

**AIR QUALITY  
CHAPTER 6, SECTION 3  
OPERATING PERMIT**

**WYOMING DEPARTMENT OF  
ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
122 West 25th Street  
Cheyenne, Wyoming 82002**



**PERMIT NO. 3-1-018-2**

Issue Date: **July 8, 2014**  
Expiration Date: **July 23, 2014**  
Effective Date: **July 8, 2014**  
Replaces Permit No.: **3-1-018-1**

In accordance with the provisions of W.S. §35-11-203 through W.S. §35-11-212 and Chapter 6, Section 3 of the Wyoming Air Quality Standards and Regulations,

**Williams Field Services Company  
Opal Gas Plant  
Sections 22 and 27, Township 21 North Range 114 West  
Lincoln County, Wyoming**

is authorized to operate a stationary source of air contaminants consisting of emission units described in this permit. The units described are subject to the terms and conditions specified in this permit. All terms and conditions of the permit are enforceable by the State of Wyoming. All terms and conditions of the permit, except those designated as not federally enforceable, are enforceable by EPA and citizens under the Act. A copy of this permit shall be kept on-site at the above named facility.

*Steven A. Dietrich*

Steven A. Dietrich, Administrator  
Air Quality Division

*7-8-14*

Date

*Todd Parfitt*

Todd Parfitt, Director  
Department of Environmental Quality

*7/10/14*

Date

**WAQSR CHAPTER 6, SECTION 3 OPERATING PERMIT**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**AIR QUALITY DIVISION**

**TABLE OF CONTENTS**

**(Modified July 20, 2011) (Modified July 8, 2014)**

General Information .....	3
Source Emission Points.....	4
Total Facility Estimated Emissions .....	6
Facility-Specific Permit Conditions.....	7
Source-Specific Permit Conditions.....	7
Testing Requirements .....	10
Monitoring Requirements .....	111
Recordkeeping Requirements .....	123
Reporting Requirements .....	14
Accidental Release Prevention Requirements .....	167
WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart Dc Requirements .....	18
WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart GG Requirements .....	18
WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart KKK Requirements .....	18
<b>WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart IIII Requirements .....</b>	<b>19</b>
WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart KKKK Requirements .....	19
<b>WAQSR Chapter 5, Section 2 and 40 CFR Part 60, Subpart OOOO Requirements .....</b>	<b>19</b>
WAQSR Chapter 5, Section 3 and 40 CFR Part 63, Subpart HH Requirements .....	20
WAQSR Chapter 5, Section 3 and 40 CFR Part 63, Subpart YYYY Requirements .....	20
<b>WAQSR Chapter 5, Section 3 and 40 CFR Part 63, Subpart ZZZZ Requirements .....</b>	<b>20</b>
WAQSR Chapter 5, Section 3 and 40 CFR Part 63, Subpart DDDDD Requirements .....	20
WAQSR Chapter 7, Section 3 Compliance Assurance Monitoring (CAM) Requirements .....	21
Compliance Certification and Schedule.....	22
Compliance Certification .....	22
Compliance Schedule.....	23
General Permit Conditions.....	24
State Only Permit Conditions .....	29
Summary of Source Emission Limits and Requirements .....	31
Abbreviations .....	44
Definitions.....	45
Appendix A: Preventative Maintenance Plan	
Appendix B: <b>Reserved</b>	
Appendix C: <b>Reserved</b>	
Appendix D: Compliance Assurance Monitoring Plan	
Appendix E-M: <b>Removed</b>	

## GENERAL INFORMATION

Company Name: Williams Field Services Company

Mailing Address: 4980 State Highway 374

City: Green River

State: Wyoming

Zip: 82935

Plant Name: Opal Gas Plant

Plant Location: Sections 22 & 27, Township 21 North, Range 114 West, Lincoln County, Wyoming (approximately one mile west of Opal, Wyoming)

Plant Mailing Address: P.O. Box 40

City: Opal

State: Wyoming

Zip: 83124

Name of Owner: Williams

Phone: (918) 588-2000

Responsible Official: *T.J. Rinke*  
(Modified July 8, 2014)

Phone: (918) 573-9968

Plant Contact: Stephenie Sinnett  
(Modified July 20, 2011)

Phone: (307) 872-2807

DEQ Air Quality Contact: District 4 Engineer  
510 Meadowview Drive  
Lander, Wyoming 82520

Phone: (307) 332-6755

SIC Code: 1321

Description of Process: The Opal Gas Processing Plant receives field gas from the Jonah, Big Piney, and Moxa gathering areas which is produced by numerous independent companies. There are five cryogenic natural gas liquids extraction plants at the facility: TXP1, TXP2, TXP3, TXP4 and TXP5. Any condensates present at the plant inlet temperature and pressure are removed prior to the extraction processes. In each extraction plant the natural gas liquids, composed of ethane, propane, and butanes, are separated from the residual natural gas.

The TXP1, TXP2, TXP3, TXP4 and TXP5 plants use cryogenic temperatures to separate, by condensation, the natural gas liquids from the residual natural gas. The required temperature is achieved by dropping the pressure of the natural gas process stream across a turbo expander to produce cooling of the natural gas and condensation of the natural gas liquids. In each plant the natural gas liquids are separated into discrete ethane, propane, and butane fractions and sold as liquid products via pipeline, truck, and railcar. The residual natural gas is recompressed to mainline pressure prior to leaving the facility.

Emission sources at the facility include the compressor engines used in the extraction process and transportation of the products by pipeline. Other air emission sources include flares, heaters, tanks, and firewater pumps. Fugitive emissions result from leaks from valves, open-ended lines, flanges, pumps, and compressor seals.

**SOURCE EMISSION POINTS**

This table may not include any or all insignificant activities at this facility.

**(Modified July 20, 2011) (Modified July 8, 2014)**

UNIT ID	ALTERNATE ID	SOURCE DESCRIPTION	SIZE	CH 6, SEC 2 PERMITS
1	OP-3	Waste Heat Recovery Unit	25.7 MMBtu/hr	MD-242A
3	OP-7	Regeneration Gas Heater	1.0 MMBtu/hr	MD-242A
4	TXP1-2	Hot Oil Heater (TXP1/TXP2)	17.6 MMBtu/hr	MD-242A
5	TXP1-4	Regeneration Gas Heater (TXP1)	6.2 MMBtu/hr	MD-242A
6	TXP1-3	Glycol Water Heater	2.4 MMBtu/hr	MD-242A
11	OP-2	Solar Centaur T-4500 Turbine Engine (Generator)	3455 hp	MD-242A
15	TXP2-1	Regeneration Gas Heater (TXP2)	10.3 MMBtu/hr	MD-242A
16	TXP2-2	Glycol Water Heater	4.2 MMBtu/hr	MD-242A
18A	-	TXP3/TXP4/TXP5 plant flare	-	MD-1327A, MD-1603, <b>MD-12097</b>
18B	-	Turbo-Expander Plant Flare (TXP1) - formerly source TXP1-5	-	MD-1603
18C	-	Pit Flare	-	MD-1603
18D	TXP2-6	Turbo-Expander Plant Flare (TXP2) (Pilot)	0.4 MMBtu/hr	MD-1603
18E	-	Turbo Expander (TXP2) VOC Flare	-	MD-1603
19B	TXP2-4	Solar Taurus T-6502S Turbine Engine (Recompressor)	4977 hp	MD-242A
20B	TXP2-5	Solar Taurus T-6502S Turbine Engine (Recompressor)	4977 hp	MD-242A
26	-	TXP2 Amine Unit Regenerator Vent Thermal Oxidizer	500 gal/min	MD-1603
27	TXP1-1	Solar Mars 90-T-12000S Turbine Engine	11,325 hp	MD-914A
28	OP-10	Solar Centaur T-4700S Turbine Engine	3835 hp	MD-242A
29	OP-11	Methanol Skid Heater	0.6 MMBtu/hr	MD-242A
32	OP-12	Solar Centaur 40-T4700S Turbine Generator	4275 hp	MD-407A2
33	OP-13	Solar Taurus 70-T10302S Turbine	9,641 hp	MD-407A2
34	TXP1-1A	Solar Centaur 50-T5700S Turbine	4709 hp	MD-407A2
35	TXP3-1	Solar Mars 100-T15000S Turbine	12,274 hp	MD-407A2
36	TXP3-2	Solar Mars 100-T15000S Turbine	12,274 hp	MD-407A2
37	TXP3-3	Regeneration Gas Heater	13.6 MMBtu/hr	None

UNIT ID	ALTERNATE ID	SOURCE DESCRIPTION	SIZE	CH 6, SEC 2 PERMITS
40	-	Auxiliary Steam Boiler	12.6 MMBtu/hr	MD-917A3 <i>corrected</i>
43	-	Solar Taurus 70-T10302S Turbine	10,300 hp	MD-917A3 <i>corrected</i>
45	-	Glycol Dehydrator Reboiler	3.6 MMBtu/hr	MD-917A3 <i>corrected</i>
46	-	Glycol Dehydrator T-Ox	1.35 BSCFD	MD-917A3 <i>corrected</i> , MD-12097, wy-13561 <i>corrected</i>
48	-	1000 bbl Stabilized Cond. Tank	1000 bbl	MD-1188
49	-	1000 bbl Stabilized Cond. Tank	1000 bbl	MD-1188
50	-	Solar Mars 100-T15000S Turbine	13,054 hp	MD-1327A
51	-	Solar Mars 100-T15000S Turbine	13,054 hp	MD-1327A
53	-	TXP3/TXP5 Amine Unit Thermal Oxidizer	N/A	MD-1327A
F-1	-	Process Piping Fugitive Emissions	-	MD-242A, MD-407A2, MD-1327A
F2	-	Natural Gasoline Loading Losses	-	MD-1603
TL	-	Truck Loading Losses (Tanks 48 and 49)	-	MD-1188
T-52 & 53	-	Methanol Storage Tanks	400 bbl ea.	None
S-8121, T-2112, T-2111, T-81034, T-81035, T-2115, T-8107	-	7 Condensate Storage Tanks	70 to 250 bbl	AP-3392
-	-	Broach Product Dryer Heater	3.6 MMBtu/hr	MD-917A3 <i>corrected</i>
-	-	Approximately 40 Small Natural Gas Heaters Located Throughout the Facility	-	None
<b>SB-01</b>	-	<b>Cummins NT-855-F2 Diesel Engine</b>	<b>380 hp</b>	<b>wy-15407</b>
<b>SB-02</b>	-	<b>Caterpillar G3406C Diesel Engine</b>	<b>330 hp</b>	<b>wy-15407</b>
<b>SB-03</b>	-	<b>John Deere 4219D Diesel Engine</b>	<b>68 hp</b>	<b>wy-15407</b>
<b>SB-04</b>	-	<b>John Deere JD4045HF Diesel Engine</b>	<b>122 hp</b>	<b>wy-15955-1</b>

### **TOTAL FACILITY ESTIMATED EMISSIONS**

For informational purposes only. These emissions are not to be assumed as permit limits.  
(Modified July 8, 2014)

<b>POLLUTANT</b>	<b>EMISSIONS (TPY)</b>
<b>CRITERIA POLLUTANT EMISSIONS</b>	
PM <sub>2.5</sub> Particulate Matter	Negligible
PM <sub>10</sub> Particulate Matter	32
Sulfur Dioxide (SO <sub>2</sub> )	15
Nitrogen Oxides (NO <sub>x</sub> )	569
Carbon Monoxide (CO)	568
Volatile Organic Compounds (VOCs)	182
<b>HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS</b>	<b>23.2<sup>1</sup></b>

Emission estimates are based on emission estimates from the *WAQSR Chapter 6, Section 2 waiver wy-15955-1*.

