of water column from the reference pressure differential, except during startup.	Not applicable.

III. Performance Criteria A. Data Representativeness	The minimum accuracy of the thermocouple is +/- 1%.	Accuracy for either the differential pressure gauge or manometer must be a minimum of +/- 0.25 inches of water column.	I/PM is performed on the engine components that could affect the emissions, including the catalyst system, AFR controller, thermocouples, oxygen sensors, over-temperature protection device, and spark plugs.
B. Verification of Operational Status	The automatic shutdown system is tested annually to ensure proper operation and replaced if not within the performance criteria.	Visual inspection of the gauge or manometer for leaks and obvious defects.	After I/PM is performed on components that could affect engine emissions, a maintenance emissions test[1] shall be conducted and logged. The AFR set points will be checked and adjusted if necessary. PM inspections verify proper operation of the system.
C. QA/QC Practices and Criteria	Thermocouple accuracy is checked and recorded annually and replaced if outside of the performance criteria.	The pressure differential gauge is checked for accuracy annually, with date recorded. If outside the performance criteria, it is either calibrated or replaced. A manometer does not need calibration.	Qualified personnel perform inspections and preventative maintenance.
D. Monitoring Frequency	1. When the engine is in operation, the temperature is measured continuously and recorded daily. 2. The engine is automatically shut down when the readings approach 1250°F. 3. No monitoring is required when the engine does not operate at any time during the day. 4. Compliance assumed daily if no corrective action events.	1. Pressure differential across the catalyst will be recorded at least once per calendar month. 2. No monitoring is required for calendar months when the engine is not operated.	Periodic as defined in the I/PM Plan, subject to inclement weather, scheduling logistics and location constraints.
E. Data Collection Procedures	1. Temperatures will be recorded daily when the engine is in operation. 2. Excursions outside of the indicator range, except for startup, will be logged with the following data: • Date • Time (Duration) • Cause of high or low temperature • Corrective action taken	1. During the initial performance test, the reference pressure differential will be established. 2. When a catalyst is replaced or cleaned, the reference pressure differential will be re-established during a maintenance emissions test [1] within 24 hours. Results of the maintenance test will be documented with the pressure differential noted. 3. Pressure differential across catalyst is monitored at least once per calendar month. 4. Operating hour records will be kept. If an engine is operated part of calendar month, and a pressure differential is not read before it is shut down, the pressure differential will be taken on the first day of engine startup, without incurring a permit deviation.	Records are maintained to document periodic inspections and maintenance performed.
Averaging period	None.	None.	Not applicable.

[1] A maintenance emissions test is performed with a portable analyzer that does not follow the MDEQ-approved protocol. The instrument is calibrated but no linearity check is performed and only one instantaneous reading is measured and recorded.

JUSTIFICATION

I. Background

The monitoring approach outlined applies to the 3-way NSCR system used on rich-burn natural gas fired compressor engines. The catalyst system is a passive unit and does not have mechanical components. The reduction reaction does not take place properly if the temperature of the engine exhaust gas into the catalyst system is too low or too high. A significant change in pressure differential across the catalyst can indicate catalyst damage or fouling.

II. Rationale for Selection of Performance Indicators

Temperature into the catalyst unit is measured because temperature excursions can indicate problems with engine operation that can prevent the chemical reaction from taking place in the catalyst bed. Too low of an exhaust gas temperature reduced the activity of the intended chemical/catalyst reaction. Too high of an exhaust gas temperature can indicate engine problems which can damage the catalyst unit. Daily monitoring of inlet gas temperature to the catalyst will help assure proper operation of the catalyst.

Pressure differential across the catalyst can indicate if the catalyst unit is physically damaged. Decreased pressure differential may indicate channeling or other problems. Increased pressure differential may indicate fouling or plugging of the catalyst. Both conditions would result in reduced catalyst performance. When a catalyst is replaced or cleaned, the reference pressure differential must be re-established using a pressure differential gauge or manometer after a Maintenance Test confirms compliance with NO_x and CO limits. A Maintenance Test is performed with a portable analyzer that does not follow the MDEQ-approved protocol. The primary differences between the protocol followed for a Maintenance Emissions Test and the MDEQ-approved protocol are that for a Maintenance Emissions Test, the instrument is calibrated using calibration gas but no linearity check is performed and only one reading is recorded.

Semiannual NO_x and CO emission testing is necessary to determine if the catalyst has chemical damage and to demonstrate compliance with emission limits. The exhaust temperature, pressure differential, implementation of the I/PM Plan and performing periodic stack tests are all necessary to maintain proper operation of the engines and catalysts. In addition to the semiannual Compliance Testing that follows the MDEQ-approved protocol, Maintenance Emissions Testing, as described above, is performed after maintenance that could affect emissions.

Implementations of the I/PM Plan provides assurance that the engines and catalyst system are in good repair and operating properly. Items on the I/PM checklist include those items that relate to air emissions and are shown in Table A.

III. Rationale for Selection of Indicator Ranges

An exhaust gas temperature range of 750°F to 1250°F has been selected based upon the catalyst manufacturer-suggested operating parameters for optimal chemical reaction and field operating experience. This is also the temperature range that is a require operating limitation for rich-burn, catalytically controlled engines subject to reciprocating internal combustion engine (RICE) NESHAP.