<sup>1</sup>Largest single HAP pollutant is formaldehyde at 12.2 TPY. This facility is a major source of HAPs.

**FACILITY-SPECIFIC PERMIT CONDITIONS**

Source-Specific Permit Conditions

- (F1) **VISIBLE EMISSIONS** [WAQSR Ch 3, Sec 2; Ch 3, Sec 6; Ch 5, Sec 2; Ch 6, Sec 2 Permits *and waivers* MD-917A3 *corrected*, MD-1327A, MD-1603, *and wv-13561 corrected*] (*Modified July 8, 2014*)
- (a) Visible emissions from the Regeneration Gas Heater (unit 3) shall not exceed 40 percent opacity.
  - (b) Flares 18B, 18C, 18D, the thermal oxidizer controlling the 1.35 BSCFD glycol dehydrator (unit 46), the enclosed vapor combustor system controlling the natural gasoline liquid loading losses (unit F2), and the thermal oxidation system controlling the TXP2 amine unit regeneration vent (unit 26) shall be operated and maintained *to be smokeless*, with no visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours as determined by Method 22.
  - (c) Flare 18E shall not exceed a 20 percent opacity emission standard.
  - (d) The TXP3/TXP4/TXP5 Plant flare (unit 18A) and the TXP3/TXP5 amine unit regenerator vent thermal oxidizer (unit 53), shall be operated and maintained to be smokeless, per Chapter 5, Section 2(m) of the WAQSR, with no visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours as determined by Method 22 of 40 CFR Part 60, Appendix A.
  - (e) *Each flare (units 18A, 18B, 18C, 18D, 18E) must be equipped and operated with an automatic ignitor or a continuous burning pilot which must be maintained in good working order.*
  - (f) *Visible emissions from the Cummins, Caterpillar and John Deere diesel fired engines (units SB-01, SB-02, SB-03 and SB-04) shall not exceed 30 percent opacity except for periods not exceeding ten consecutive seconds.*
  - (g) Unless a limit is specified elsewhere in this permit, visible emissions of any contaminant discharged into the atmosphere from any other single source of emission, shall not exhibit greater than 20 percent opacity except for one period or periods aggregating not more than six minutes in any one hour of not more than 40 percent opacity.
- (F2) **NO<sub>x</sub> AND CO EMISSIONS** [WAQSR Ch 3, Sec 3 and Ch 6, Sec 2 Permits MD-242A, MD-914A, MD-407A2, MD-917A3 *corrected* and MD-1327A] (*Modified July 8, 2014*)
- (a) Emissions from the units listed in Table I and Table II of this permit shall not exceed the specified limits.
  - (b) For each unit listed in Table I, compliance with the g/hp-hr limit is compliance with the lb/hr and TPY limits in Table II of this permit as long as the unit is operated at or below its site-rated capacity.
  - (c) NO<sub>x</sub> emissions from the approximately 40 assorted small heaters with heat inputs between 10,000 and 200,000 Btu/hr shall not exceed 0.20 lb/MMBtu heat input.

TABLE I: ALLOWABLE EMISSION LIMITS						
Unit ID	Alternate ID#	Unit Description	NO <sub>x</sub>		CO	
			ppmv <sub>d</sub> @ 15% O <sub>2</sub>	g/hp-hr	ppmv <sub>d</sub> @ 15% O <sub>2</sub>	g/hp-hr
11	OP-2	Solar Centaur T-4500 Turbine Engine		2.263		0.630
19B	TXP2-4	Solar Taurus T-6502S Turbine Engine	42		50	
20B	TXP2-5	Solar Taurus T-6502S Turbine Engine	42		50	
27	TXP1-1	Solar Mars 90-T-12000S Turbine Engine	42		50	
28	OP10	Solar Centaur 40-T4700S Turbine Engine	165	0.706		1.473
32	OP-12	Solar Centaur 40-T4700S Turbine Generator Engine	25		50	
33	OP-13	Solar Taurus 70-10302S Turbine Engine	25		50	
34	TXP1-1A	Solar Centaur 50-T5700S Turbine Engine	25		50	
35	TXP3-1	Solar Mars 100-T15000S Turbine Engine	25		50	
36	TXP3-2	Solar Mars 100-T15000S Turbine Engine	25		50	
43	-	Solar Taurus 70-T10302S Turbine Engine	25		50	

Unit ID	Alternate ID#	Unit Description	NO <sub>x</sub>		CO	
			ppmv <sub>d</sub> @ 15% O <sub>2</sub>	g/hp-hr	ppmv <sub>d</sub> @ 15% O <sub>2</sub>	g/hp-hr
50	-	Solar Mars 100-T15000S Turbine Engine	15 <sup>a</sup>		25 <sup>a</sup>	
51	-	Solar Mars 100-T15000S Turbine Engine	15 <sup>a</sup>		25 <sup>a</sup>	

<sup>a</sup> at ambient temperatures greater than 0 °F.

Unit ID	Alternate ID	Unit Description	NO <sub>x</sub> Emission Limits			CO Emission Limits	
			lb/MMBtu	lb/hr	TPY	lb/hr	TPY
1	OP-3	Waste Heat Recovery Unit	0.20				
3	OP-7	Regeneration Gas Heater	0.23				
4	TXP1-2	Hot Oil Heater (TXP1/TXP2)	0.20				
5	TXP1-4	Regeneration Gas Heater (TXP1)	0.20				
6	TXP1-3	Glycol Water Heater	0.20				
11	OP-2	Solar Centaur T-4500 Turbine Engine (Generator)		17.2	75.5	4.8	21.0
15	TXP2-1	Regeneration Gas Heater (TXP2)	0.20				
16	TXP2-2	Glycol Water Heater	0.20				
19B	TXP2-4	Solar Taurus T-6502S Turbine Engine (Recompressor)		7.2	31.3	1.6	6.9
20B	TXP2-5	Solar Taurus T-6502S Turbine Engine (Recompressor)		7.2	31.3	1.6	6.9
27	TXP1-1	Solar Mars 90-T-12000S Turbine Engine		14.7		10.6	
28	OP-10	Solar Centaur T-4700S Turbine Engine		6.0	26.1	12.5	54.5
29	OP-11	Methanol Skid Heater	0.20				
32	OP-12	Solar Centaur 40-T4700S Turbine Generator		4.0	17.5	4.8	21.0
33	OP-13	Solar Taurus 70-T10302S Turbine		6.9	30.4	8.4	37.0
34	TXP1-1A	Solar Centaur 50-T5700S Turbine		4.1	17.9	4.9	21.8
35	TXP3-1	Solar Mars 100-T15000S Turbine		9.7	42.5	11.8	51.7
36	TXP3-2	Solar Mars 100-T15000S Turbine		9.7	42.5	11.8	51.7
37	TXP3-3	Regeneration Gas Heater	0.20				
40	-	Auxiliary Steam Boiler		1.3	5.5	1.1	4.6
43	-	Solar Taurus 70-T10302S Turbine		6.9	30.4	8.5	37.0
45	-	Glycol Dehydrator Reboiler		0.4	1.7	0.2	1.1
46	-	Glycol Dehydrator T-Ox		3.0	13.2	2.3	10.0
50	-	Solar Mars 100-T15000S Turbine		6.9		7.8	
51	-	Solar Mars 100-T15000S Turbine		6.9		7.8	
53	-	TXP3/TXP5 Amine Unit Thermal Oxidizer		2.7	11.6	3.1	13.6
-	-	Broach Product Dryer Heater		0.3	1.5	0.3	1.3

- (F3) VOC EMISSIONS LIMITS AND CONTROL **EQUIPMENT** REQUIREMENTS [WAQSR Ch, 6, Sec 2 Permits *and waivers* MD-1327A, MD-1603, MD-917A3 *corrected*, MD-12097 and *wv-13561 corrected*; and W.S. 35-11-110 2/9/2006 Letter] (**Modified July 20, 2011**) (*Modified July 8, 2014*)
- (a) VOC and HAP emissions associated with the TXP3/TXP5 amine unit flash tanks and acid gas vents shall be controlled by a thermal oxidizer (unit 53). VOC emissions from the TXP3/TXP5 amine unit thermal oxidizer (unit 53) shall not exceed 1.7 lb/hr and 7.1 TPY.
  - (b) The *permittee* shall **operate and maintain** a thermocouple and continuous recording device or any other equivalent device to detect the presence of a flame on the TXP3/TXP4/TXP5 Plant Flare (unit 18A) and the TXP3/TXP5 amine unit thermal oxidizer (unit 53).
  - (c) The TXP3/TXP4/TXP5 plant flare and the TXP3/TXP5 amine unit thermal oxidizer (units 18A & 53) shall be maintained and operated during all periods of active operation of the TXP5 plant such that the units remain effective as viable emissions control devices.
  - (d) **The 350 MMscfd glycol dehydration contactor shall utilize the 1 BSCFD glycol dehydrator glycol regeneration system (together comprising the 1.35 BSCFD glycol dehydrator). VOC and HAP emissions from the 1.35 BSCFD glycol dehydrator still vent shall be controlled with a thermal oxidizer (unit 46).** VOC and HAP emissions from the 1.35 BSCFD glycol *dehydrator* flash tank vent that are not used as fuel in the reboiler (unit 45) shall be controlled with a thermal oxidizer (unit 46) **or the TXP3/TXP4/TXP5 flare (unit 18A).**
    - (i) Benzene emissions from the 1.35 BSCFD glycol dehydrator shall be limited to **1.0 ton per year.**
    - (ii) The Glycol Dehydrator Thermal Oxidizer (unit 46) shall have a temperature monitoring device equipped with a continuous recording device.
    - (iii) The minimum hourly average operating temperature of glycol dehydrator still vent thermal oxidizer (unit 46) outlet shall be 1268 °F  $\pm 2^{\circ}\text{C}$ . The required minimum hourly average temperature of thermal oxidizer outlet may be administratively amended by the Division.
  - (e) The TXP2 amine unit regenerator vent shall be controlled with a thermal oxidation system (unit 26) and the natural gasoline liquid loading losses shall be controlled with an enclosed vapor combustion system (unit F2).
    - (i) VOC emissions from the TXP2 amine regenerator thermal oxidizer (unit 26) shall not exceed 0.1 lb/hr and 0.5 TPY.
    - (ii) VOC emissions from the natural gasoline liquid loading losses enclosed vapor combustor system (unit F2) shall not exceed 0.0835 lb/1000 gal loaded, 2.7 lb/hr and 1.1 TPY.
    - (iii) Unit F2 shall maintain a temperature monitoring device equipped with a continuous recording device located in the combustion chamber, downstream of the combustion zone.
    - (iv) The permittee shall maintain and operate the enclosed vapor combustion system and the thermal oxidation system (units F2 and 26) during all periods of active operation of the natural gasoline loading rack and the TXP2 amine unit such that each remains effective as a viable emissions control device.
  - (f) The permittee shall maintain records of gas volumes sent to each flare (units 18A, 18B, 18D, and 18E) as a result of plant upsets not associated with normal operations.
  - (g) **The TXP3/TXP4/TXP5 flare (unit 18A) shall be operated following the requirements outlined in 40 CFR §63.11(b).**
- (F4) **ENGINE OPERATION AND MAINTENANCE** REQUIREMENTS [WAQSR Ch 6, Sec 2 Permits *and waivers* MD-407A2, MD-1327A, *wv-15407*, and *wv-15955-1*; and Ch 6 Sec 3 (h)(i)(A)] (*Modified July 8, 2014*)
- (a) The permittee shall operate and maintain the following turbine engines, units 32, 33, 34, 35, and 36, in accordance with the Preventative Maintenance Plan attached as Appendix A of this permit.
  - (b) The permittee shall operate and maintain units 1, 4, 5, 15, 37, 40 and 28 in accordance with the manufacturers' specifications and recommendations to minimize NO<sub>x</sub> emissions.
  - (c) The Solar Mars 100-T15000S Turbine engines (units 50 & 51) shall be maintained in accordance with the manufacturer's specifications and recommendations.
  - (d) **The permittee shall operate and maintain the Cummins, Caterpillar and John Deere diesel fired engines (units SB-01, SB-02, SB-03 and SB-04) and monitoring equipment according to good air pollution control practices at all times, including startup, shutdown, and malfunction.**
  - (e) **The operating hours of the diesel fired engines shall be limited as follows:**

- (i) *The Cummins and Caterpillar diesel engines (units SB-01 and SB-02) shall each be limited to 100 hours of non-emergency operation per calendar year.*
  - (ii) *The John Deere 4219D diesel engine (unit SB-03) shall be limited to 500 hours of non-emergency operation per calendar year.*
  - (iii) *The John Deere JD4045HF diesel engine (unit SB-04) shall be limited to 1,000 hours of operation per calendar year.*
  - (f) *The permittee shall install, operate and maintain non-resettable hour meters on the Cummins, Caterpillar and John Deere diesel engines (units SB-01, SB-02, SB-03 and SB-04) to demonstrate compliance with the hours limits in condition F4(e).*
  - (g) *The John Deere JD4045HF diesel engine (unit SB-04) shall be U.S. EPA Tier 4i certified.*
- (F5) TEMPORARY ENGINE REPLACEMENT [WAQSR Ch 6, Sec 3 (h)(i)(I)]
- (a) Should the any of the engines break down or require overhauls during the term of this permit, the permittee may bring on site and operate a temporary replacement engine until repairs are made. Permanent replacement of an engine must be permitted under Chapter 6, Section 2 of the WAQSR, to determine appropriate permitting action and evaluate the need for additional requirements resulting from the permanent replacement.
  - (b) The replacement unit shall be identical or similar to the unit replaced with emission levels at or below those of the unit replaced.
  - (c) The permittee shall notify the Division in writing of such replacement within five working days, provide the date of startup of the replacement engine, and provide a statement regarding the applicability of any New Source Performance Standards (NSPS) in 40 CFR, Part 60 and/or the applicability of any National Emission Standards for Hazardous Air Pollutants (NESHAPs) in 40 CFR, Part 63.
- (F6) CONDENSATE STABILIZER OPERATION [WAQSR Chapter 6, Section 2 Permit MD-1188]
- (a) The bottoms temperature off the stabilizer shall be 300 °F or greater during active stabilizer operation.
  - (b) A temperature monitoring device with a continuous recording device shall be maintained and operated at the bottoms outlet of the stabilizer.

Testing Requirements

- (F7) [RESERVED]
- (F8) ADDITIONAL TESTING [W.S. 35-11-110] **(Modified July 20, 2011)** **(Modified July 8, 2014)**
- (a) The Division reserves the right to require additional testing as provided under condition G1 of this permit. Should testing be required, test methods found at 40 CFR Part 60, Appendix A, shall be used as follows:
    - (i) Method 9 shall be used to measure visible emissions.
    - (ii) For the turbines, testing for NO<sub>x</sub> and SO<sub>2</sub> on a ppm basis shall follow the requirements of 40 CFR Part 60, Subpart GG or KKKK, and testing on a lb/hr basis shall follow Methods 1-4, 7E and 6.
    - (iii) For other NO<sub>x</sub> emission sources, Methods 1-4 and 7 or 7E shall be used.
    - (iv) For other CO emission sources, Methods 1-4 and 10 shall be used.
    - (v) For VOC emissions from the enclosed vapor combustion system controlling the natural gasoline liquid loading losses (unit F2) the test shall be 6 hours long during which at least 300,000 liters of product is loaded. If this is not possible, the test may be continued the same day until 300,000 liters of product is loaded or the test may be resumed the next day with another complete 6 hour period. In the later case, the 300,000 liter criterion need not be met. However, as much as possible, testing should be conducted during the 6 hour period in which the highest throughput normally occurs.
    - (vi) For benzene emissions from the *1.35 BSCFD* glycol dehydrator, methods *indicated in 40 CFR 63 Subpart HH shall be used.*
    - (vii) For alternative test methods, or methods used for other pollutants, the approval of the Administrator must be obtained prior to using the test method to measure emissions.

- (b) Unless otherwise specified, testing shall be conducted in accordance with WAQSR Chapter 5, Section 2 (h).

#### Monitoring Requirements

- (F9) **VISIBLE EMISSIONS MONITORING** [WAQSR Ch 6, Sec 3 (h)(i)(C)(I)] (*Modified July 8, 2014*)
- (a) The permittee shall perform, at minimum, quarterly Method 22 tests on the flares (units 18A, 18B, 18D, and 18E), the thermal oxidizers (units 26, 46 and 53) and the enclosed vapor combustor system (unit F2) to assess compliance with condition F1 of this permit. The Method 22 test shall be performed for a period of 15 consecutive minutes. If visible emissions are observed during the 15 minute period, the test shall continue for 2 consecutive hours.
- (b) Periodic monitoring of visible emissions from unit 18C is not required since the source does not operate during normal operations of the facility.
- (c) In lieu of periodic monitoring for visible emissions from the other gas fired sources listed in the Source Emissions Points Table of this permit (except for the flares and thermal oxidizers), the permittee shall monitor the type of fuel used to ensure gas is the sole fuel sources for the units.
- (d) ***The permittee shall conduct observations of visible emissions from the diesel fired engines as follows:***
- (i) ***For units SB-01, SB-02 and SB-03, during periodic availability assurance tests of these sources, at least semi-annually, to assess compliance with the opacity limit under condition F1 and to identify maintenance needs.***
- (ii) ***For unit SB-04, during periods of normal operation or during periodic availability assurance tests of this source, at least semi-annually, to assess compliance with the opacity limit under condition F1 and to identify maintenance needs.***
- (iii) ***The visual observations shall be conducted by a person who is educated on the general procedures for determining the presence of visible emissions but not necessarily certified to perform Method 9 observations. Observation of excess emissions shall prompt immediate inspection and, if necessary, corrective actions.***
- (F10) **TURBINE NO<sub>x</sub> EMISSIONS MONITORING** [WAQSR Ch 6, Sec 3 (h)(i)(C)(I); and WAQSR Ch 6, Sec 2 Permits MD-914A, MD-917A3 *corrected*, MD-407A and MD-1327A] (*Modified July 8, 2014*)
- (a) The permittee shall measure NO<sub>x</sub> emissions from the following units 11, 19B, 20B, 27, 28, 32, 33, 34, 35, 36 and 43 at least once every calendar year for comparison with the emission limits in condition F2 of this permit.
- (b) The permittee shall measure NO<sub>x</sub> emissions from units 50 and 51, at least once every calendar year for comparison with the emission limits in condition F2 of this permit.
- (i) Compliance shall be demonstrated in accordance with 40 CFR Part 60, Subpart KKKK, 60.4400.
- (ii) Emissions in terms of lb/hr shall be calculated using EPA Reference Method 19.
- (iii) Fuel consumption shall be recorded during testing and a representative gas analysis shall be included in the test report.
- (c) The permittee shall monitor of the number of days during the calendar year when the ambient temperature is below zero °F.
- (d) The Solar Mars 100-T15000S gas turbines (units 50 and 51) shall be maintained per the manufacturer's specifications.
- (e) The permittee shall measure NO<sub>x</sub> emissions using the Division's portable analyzer monitoring protocol. ***The monitoring protocol is available from the Division upon request or can be downloaded at <http://deq.state.wy.us/aqd/operating.asp>.***
- (F11) **OTHER NO<sub>x</sub>, CO AND ENGINE MONITORING** [WAQSR Ch 6, Sec 3 (h)(i)(C)(I); and WAQSR Ch 6, Sec 2 Permits *and waivers* MD-914A, MD-917A3 *corrected*, MD-407A, MD-1327A, *wv-15407 and wv-15955-1*] (*Modified July 8, 2014*)
- (a) The permittee shall measure CO emissions from units 27, 32, 33, 34, 35, 36, 43, 50 and 51, at least once every calendar year for comparison with the emission limits in condition F2 of this permit.