Monitoring of the pressure differential across the catalyst is based on information gathered from catalyst vendors that a pressure differential that deviates by +/- 2 inches of water column from the pressure differential measures during the initial performance test (reference pressure differential) indicates that the catalyst may be damaged or fouled. This is also the pressure differential range that is a required operating limitation for rich-burn, catalytically controlled engines subject to the RICE NESHAP.

The I/PM Plan was developed based on manufacturer recommendations and company operating experience with similar engines to include those items that affect emissions.

INSPECTION/PREVENTATIVE MAINTENANCE PLAN

ORM owns and operates the Baker Gas Plant in Fallon County, Montana. The facility contains one (1) 1250 bhp Waukesha L7042 GSI compressor engine, equipped with an AFR controller and NSCR 3-way catalyst for reduction of NOx, CO, and VOC emissions. This unit is subject to 40 CFR 64, *Compliance Assurance Monitoring Program*. The facility operates two other engines that are not subject to Compliance Assurance Monitoring.

PURPOSE

The purpose of the I/PM Plan is to supplement engine operating manuals with required maintenance procedures for equipment that could affect emissions so that potential exceedance of emissions limitations may be prevented. This I/PM Plan is also designed to help ensure optimum operation of engines and control equipment, avoid situations that could cause catalyst damage, and identify potential problems in a timely manner. A general maintenance program checklist is provided in Table B to demonstrate activities that are performed periodically as part of the I/PM Plan.

ENGINE

Proper engine operation is critical to the performance of NSCR catalysts. Emissions are directly influenced by a number of factors that affect combustion temperature and efficiency, including engine timing, type and heat content of fuel, ambient air temperature and relative humidity, fuel temperature and changes in load. If an engine misfires, it produces high catalyst temperature because the unburned fuel/fuel mixture burns when it contacts the catalyst. Several misfiring cylinders can produce enough heat to cause permanent damage to the catalyst. Each engine is scheduled for preventative maintenance every 3000 hours of operation; however, this time frame fluctuates with inclement weather, scheduling logistics and location constraints. Each engine will be checked on a routine basis for proper operation and misfiring conditions.

CATALYST

For rich-burn engines equipped with a NSCR catalyst, an AFR controller is used to control the oxygen content of the exhaust gas. The AFR controller will be routinely checked, along with the percent oxygen level, to ensure it is operating in automatic mode, and that there are no alarms of the engine exceeding the limits of the AFR controller. Corrective action may include adjusting the engine timing to a different setting at which the AFR controller can adequately adjust the AFR over the expected range of fuel heat content and loading.

These control devices are intrinsically maintenance-free and periodic inspection is sufficient to help maintain catalytic activity and control efficiency. To help ensure each catalyst is operating properly, an annual inspection for physical damage and fouling will be conducted. Vacuuming and a low pH washing procedure may be utilized to clean any fouling. Cleaning procedures and frequencies will depend on each specific situation. When a catalyst is replaced or cleaned, the reference pressure differential must be re-established using a pressure differential gauge or manometer after a Maintenance Emissions Test confirms compliance with NO_x and CO limits.

TEMPERATURE

Engines are equipped with under-temperature and over-temperature shutdown systems. At least annually (or as inclement weather, scheduling logistics, and location constraints allow), the under-temperature and over-temperature shut down systems will be tested to ensure they are working. For efficient NSCR operations, the exhaust gas must be above 750°F with a maximum of 1250°F at the inlet of the catalyst. Readings approaching 1250°F will result in an automatic shutdown of the engine.

PRESSURE DIFFERENTIAL

A change in pressure differential may indicate the catalyst is becoming fouled or channeled, thereby lowering the effectiveness of the unit. The pressure differential across the catalyst shall be monitored at least monthly. If the pressure changes by +/- 2 inches of water column from the reference pressure differential, corrective action will be taken.

TABLE B: INSPECTION/PREVENTATIVE MAINTENANCE PLAN CHECKLIST

DAILY:

- ✓ Exhaust gas temperature into the catalyst
- ✓ Check panel board pressure and temperature readings (record weekly)
- ✓ Check engine and compressor oil temperatures
- ✓ Inspect the AFR controller for alarms and change the oxygen sensor if needed
- ✓ Check engine and compressor fluid levels

MONTHLY:

- ✓ Pressure differential across the catalyst is measured and recorded
- ✓ Visual inspection of tubing to detect clogging on differential pressure gauges

EVERY 3000 OPERATING HOURS[1], PREVENTATIVE MAINTENANCE CONSISTING OF:

- ✓ Replace air pre-filters and filters as needed
- ✓ Check ignition timing
- ✓ Replace engine oil filters
- ✓ Check valve recessions and repair as needed
- ✓ Inspect and gap spark plugs and replace as needed
- ✓ Check and set fuel and boost pressures
- ✓ Check and adjust crankcase pressures
- ✓ Test panel board shutdowns

SEMIANNUALLY:

- ✓ Stack Test
- ✓ Check catalyst housing for visible cracks or openings

ANNUALLY:

- ✓ Over-temperature system is tested to ensure proper operation by creating an alarm on the control panel
- ✓ Accuracy check of thermocouples
- ✓ Accuracy check of differential pressure gauge, if used

Notes:

1. Each engine is scheduled for preventative maintenance every 3000 hours or operation; however, this time frame fluctuates with inclement weather, scheduling logistics, and location constraints.