- (b) NO<sub>x</sub> monitoring of units 1, 4, 5, 15, 37 and 40 shall consist of maintaining and operating the units in accordance with the manufacturer's recommendations and specifications as required by condition F4 of this permit.
- (c) The permittee shall measure NO<sub>x</sub> emissions for units 46 and 53 once during the permit term for comparison *with* the emission limits in condition F2 of this permit.
- (d) ***The permittee shall monitor the hours of operation of each diesel fired engine (units SB-01, SB-02, SB-03 and SB-04) using the hour meters required by condition F4(f).***

(F12) VOC EMISSIONS ***AND CONTROL EQUIPMENT*** MONITORING [WAQSR Ch 6, Sec 3 (h)(i)(C)(I) and Ch 7, Sec 3(c)(ii) and Ch 6, Sec Permits MD-917A3 *corrected*, MD-1327A, MD-1603 *and MD-12097*] ***(Modified July 20, 2011) (Modified July 8, 2014)***

- (a) The permittee shall adhere to the compliance assurance monitoring (CAM) plan, attached as Appendix D of this permit, for the TXP3/TXP5 Amine Unit Thermal Oxidizer (*unit 53*), and shall conduct monitoring as follows ***during active operation of the unit:***
  - (i) For unit 53, the permittee shall continuously monitor ***the temperature within the combustion unit downstream of the combustion zone using a temperature monitoring device with a continuous recording device.***
  - (ii) ***An excursion, which is considered operation below the minimum temperature established in the approved CAM plan, shall trigger immediate inspection and, if appropriate, corrective action.***
  - (iii) The permittee shall follow all other applicable requirements under conditions CAM-1 through CAM-4 of this permit.
- (b) For unit F2, the permittee shall continuously monitor the temperature in the combustion chamber, downstream of the combustion zone.
- (c) The permittee shall operate and maintain the TXP5 plant, the TXP2 amine unit and the natural gasoline loading rack and the respective control devices, unit 18A, 26 and F2, in order to assure each remains a viable emissions control as required by condition F3 of this permit.
- (d) That each calendar month, the vapor collection system, the vapor processing system and each natural gasoline loading rack shall be inspected during the loading of tank trucks for total organic compounds liquid or vapor leaks. Detection methods incorporating sight, sound or smell are acceptable. Each leak detected shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.
- (e) For units 18A *and 53*, the permittee shall continuously monitor for the presence of a pilot flame, and monitor the date and durations of time during active operation of the TXP5 plant when the pilot flame is not present in the TXP3/TXP4/TXP5 Plant Flare (*unit 18A*) *or the TXP3/TXP5 Amine Unit Thermal Oxidizer (unit 53)*.
- (f) For benzene emissions from the 1.35 BSCFD glycol dehydrator, ***compliance with the limit shall be determined according to the procedures outlined in 40 CFR §63.772(b)(2)(i) at least annually. For the purposes of this permit, only a 95% control efficiency can be applied to the offgas from the glycol dehydrator flash tank vent.***
- (g) For unit 46, the permittee shall **maintain and operate a temperature monitoring device with a continuous recording device** in the combustion unit, downstream of the combustion zone.
- (h) ***The permittee shall monitor the date, time and duration when the 1.35 BSCFD glycol dehydrator is operating and unit 46 or unit 18A were not operational.***

(F13) CONDENSATE STABILIZER OPERATION [WAQSR Chapter 6, Section 3(h)(i)(c)(I)]

The permittee shall monitor the date and duration of time that the stabilizer is in operation & the bottoms temperature during operation.

Recordkeeping Requirements

(F14) TESTING AND MONITORING RECORDS [WAQSR Ch 6, Sec 3 (h)(i)(C)(II); *Ch 6, Sec 2 Waivers wv-15407 and wv-15955-1*] ***(Modified July 8, 2014)***

- (a) For any additional testing required by the Division under condition F8 other than Method 9 observations, and for the emissions monitoring required under conditions F10 and F11, the permittee shall record, as applicable, the following:

- (i) The date, place, and time of sampling or measurements;
  - (ii) The date(s) the analyses were performed;
  - (iii) The company or entity that performed the analyses;
  - (iv) The analytical techniques or methods used;
  - (v) The results of such analyses; and
  - (vi) The operating conditions as they existed at the time of sampling or measurement.
- (b) For any Method 9 observations required by the Division under condition F8, the permittee shall keep field records in accordance with Section 2.2 of Method 9.
  - (c) For the Method 22 observations required under F9, the permittee shall keep field records in accordance with Sections 11.2 and 11.5 of Method 22.
  - (d) The permittee shall record of the number of days during the calendar year when that ambient temperature is below zero °F.
  - (e) *For the operating hours monitoring required by condition F11(d), the permittee shall record the calendar year operating hours of the Cummins, Caterpillar and John Deere diesel engines (units SB-01, SB-02, SB-03 and SB-04).*
  - (f) *For the visible emission observations of the diesel fired engines (units SB-01, SB-02, SB-03 and SB-04), the permittee shall record the date, location and time of the observation, as well as if any excess emissions were observed and any corrective actions taken, as applicable.*
  - (g) The permittee shall retain on-site at the facility, or at an acceptable alternative location with the concurrence of the district engineer, the record of each test, measurement, or observation and support information for a period of at least five years from the date of the test, measurement, or observation, *and shall make them available to the Division upon request.*
- (F15) **MAINTENANCE AND CERTIFICATION RECORDS** [WAQSR Ch 6, Sec 3 (h)(i)(C)(II); *Ch 6, Sec 2 Waivers wv-15407 and wv-15955-1*] (*Modified July 8, 2014*)
- (a) The permittee shall record:
    - (i) All maintenance activities performed on the following heaters and boilers: units 1, 4, 5, 15, 37 and 40;
    - (ii) All maintenance activities performed on the following turbines: units 28, 32, 33, 34, 35, 36, 50 and 51; *and*
    - (iii) *All maintenance activities and corrective actions performed on the Cummins, Caterpillar and John Deere diesel engines (units SB-01, SB-02, SB-03 and SB-04).*
  - (b) The record of maintenance activities/*corrective actions* shall include:
    - (i) The activity performed;
    - (ii) The date and place the activity was performed;
    - (iii) The company and individual(s) that performed the activity;
    - (iv) The purpose of the activity; and
    - (v) An explanation for any deviation from the Preventative Maintenance Plan attached as Appendix A of this permit for the turbines, or manufacturer's recommendations for the heaters and boilers.
  - (c) The permittee shall retain on-site at the facility, or at an acceptable alternative location with the concurrence of the district engineer, the record of each maintenance activity/*corrective action* required by conditions F4 and F11 for a period of at least five years from the date of the activity, *and shall make them available to the Division upon request.*
  - (d) *Records of the U.S. EPA Tier 4i certification for the John Deere JD4045HF diesel engine (unit SB-04) required by condition F4(g) shall be maintained for a period of at least five years and shall be made available to the Division upon request.*
- (F16) **VOC EMISSIONS RECORDS** [WAQSR Ch 6, Sec 3 (h)(i)(C)(II); Ch 7, Sec 3; and Ch 6, Sec 2 Permits MD-1327A and MD-1603] (*Modified July 20, 2011*) (*Modified July 8, 2014*)
- (a) For the monitoring conducted under condition F12(a), the permittee shall continuously record the *temperature within the combustion unit* of the TXP3/TXP5 Amine Unit Thermal Oxidizer (unit 53).
  - (b) The permittee shall maintain records noting the dates and duration of time during active operation of the TXP5 plant when the pilot flame is not present in the TXP3/TXP4/TXP5 plant flare and/or the TXP3/TXP5 Amine Unit Thermal Oxidizer (units 18A & 53).

- (c) The permittee shall maintain records noting when the enclosed vapor combustor system and the thermal oxidation system (units F2 and 26) are not operational during periods of active operation of the natural gasoline loading rack and TXP2 amine unit.
- (d) The permittee shall keep records of the temperature in the combustion unit, downstream of the combustion zone of the Glycol Dehydrator Thermal Oxidizer (unit 46) and the natural gasoline loading losses controlled by the enclosed vapor combustor (unit F2).
- (e) For the CAM, the permittee shall also maintain records of monitor performance data, corrective actions taken, any written QIP required pursuant to WAQSR Chapter 7, Section 3(h), any activities undertaken to implement a QIP, and other supporting information required to be maintained under WAQSR Chapter 7, Section 3.
- (f) The permittee shall record the monthly inspection of the vapor collection system, the vapor processing system and each natural gasoline loading rack required under condition F12 of this permit. The inspection records shall include, at a minimum, the following:
  - (i) Date of the inspection.
  - (ii) Findings (may indicate no leaks discovered, or location, nature and severity of each leak).
  - (iii) Corrective action (date each leak is repaired; reasons for any repair interval in excess of 15 days).
  - (iv) Leak determination method.
  - (v) Inspector name and signature.
- (g) The permittee shall record all gas volumes sent to the flares (units 18A, 18B, 18D, and 18E) as a result of plant upsets not associated with normal operations.
- (h) *The permittee shall maintain records noting the dates and duration of time during active operation of the 1.35 BSCFD glycol dehydrator when unit 46 or 18A are not operational.*
- (i) *For the benzene monitoring required by condition F12(f), records shall be kept in accordance with 40 CFR 63, Subpart HH.*
- (f) The permittee shall retain on-site at the facility, or at an acceptable alternative location with the concurrence of the district engineer, the records of each test, measurement, and support information for a period of at least five years from the date such records are generated.

(F17) CONDENSATE STABILIZER OPERATION RECORDS

[WAQSR Chapter 6, Section 2 Permit MD-1188]

- (a) The permittee shall maintain records of stabilizer operation as follows:
  - (i) Date and duration of time during active stabilizer operation that the temperature of the stabilizer bottoms liquid is less than 300 °F.
  - (ii) Dates and duration of time that the stabilizer is in operation.
  - (iii) The name of the person responsible for keeping records and the location of the records for viewing purposes.
- (b) These records shall be retained on site at the facility, or at an acceptable alternative location with the concurrence of the district engineer for a period of at least five years from the date such records are generated.

Reporting Requirements

(F18) MONITORING REPORTS [WAQSR Ch 6, Sec 3 (h)(i)(C)(III)] (*Modified July 8, 2014*)

- (a) The following shall be reported to the Division by January 31 and July 31 each year:
  - (i) Summary results of the NO<sub>x</sub> emissions monitoring required under condition F10,
  - (ii) Summary results of the CO emissions monitoring required under condition F11,
  - (iii) Summary results of the visible emissions monitoring required under condition F9 of this permit. Only monitoring during which visible emissions are observed shall be included in the report. If no visible emissions are observed during the reporting period, this shall be stated in the report,
  - (iv) Documentation the emissions units are firing natural gas as specified in condition F9, *and*
  - (v) *The calendar year-to-date operating hours for the Cummins, Caterpillar and John Deere diesel engines (units SB-01, SB-02, SB-03 and SB-04).*
- (b) All instances of deviations from the conditions of this permit must be clearly identified in each report.

- (c) The reports shall *reference this permit condition (F18), and* be submitted to the Division in accordance with condition G4 of this permit.
- (F19) MAINTENANCE REPORTS [WAQSR Ch 6, Sec 3 (h)(i)(C)(III)] (*Modified July 8, 2014*)
- (a) (i) The permittee shall report to the Division by January 31 and July 31 each year whether the permittee has adhered to the Preventative Maintenance Plan in Appendix A for the turbine engines (units 28, 32, 33, 34, 35, and 36).
- (ii) Any deviations from the Preventative Maintenance Plan must be clearly identified in each report.
- (iii) If the permittee has adhered to the Preventative Maintenance Plan during the reporting period, this shall be stated in the report.
- (b) (i) The permittee shall report to the Division by January 31 and July 31 each year whether the permittee has adhered to the manufacturers' specifications and recommendations for maintaining units 1, 4, 5, 15, 37, 40, 50 and 51.
- (ii) Any deviations from the manufacturers' specifications and recommendations for maintaining units 1, 4, 5, 15, 37, 40, 50 and 51 must be clearly identified in each report.
- (iii) If the permittee has adhered to the manufacturers' specifications and recommendations for maintaining units 1, 4, 5, 15, 37, 40, 50 and 51 during the reporting period, this shall be stated in the report.
- (c) The reports shall *reference this permit condition (F19), and* be submitted to the Division in accordance with condition G4 of this permit.
- (F20) VOC EMISSIONS REPORTS [WAQSR Ch 6, Sec 3 (h)(i)(C)(III); & WAQSR Ch 6, Sec 2 Permit MD-917A3 corrected] (*Modified July 20, 2011*) (*Modified July 8, 2014*)
- (a) The following shall be reported to the Division by January 31 and July 31 each year:
- (i) The permittee shall report periods in which the TXP3 and TXP5 amine units are in operation but the thermal oxidizer (unit 53) or the plant flare (unit 18A) for VOC and HAP emissions did not remain effective as viable emissions control devices.
- (ii) The permittee shall report periods in which the natural gasoline loading rack and the TXP2 amine unit were operation and but the enclosed vapor combustor system (unit F2) and the thermal oxidizer (unit 26) for VOC emissions did not remain effective as viable emissions control devices.
- (iii) The results of CAM required under condition F12(a) of this permit for the thermal oxidizer controlled amine unit (*unit 53*) shall include the following:
- (A) Summary information on the number, duration, and cause of excursions, as applicable, and the corrective actions taken;
- (B) Summary information on the number, duration, and cause for monitor downtime incidents; and
- (C) A description of the action taken to implement a QIP (if required) during the reporting period as specified in Chapter 7, Section 3 (h). Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has reduced the likelihood of similar excursions.
- (b) The permittee shall submit an hourly combustion temperature report for the glycol dehydrator still vent thermal oxidizer (unit 46) within 30 days of the end of each calendar quarter. This report shall include a discussion of corrective actions taken for any period when the combustion unit temperature is below the minimum operating temperature specified in condition F3 of this permit. Any average hourly combustion temperature that is below the minimum operating temperature will constitute a violation of this permit.
- (c) *The permittee shall submit a summary report of the benzene monitoring, required by condition F12(f), to the Division by January 31 each year for the previous calendar year.*
- (d) All instances of deviations from the conditions of this permit must be clearly identified in each report.
- (e) The reports shall *reference this permit condition (F20), and* be submitted to the Division in accordance with condition G4 of this permit.

- (F21) **CONDENSATE STABILIZER REPORTS [WAQSR Ch 6, Sec 2 Permit MD-1188] (Modified July 8, 2014)**
- (a) The permittee shall report to the Division by January 31 and July 31 each year:
    - (i) Date and duration of time during active stabilizer operation that the temperature of the stabilizer bottoms liquid is less than 300 °F.
    - (ii) Dates and duration of time that the stabilizer is in operation.
    - (iii) If the stabilizer bottoms temperature was above 300 °F during all times of stabilizer operation, this shall be stated in the report.
    - (iv) The name of the person responsible for keeping records and the location of the records for viewing purposes.
  - (b) *The reports shall reference this permit condition (F21), and be submitted to the Division in accordance with condition G4 of this permit.*

- (F22) **REPORTING EXCESS EMISSIONS & DEVIATIONS FROM PERMIT REQUIREMENTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III)]**
- (a) General reporting requirements are described under the General Conditions of this permit. The Division reserves the right to require reports as provided under condition G1 of this permit.
  - (b) Emissions which exceed the limits specified in this permit and that are not reported to the Division under a different condition of this permit, shall be reported annually with the emission inventory unless specifically superseded by condition G17, condition G19, or other condition(s) of this permit. The probable cause of such exceedance, the duration of the exceedance, the magnitude of the exceedance, and any corrective actions or preventative measures taken shall be included in this annual report. For sources and pollutants which are not continuously monitored, if at any time emissions exceed the limits specified in this permit by 100 percent, or if a single episode of emission limit exceedance spans a period of 24 hours or more, such exceedance shall be reported to the Division within one working day of the exceedance. (Excess emissions due to an emergency shall be reported as specified in condition G17. Excess emissions due to unavoidable equipment malfunction shall be reported as specified in condition G19.)
  - (c) Any other deviation from the conditions of this permit shall be reported to the Division in writing within 30 days of the deviation or discovery of the deviation.

- (F23) GREENHOUSE GAS REPORTS [W.S. 35-11-110] (Modified July 20, 2011)**  
**The permittee shall submit to the Division a summary of any report(s) required to be submitted to the EPA under 40 CFR Part 98.**
- (a) **The report(s) shall be submitted to the Division within 60 days of submission to EPA, in a format as specified by the Division.**
  - (b) **The report(s) shall be submitted in accordance with condition G4(a)(i) of this permit, to the attention of the Division's Emission Inventory Program. A copy need not be sent to the DEQ Air Quality contact.**

- (F24) **NOTIFICATION OF SHUTDOWN [W.S. 35-11-110] (Modified July 8, 2014)**  
*Upon shutdown and removal of an engine from the facility, written notification is required within 15 days of removal. Such notification shall be submitted on a complete Engine Installation/Removal form. The form can be downloaded from the Air Quality Division website <http://deq.state.wy.us/aqd> or obtained from the Air Quality Division upon request.*

Accidental Release Prevention Requirements

- (F25) **ACCIDENTAL RELEASE PREVENTION REQUIREMENTS [40 CFR Part 68] (Modified July 20, 2011)**
- (a) The permittee shall meet all requirements of 40 CFR Part 68 as they apply to the facility.
  - (b) The permittee shall submit, as part of the annual compliance certification submitted under condition C1 of this permit, a certification statement concerning the facility's compliance with all requirements of 40 CFR Part 68, including the registration and submission of a Risk Management Plan.

**WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) & 40 CFR 60**

**SUBPART Dc REQUIREMENTS FOR SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL  
STEAM GENERATING UNITS**

SUBPART Dc REQUIREMENTS [40 CFR 60 - Subparts *A and Dc*; WAQSR Ch 5, Sec 2 and Ch 6, Sec 3 Permit MD-917A3 *corrected*] (*Modified July 8, 2014*)

The permittee shall meet all *applicable* requirements of 40 CFR 60 Subparts *A and Dc*, and WAQSR Ch 5, Sec 2, as they apply to *each steam generating unit as defined under §60.40c, including* the waste heat recovery unit, regeneration gas heater (TXP2), regeneration gas heater and auxiliary steam boiler (units 1, 15, 37 & 40).

**SUBPART GG REQUIREMENTS FOR STATIONARY GAS TURBINES**

SUBPART GG REQUIREMENTS [40 CFR 60 Subparts *A and GG*; WAQSR Ch 5 Sec 2 and Ch 6, Sec 2 Permits MD-242A, MD-914A, MD-407A2 and MD-917A3 *corrected*] (*Modified July 8, 2014*)

The permittee shall meet all *applicable* requirements of 40 CFR 60 Subparts *A and GG* and WAQSR Ch 5 Sec 2 as they apply to *affected stationary gas turbines as specified under §60.330, including* the units described in Table III of this permit.

TABLE III: ALLOWABLE EMISSIONS		
Unit ID	Alternate ID	Unit Description
11	OP-2	Solar Centaur T-4500 Turbine Engine
19B	TXP2-4	Solar Taurus T-6502S Turbine Engine
20B	TXP2-5	Solar Taurus T-6502S Turbine Engine
27	TXP1-1	Solar Mars 90-T-12000S Turbine Engine
28	OP-10	Solar Centaur T-4700S Turbine Engine
32	OP-12	Solar Centaur 40-T4700S Turbine Engine
33	OP-13	Solar Taurus 70-T10302S Turbine Engine
34	TXP1-1A	Solar Centaur 50-T5700S Turbine Engine
35	TXP3-1	Solar Mars 100-T15000S Turbine Engine
36	TXP3-2	Solar Mars 100-T15000S Turbine Engine
43	TXP3-3	Solar Taurus 70-T10302S Turbine Engine

**SUBPART KKK REQUIREMENTS (FOR EQUIPMENT LEAKS OF VOC FROM ONSHORE NATURAL  
GAS PROCESSING PLANTS) and VV (FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC  
ORGANIC CHEMICALS MANUFACTURING INDUSTRY)**

SUBPART KKK REQUIREMENTS [40 CFR 60 - Subparts *A, KKK and VV*; WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Permits MD-242A, MD-407A2, MD-1327A, MD-1603 and MD-917A3 *corrected*] (*Modified July 8, 2014*)

The permittee shall meet all *applicable* requirements of 40 CFR 60 - Subparts *A, KKK, and VV*; and WAQSR Ch 5, Sec 2 as they apply to affected facilities *in onshore natural gas processing plants as defined under §60.630*.

WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) & 40 CFR 60

SUBPART IIII REQUIREMENTS  
FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES  
(Modified July 8, 2014)

**SUBPART IIII REQUIREMENTS**

[40 CFR 60 Subparts A and IIII; WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Waiver wv-15955-1]

*As applicable, the permittee shall meet the requirements of 40 CFR 60 Subparts A and IIII and WAQSR Ch 5, Sec 2, as they apply to stationary compression ignition (CI) internal combustion engines. (As required by condition F5(c), if an engine is replaced or reconstructed, subpart applicability will need to be reevaluated and a statement regarding applicability submitted to the Division.) For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. An affected source is defined at §60.4200.*

*On April 29, 2014, the diesel fired engines SB-01, SB-02 and SB-03 were not subject to Subpart IIII according to information submitted to the Division by the permittee, while the John Deere JD4045HF diesel fired engine (unit SB-04) must comply with all applicable requirements of 40 CFR 60, Subpart IIII because of its date of manufacture.*

SUBPART KKKK REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES

**SUBPART KKKK REQUIREMENTS**

[40 CFR 60 Subparts A and KKKK; WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Permit MD-1327A] (Modified July 8, 2014)

*The permittee shall meet all applicable requirements of 40 CFR Part 60 Subparts A and KKKK and WAQSR Ch 5, Sec 2 as they apply to stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005, as defined under §60.4305 (except as indicated under §60.4310), including the Solar Mars 100-T15000S turbine engines (units 50 & 51).*

SUBPART OOOO REQUIREMENTS FOR CRUDE OIL AND NATURAL GAS PRODUCTION,  
TRANSMISSION AND DISTRIBUTION  
(Modified July 8, 2014)

**SUBPART OOOO REQUIREMENTS**

[40 CFR 60 Subparts A and OOOO; and WAQSR Ch 5, Sec 2]

*The permittee shall meet all applicable requirements of 40 CFR 60 Subparts A and OOOO and WAQSR Ch 5, Sec 2 as they apply to affected facilities as specified under §60.5365.*

*The subparts are available at <http://www.gpoaccess.gov/cfr/retrieve.html>, or from the Division upon request.*

**WAQSR CHAPTER 5, SECTION 3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS) AND 40 CFR PART 63**

**SUBPART HH REQUIREMENTS FROM OIL AND NATURAL GAS PRODUCTION FACILITIES**

(Amended March 23, 2010) *(Amended June 18, 2012)*

**SUBPART HH REQUIREMENTS**

*[40 CFR 63, Subparts A and HH; WAQSR Ch 5, Sec 3 and Ch 6, Sec 2 Permit MD-12097] (Modified July 8, 2014)*

*The permittee shall meet all requirements of 40 CFR 63, Subparts A and HH and WAQSR Ch 5, Sec 3, as they apply to affected sources as defined in §63.760, located at oil and natural gas production facilities that are major or area sources of hazardous air pollutants (HAP). For major sources, the affected sources include the equipment described in §63.760(b)(1).*

**SUBPART YYYY REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES**

**SUBPART YYYY REQUIREMENTS**

*[40 CFR Part 63 Subparts A and YYYY; WAQSR Ch 5, Sec 3] (Modified July 8, 2014)*

The permittee shall meet all applicable requirements of 40 CFR Part 63 Subparts A and YYYY; and WAQSR Ch 5, Sec 3 as they apply to *any existing, new, or reconstructed stationary combustion turbine located at a major source of HAP emissions* as described in §63.6090, including units 11, 19B, 20B, 27, 28, 32 33, 34, 35, & 36, and units 43, 50 & 51.

**SUBPART ZZZZ REQUIREMENTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES**

*(Modified July 8, 2014)*

**SUBPART ZZZZ REQUIREMENTS**

*[40 CFR 63 Subparts A and ZZZZ; WAQSR Ch 5, Sec 3; Ch 6, Sec 2 Waivers wv-15407 and wv-15955-1]*

*The permittee shall meet all requirements of 40 CFR 63 Subparts A and ZZZZ and WAQSR Ch 5, Sec 3 as they apply to each affected source as indicated in §63.6590(a). An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. (As required by condition F5(c), if an engine is replaced or reconstructed, subpart applicability will need to be re-evaluated and a statement regarding applicability submitted to the Division.) This facility is currently identified as a major source of HAP emissions. Affected sources at this facility include the Cummins NT-855-F2, Caterpillar G3406C, John Deere 4219D, and John Deere JD4045HF diesel engines (units SB-01, SB-02, SB-03 and SB-04).*

**SUBPART DDDDD REQUIREMENTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS**

**SUBPART DDDDD REQUIREMENTS**

*[40 CFR 63 Subparts A and DDDDD; and WAQSR Ch 5, Sec 3] (Modified July 8, 2014)*

*The permittee shall meet all requirements of 40 CFR 63 Subparts A and DDDDD and WAQSR Ch 5, Sec 3, as they apply to owners or operators of an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that are located at, or are part of, a major source of HAPs as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAPs is as defined in §63.761 (40 CFR Part 63, Subpart HH). The types of boilers and process heaters listed in §63.7491 are not subject to Subpart DDDDD. This subpart applies to existing, new or reconstructed industrial, commercial, and institutional boilers and process heaters, including units 1, 3, 4, 5, 6, 15, 16, 29, 37, 40, 45 and the broach product dryer.*

*The subparts are available at <http://www.gpoaccess.gov/cfr/retrieve.html>, or from the Division upon request.*

**WAQSR CHAPTER 7, SECTION 3**

**COMPLIANCE ASSURANCE MONITORING (CAM) REQUIREMENTS**

*WAQSR Ch 7, Sec 3 is available at <http://deq.state.wy.us/aqd/standards.asp>, or from the Division upon request.*

*(Modified July 8, 2014)*

- (CAM-1) COMPLIANCE ASSURANCE MONITORING REQUIREMENTS [WAQSR Ch 7, Sec 3 (b) and (c)]  
The permittee shall meet all CAM requirements of WAQSR Chapter 7, Section 3 as they apply to the TXP3/TXP5 Amine Unit Thermal Oxidizer (unit 53). Compliance with the source specific monitoring, recordkeeping, and reporting requirements of this permit meets the monitoring, recordkeeping, and reporting requirements of WAQSR Chapter 7, Section 3, except for additional requirements specified under conditions CAM-2 through CAM-4.
- (CAM-2) OPERATION OF APPROVED MONITORING [WAQSR Ch 7, Sec 3 (g)]
- (a) At all times, the permittee shall maintain the monitoring under this section, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
  - (b) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities, the permittee shall conduct all monitoring in continuous operation at all times that the pollutant specific emissions unit is operating.
  - (c) Upon detecting an excursion, the permittee shall restore operation of the pollutant-specific emission unit to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices. The response shall include minimizing the period of any start-up, shutdown, or malfunction and taking any corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion.
  - (d) If the permittee identifies a failure to achieve compliance with an emission limit for which the monitoring did not provide an indication of an excursion while providing valid data, or the results of compliance or performance testing documents a need to modify the existing indicator ranges, the permittee shall promptly notify the Division and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes.
- (CAM-3) QUALITY IMPROVEMENT PLAN (QIP) REQUIREMENTS [WAQSR Ch 7, Sec 3 (h)]
- (a) If the Division or the EPA Administrator determines, based on available information, that the permittee has used unacceptable procedures in response to an excursion or exceedance, the permittee may be required to develop and implement a Quality Improvement Plan (QIP).
  - (b) If required, the permittee shall maintain a written QIP and have it available for inspection.
  - (c) The plan shall include procedures for conducting one or more of the following:
    - (i) Improved preventative maintenance practices.
    - (ii) Process operation changes.
    - (iii) Appropriate improvements to control methods.
    - (iv) Other steps appropriate to correct control.
    - (v) More frequent or improved monitoring (in conjunction with (i) - (iv) above).
  - (d) If a QIP is required, the permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
  - (e) Following implementation of a QIP, upon any subsequent determination under paragraph (a) above, the Division may require the permittee to make reasonable changes to the QIP if the QIP failed to address the cause of control device problems, or failed to provide adequate procedures for correcting control device problems as expeditiously as practicable.
  - (f) Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limit(s) or any existing monitoring, testing, reporting, or recordkeeping requirements that may be applicable to the facility.
- (CAM-4) SAVINGS PROVISIONS [WAQSR Ch 7, Sec 3 (j)]  
Nothing in the CAM regulations shall excuse the permittee from compliance with any existing emission limit or standard, or any existing monitoring, testing, reporting, or recordkeeping requirement that may be applicable to the facility.

## COMPLIANCE CERTIFICATION AND SCHEDULE

Compliance Certification: [WAQSR Ch 6, Sec 3 (h)(iii)(E)] *(Modified July 8, 2014)*

- (C1) (a) The permittee shall submit by January 31 each year a certification addressing compliance with the requirements of this permit. The certification shall be submitted as a stand-alone document separate from any monitoring reports required under this permit.
- (b) (i) For visible emissions from the gas fired sources listed in the Source Emissions Points Table of this permit (except the flares and thermal oxidizers), the permittee shall assess compliance with condition F1 of this permit by verifying natural gas was the sole fuel source used as specified by condition F9(c).
- (ii) For visible emissions from the flares, thermal oxidizers, the enclosed vapor combustor system **and the diesel engines**, the permittee shall assess compliance with condition F1 of this permit by conducting the monitoring required by conditions F9(a), (b) **and (d)**.
- (iii) For NO<sub>x</sub> emissions from the turbine engines listed in Tables I and II of this permit, the permittee shall assess compliance with condition F2 of this permit by conducting monitoring required by condition F10.
- (iv) For CO emissions from the turbine engine units 27, 32, 33, 34, 35, 36, 43, 50 & 51 the permittee shall assess compliance with condition F2 of this permit by conducting the monitoring required by conditions F11(a).
- (v) For VOC **and Benzene** emissions from units 18A, 18B, 18D, 18E, 26, 46, 53, F2 **and the 1.35 BSCFD glycol dehydrator**, the permittee shall assess compliance with condition F3 of this permit by conducting monitoring required by condition F12 and by maintaining the records kept in accordance with condition F16.
- (vi) *For the control equipment requirements listed in condition F3, the permittee shall assess compliance with condition F3 by verifying the control equipment was operated as required.*
- (vii) *For the operational requirements for the TXP3/TXP4/TXP5 flare (unit 18A), the permittee shall assess compliance with condition F3(g) by conducting the monitoring required by condition F12 and verifying the unit is operated in accordance with 40 CFR §63.11(b).*
- (viii) To assess compliance with the operation and maintenance requirements of condition F4 for the turbine engines (units 28, 32, 33, 34, 35, 36, 50 and 51) **and diesel engines**, the permittee shall review the maintenance records kept in association with condition F15.
- (ix) *For the operating hours limitations on the diesel engines, the permittee shall assess compliance with condition F4(e) by conducting the monitoring required by condition F11(d) and by reviewing the records kept in accordance with condition F14(e).*
- (x) For NO<sub>x</sub> emissions from units 1, 4, 5, 15, 37 and 40 the permittee shall assess compliance with condition F2 of this permit by reviewing records maintained in accordance with condition F15.
- (xi) For compliance with the minimum bottoms temperature requirements off the stabilizer specified in condition F6, the permittee shall review the records maintained in accordance with condition F17.
- (xii) *For greenhouse gas reporting, the permittee shall assess compliance with condition F23 by verifying that reports were submitted in accordance with condition F23(b).*
- (xiii) *For accidental release prevention, the permittee shall submit a certification statement as described in condition F25(b).*
- (xiv) *For any units subject to 40 CFR 60, Subpart Dc, the permittee shall assess compliance with Subpart Dc by conducting any applicable testing and monitoring required by §§60.44c through 60.47c, and reviewing records required by §60.48c(g).*
- (xv) *For any unit subject to 40 CFR 60 Subpart GG, the permittee shall assess compliance with Subpart GG by conducting any applicable testing and monitoring required by §§60.334 and 60.335, and by reviewing any records required by §60.7 and Subpart GG.*
- (xvi) *For any unit subject to 40 CFR 60 Subpart KKK, the permittee shall assess compliance with Subpart KKK by reviewing the records required by §60.635.*
- (xvii) *For the John Deere JD4045HF diesel engine (unit SB-04) subject to 40 CFR 60 Subpart IIII, the permittee shall assess compliance with Subpart IIII by conducting any applicable testing and monitoring required by §§60.4209, 60.4211, 60.4212, and 60.4213, and by reviewing the records required by §§60.4211 and 60.4214.*

- (xviii) *For any unit subject to 40 CFR 60 Subpart KKKK, the permittee shall assess compliance with Subpart KKKK by conducting any testing and monitoring required by §§60.4335 through 60.4370 and §§60.4400 through 60.4415, and by reviewing the records required by §§60.7 and 60.4365.*
  - (xix) *For any affected facility subject to 40 CFR 60 Subpart OOOO, the permittee shall assess compliance with Subpart OOOO by conducting any applicable testing and monitoring required by §§60.5413 through 60.5417 and by reviewing any applicable records required by §§60.5420, 60.5421, and 60.5423.*
  - (xx) *The permittee shall assess compliance with Part 63 Subpart HH by conducting any compliance demonstrations and monitoring required by §§63.772 and 63.773 and reviewing any records required by §§63.760 and 63.774. (Amended March 23, 2010) (amended June 18, 2012).*
  - (xxi) *The permittee shall assess compliance with Part 63 Subpart YYYYY by conducting any applicable testing and monitoring required by §§63.6115 through 63.6140, and by reviewing any records required by §§63.6155 and 63.6160.*
  - (xxii) *For the reciprocating internal combustion engines, the permittee shall assess compliance with Part 63 Subpart ZZZZ by conducting any applicable testing and monitoring required by §§63.6610 through 63.6640 and by reviewing the records required by §§63.6655 and 63.6665.*
  - (xxiii) *The permittee shall assess compliance with Part 63 Subpart DDDDD by conducting any applicable testing and monitoring required by §§63.7505 through 63.7541 and by reviewing any records required by §§63.7555 and 63.7560.*
- (c) The compliance certification shall include:
    - (i) The permit condition or applicable requirement that is the basis of the certification;
    - (ii) The current compliance status;
    - (iii) Whether compliance was continuous or intermittent; and
    - (iv) The methods used for determining compliance.
  - (d) For any permit conditions or applicable requirements for which the source is not in compliance, the permittee shall submit with the compliance certification a proposed compliance plan and schedule for Division approval.
  - (e) The compliance certification shall be submitted to the Division in accordance with condition G4 of this permit and to the Assistant Regional Administrator, Office of Enforcement, Compliance, and Environmental Justice (8ENF-T), U.S. EPA - Region VIII, 1595 Wynkoop Street, Denver, CO 80202-1129.
  - (f) Determinations of compliance or violations of this permit are not restricted to the monitoring requirements listed in paragraph (b) of this condition; other credible evidence may be used.

Compliance Schedule: [WAQSR Ch 6, Sec 3 (h)(iii)(C) and (D)]

- (C2) The permittee shall continue to comply with the applicable requirements with which the permittee has certified that it is already in compliance.
- (C3) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.

## GENERAL PERMIT CONDITIONS

### Powers of the Administrator: [W.S. 35-11-110]

- (G1) (a) The Administrator may require the owner or operator of any point source to complete plans and specifications for any application for a permit required by the Wyoming Environmental Quality Act or regulations made pursuant thereto and require the submission of such reports regarding actual or potential violations of the Wyoming Environmental Quality Act or regulations thereunder.
- (b) The Administrator may require the owner or operator of any point source to establish and maintain records; make reports; install, use and maintain monitoring equipment or methods; sample emissions, or provide such other information as may be reasonably required and specified.

### Permit Renewal and Expiration: [WAQSR Ch 6, Sec 3(c)(i)(C), (d)(ii), (d)(iv)(B), and (h)(i)(B)] [W.S. 35-11-206(f)]

- (G2) This permit is issued for a fixed term of five years. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted at least six months prior to the date of permit expiration. If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit is not a violation of WAQSR Chapter 6, Section 3 until the Division takes final action on the renewal application. This protection shall cease to apply after a completeness determination if the applicant fails to submit by the deadline specified in writing by the Division any additional information identified as being needed to process the application.

### Duty to Supplement: [WAQSR Ch 6, Sec 3(c)(iii)]

- (G3) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after this permit is issued.

### Submissions: [WAQSR Ch 6, Sec 3(c)(iv)] [W.S. 35-11-206(c)] **(Modified July 20, 2011)**

- (G4) Any document submitted shall be certified as being true, accurate, and complete by a responsible official.
- (a) Submissions to the Division.
- (i) Any submissions to the Division including reports, certifications, and emission inventories required under this permit shall be submitted as separate, stand-alone documents and shall be sent to:
- Administrator, Air Quality Division  
122 West 25th Street  
Cheyenne, Wyoming 82002
- (ii) Unless otherwise noted elsewhere in this permit, a copy of each submission to the Administrator under paragraph (a)(i) of this condition shall be sent to the DEQ Air Quality Contact listed on page 3 of this permit.
- (b) Submissions to EPA.
- (i) Each certification required under condition C1 of this permit shall also be sent to:
- Assistant Regional Administrator  
Office of Enforcement, Compliance, and Environmental Justice (8ENF-T)  
U.S. EPA - Region VIII  
1595 Wynkoop Street  
Denver, CO 80202-1129
- (ii) All other required submissions to EPA shall be sent to:
- Office of Partnerships and Regulatory Assistance  
Air and Radiation Program (8P-AR)  
U.S. EPA - Region VIII  
1595 Wynkoop Street  
Denver, CO 80202-1129

Changes for Which No Permit Revision Is Required: [WAQSR Ch 6, Sec 3(d)(iii)]

- (G5) The permittee may change operations without a permit revision provided that:
- (a) The change is not a modification under any provision of title I of the Clean Air Act;
  - (b) The change has met the requirements of Chapter 6, Section 2 of the WAQSR and is not a modification under Chapter 5, Section 2 or Chapter 6, Section 4 of the WAQSR and the changes do not exceed the emissions allowed under the permit (whether expressed therein as a rate of emissions or in terms of total emissions); and
  - (c) The permittee provides EPA and the Division with written notification at least 14 days in advance of the proposed change. The permittee, EPA, and the Division shall attach such notice to their copy of the relevant permit. For each such change, the written notification required shall include a brief description of the change within the permitted facility, 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. The permit shield, if one exists for this permit, shall not apply to any such change made.

Transfer of Ownership or Operation: [WAQSR Ch 6, Sec 3(d)(v)(A)(IV)]

- (G6) A change in ownership or operational control of this facility is treated as an administrative permit amendment if no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Division.

Reopening for Cause: [WAQSR Ch 6, Sec 3(d)(vii)] [W.S. 35-11-206(f)(ii) and (iv)]

- (G7) The Division will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:
- (a) Additional applicable requirements under the Clean Air Act or the WAQSR that become applicable to this source if the remaining permit term is three or more years. Such reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended.
  - (b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit.
  - (c) The Division or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - (d) The Division or EPA determines that the permit must be revised or revoked to assure compliance with applicable requirements.

Annual Fee Payment: [WAQSR Ch 6, Sec 3(f)(i), (ii), and (vi)] [W.S. 35-11-211]

- (G8) The permittee shall, as a condition of continued operations, submit an annual fee to the Division as established in Chapter 6, Section 3 (f) of the WAQSR. The Division shall give written notice of the amount of fee to be assessed and the basis for such fee assessment annually. The assessed fee is due on receipt of the notice unless the fee assessment is appealed pursuant to W.S. 35-11-211(d). If any part of the fee assessment is not appealed it shall be paid to the Division on receipt of the written notice. Any remaining fee which may be due after completion of the appeal is immediately due and payable upon issuance of the Council's decision. Failure to pay fees owed the Division is a violation of Chapter 6, Section 3 (f) and W.S. 35-11-203 and may be cause for the revocation of this permit.

Annual Emissions Inventories: [WAQSR Ch 6, Sec 3(f)(v)(G)]

- (G9) The permittee shall submit an annual emission inventory for this facility to the Division for fee assessment and compliance determinations within 60 days following the end of the calendar year. The emissions inventory shall be in a format specified by the Division.

Severability Clause: [WAQSR Ch 6, Sec 3(h)(i)(E)]

- (G10) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Compliance: [WAQSR Ch 6, Sec 3(h)(i)(F)(I) and (II)] [W.S. 35-11-203(b)]

- (G11) The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act, Article 2 of the Wyoming Environmental Quality Act, and the WAQSR and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 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 this permit.

Permit Actions: [WAQSR Ch 6, Sec 3(h)(i)(F)(III)] [W.S. 35-11-206(f)]

- (G12) This permit may be modified, revoked, reopened, and reissued, or terminated for cause. 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.

Property Rights: [WAQSR Ch 6, Sec 3(h)(i)(F)(IV)]

- (G13) This permit does not convey any property rights of any sort, or any exclusive privilege.

Duty to Provide Information: [WAQSR Ch 6, Sec 3(h)(i)(F)(V)]

- (G14) The permittee shall furnish to the Division, within a reasonable time, any information that the Division 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 Division copies of records required to be kept by the permit, including information claimed and shown to be confidential under W.S. 35-11-1101 (a) of the Wyoming Environmental Quality Act. Upon request by the Division, the permittee shall also furnish confidential information directly to EPA along with a claim of confidentiality.

Emissions Trading: [WAQSR Ch 6, Sec 3(h)(i)(H)]

- (G15) No permit revision is required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

Inspection and Entry: [WAQSR Ch 6, Sec 3(h)(iii)(B)] [W.S. 35-11-206(c)]

- (G16) Authorized representatives of the Division, upon presentation of credentials and other documents as may be required by law, shall be given permission to:
- (a) Enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
  - (b) Have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
  - (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
  - (d) Sample or monitor any substances or parameters at any location, during operating hours, for the purpose of assuring compliance with this permit or applicable requirements.

Excess Emissions Due to an Emergency: [WAQSR Ch 6, Sec 3(l)]

- (G17) The permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency, as defined in Ch 6, Sec 3(l)(i) of the WAQSR. To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:
- (a) An emergency occurred and that 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 emissions standards, or other requirements in this permit;
  - (d) The permittee submitted notice of the emergency to the Division within one working day of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

Diluting and Concealing Emissions: [WAQSR Ch 1, Sec 4]

- (G18) No person shall cause or permit the installation or use of any device, contrivance, or operational schedule which, without resulting in reduction of the total amount of air contaminant released to the atmosphere, shall dilute or conceal an emission from a source. This condition shall not apply to the control of odors.

Unavoidable Equipment Malfunction: [WAQSR Ch 1, Sec 5]

- (G19) (a) Any source believing that any emissions in excess of established regulation limits or standards resulted from an unavoidable equipment malfunction, shall notify the Division within 24 hours of the incident via telephone, electronic mail, fax, or other similar method. A detailed description of the circumstances of the incident as described in paragraph 5(a)(i)(A) Chapter 1, including a corrective program directed at preventing future such incidents, must be submitted within 14 days of the onset of the incident. The Administrator may extend this 14-day time period for cause.
- (b) The burden of proof is on the owner or operator of the source to provide sufficient information to demonstrate that an unavoidable equipment malfunction occurred.

Fugitive Dust: [WAQSR Ch 3, Sec 2(f)]

- (G20) The permittee shall minimize fugitive dust in compliance with standards in Ch 3, Sec 2(f) of WAQSR for construction/demolition activities, handling and transportation of materials, and agricultural practices.

Carbon Monoxide: [WAQSR Ch 3, Sec 5]

- (G21) The emission of carbon monoxide in stack gases from any stationary source shall be limited as may be necessary to prevent ambient standards from being exceeded.

Asbestos: [WAQSR Ch 3, Sec 8]

- (G22) The permittee shall comply with emission standards for asbestos during abatement, demolition, renovation, manufacturing, spraying, and fabricating activities.
- (a) No owner or operator shall build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous dilutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specified size.
- (b) All owners and operators conducting an asbestos abatement project, including an abatement project on a residential building, shall be responsible for complying with Federal requirements and State standards for packaging, transportation, and delivery to an approved waste disposal facility as provided in paragraph (m) of Ch 3, Sec 8.
- (c) The permittee shall follow State and Federal standards for any demolition and renovation activities conducted at this facility, including:
- (i) A thorough inspection of the affected facility or part of the facility where the demolition or renovation activity will occur shall be conducted to determine the presence of asbestos, including Category I and Category II non-friable asbestos containing material. The results of the inspection will determine which notification and asbestos abatement procedures are applicable to the activity.
- (ii) The owner or operator shall follow the appropriate notification requirements of Ch 3, Sec 8(i)(ii).
- (iii) The owner or operator shall follow the appropriate procedures for asbestos emissions control, as specified in Ch 3, Sec 8(i)(iii).
- (d) No owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this paragraph do not apply to spray-applied insulating materials regulated under paragraph (j) of Ch 3, Sec 8.
- (e) The permittee shall comply with all other requirements of WAQSR Ch 3, Sec 8.

Open Burning Restrictions: [WAQSR Ch 10, Sec 2]

- (G23) The permittee conducting an open burn shall comply with all rules and regulations of the Wyoming Department of Environmental Quality, Division of Air Quality, and with the Wyoming Environmental Quality Act.
- (a) No person shall burn prohibited materials using an open burning method, except as may be authorized by permit. ***“Prohibited materials”*** means substances including, but not limited to; natural or synthetic rubber products, including tires; waste petroleum products, such as oil or used oil filters; insulated wire; plastic products, including polyvinyl chloride (“PVC”) pipe, tubing and connectors; tar, asphalt, asphalt shingles, or tar paper; railroad ties; wood, wood waste, or lumber that is painted or chemically treated; explosives or ammunition; batteries; hazardous waste products; asbestos or asbestos containing materials; or materials which cause dense smoke discharges, excluding refuse and flaring associated with oil and gas well testing, completions and well workovers.
  - (b) No person or organization shall conduct or cause or permit open burning for the disposal of trade wastes, for a salvage operation, for the destruction of fire hazards if so designated by a jurisdictional fire authority, or for firefighting training, except when it can be shown by a person or organization that such open burning is absolutely necessary and in the public interest. Any person or organization intending to engage in such open burning shall file a request to do so with the Division.

Sulfur Dioxide Emission Trading and Inventory Program: [WAQSR Ch 14]

- (G24) Any BART (Best Available Retrofit Technology) eligible facility, or facility which has actual emissions of SO<sub>2</sub> greater than 100 tpy in calendar year 2000 or any subsequent year, shall comply with the applicable requirements of WAQSR Ch 14, Sections 1 through 3, with the exceptions described in sections 2(c) and 3(a).

Stratospheric Ozone Protection Requirements: [40 CFR Part 82]

- (G25) The permittee shall comply with all applicable Stratospheric Ozone Protection Requirements, including but not limited to:
- (a) *Standards for Appliances* [40 CFR Part 82, Subpart F]  
The permittee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F - Recycling and Emissions Reduction, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
    - (i) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
    - (ii) 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.
    - (iii) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
    - (iv) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC-like appliance” is defined at §82.152).
    - (v) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.166.
    - (vi) 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.
    - (vii) The permittee shall comply with all other requirements of Subpart F.
  - (b) *Standards for Motor Vehicle Air Conditioners* [40 CFR Part 82, Subpart B]  
If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.

**STATE ONLY PERMIT CONDITIONS**

The conditions listed in this section are State only requirements and are not federally enforceable.

**Ambient Standards:** **(Modified July 20, 2011)** *(Modified July 8, 2014)*

(S1) The permittee shall operate the emission units described in this permit such that the following ambient standards are not exceeded, *in accordance with 40 CFR 50:*

POLLUTANT	STANDARD	CONDITION	WAQSR CH. 2, SEC.
PM <sub>10</sub> particulate matter	50 micrograms per cubic meter	annual arithmetic mean	2 (a)
	150 micrograms per cubic meter	24-hr average concentration with not more than one exceedance per year	
PM <sub>2.5</sub> particulate matter	15 micrograms per cubic meter	annual arithmetic mean	2 (b)
	<b>35</b> micrograms per cubic meter	98 <sup>th</sup> percentile 24-hour average concentration	
Nitrogen dioxide	<i>53 parts per billion</i>	<i>annual average concentration</i>	3
	<i>100 parts per billion</i>	<i>three-year average of the annual 98th percentile of the daily maximum 1-hr average concentration</i>	
	<i>0.053 parts per million</i>	annual arithmetic mean	
Sulfur dioxide	<i>75 parts per billion</i>	<i>three-year average of the annual (99th percentile) of the daily max 1-hr average</i>	4
	<i>0.5 parts per million</i>	3-hr blocks not to be exceeded more than once per calendar year	
Carbon monoxide	10 milligrams per cubic meter	max 8-hr concentration with not more than one exceedance per year	5
	40 milligrams per cubic meter	max 1-hr concentration with not more than one exceedance per year	
Ozone	0.075 parts per million	<i>three-year average of the annual fourth-highest daily maximum 8-hour average concentration</i>	6
Hydrogen sulfide	70 micrograms per cubic meter	½ hour average not to be exceeded more than two times per year	7
	40 micrograms per cubic meter	½ hour average not to be exceeded more than two times in any five consecutive days	
Suspended sulfate	0.25 milligrams SO <sub>3</sub> per 100 square centimeters per day	maximum annual average	8
	0.50 milligrams SO <sub>3</sub> per 100 square centimeters per day	maximum 30-day value	
Lead and its compounds	<b>0.15</b> micrograms per cubic meter	maximum arithmetic <b>3-month mean concentration for a 3-year period</b>	10

Hydrogen Sulfide: [WAQSR Ch 3, Sec 7]

- (S2) Any exit process gas stream containing hydrogen sulfide which is discharged to the atmosphere from any source shall be vented, incinerated, flared, or otherwise disposed of in such a manner that ambient sulfur dioxide and hydrogen sulfide standards are not exceeded.

Odors: [WAQSR Ch 2, Sec 11]

- (S3) (a) The ambient air standard for odors from any source shall be limited to an odor emission at the property line which is undetectable at seven dilutions with odor free air as determined by a scentometer as manufactured by the Barnebey-Cheney Company or any other instrument, device, or technique designated by the Division as producing equivalent results. The occurrence of odors shall be measured so that at least two measurements can be made within a period of one hour, these determinations being separated by at least 15 minutes.
- (b) Odor producing materials shall be stored, transported, and handled in a manner that odors produced from such materials are confined and that accumulation of such materials resulting from spillage or other escape is prevented.

**SUMMARY OF SOURCE EMISSION LIMITS AND REQUIREMENTS**

Source ID#: **11, 19B and 20B** Source Description: **Turbine Engines (Modified July 8, 2014)**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	See Tables I and II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permit MD-242A	If required [F8]	Measure emissions annually [F10]	Record monitoring results [F14]	Report monitoring results semiannually [F18] Report excess emissions and permit deviations [F22]
CO	See Tables I and II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permit MD-242A	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]
<b>SO<sub>2</sub> and NO<sub>x</sub></b>	<b>WAQSR Ch 5, Sec 3 and 40 CFR 60 Subparts A &amp; GG</b>					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **27 and 43** Source Description: **Turbine Engines (Modified July 8, 2014)**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	See Tables I and II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permits MD-914A and MD-917A3 <i>corrected</i>	If required [F8]	Measure emissions annually [F10]	Record monitoring results [F15]	Report monitoring results semiannually [F18] Report excess emissions and permit deviations [F22]
CO	See Tables I and II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permits MD-914A and MD-917A3 <i>corrected</i>	If required [F8]	Measure emissions annually [F11(a)]	Record monitoring results [F15]	Report monitoring results semiannually [F18] Report excess emissions and permit deviations [F22]
<i>SO<sub>2</sub> and NO<sub>x</sub></i>	<i>WAQSR Ch 5, Sec 3 and 40 CFR 60 Subparts A &amp; GG</i>					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: 28 Source Description: Turbine Engine (Modified July 8, 2014)

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	165 ppm, 0.706 g/hp-hr, 6.0 lb/hr & 26.1 TPY [F2] Conduct maintenance [F4]	WAQSR Ch 6, Sec 2 Permit MD-242A	If required [F8]	Measure emissions annually [F10]	Record monitoring results [F14] Maintenance records [F15]	Report monitoring results semiannually [F18] Semiannual maintenance report [F19] Report excess emissions and permit deviations [F22]
CO	1.473 g/hp-hr, 12.5 lb/hr & 54.5 TPY [F2]	WAQSR Ch 6, Sec 2 Permit MD-242A	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]
<i>SO<sub>2</sub> and NO<sub>x</sub></i>	<i>WAQSR Ch 5, Sec 3 and 40 CFR 60 Subparts A &amp; GG</i>					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: 32, 33, 34, 35, and 36 Source Description: Turbine Engines (Modified July 8, 2014)

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	See Tables I and II and condition F2 [F2] Conduct maintenance [F4]	WAQSR Ch 6, Sec 2 Permit MD-407A2	If required [F8]	Measure emissions annually [F10]	Record monitoring results [F14] Maintenance records [F15]	Report monitoring results semiannually [F18] Semiannual maintenance report [F19] Report excess emissions and permit deviations [F22]
CO	See Tables I and II and condition F2 [F2] Conduct maintenance [F4]	WAQSR Ch 6, Sec 2 Permit MD-407A2	If required [F8]	Measure emissions annually [F11(a)]	Test records [F14] Maintenance records [F15]	Report monitoring results semiannually [F18] Semiannual maintenance report [F19] Report excess emissions and permit deviations [F22]
<i>SO<sub>2</sub> and NO<sub>x</sub></i>	<i>WAQSR Ch 5, Sec 3 and 40 CFR 60 Subparts A &amp; GG</i>					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **50 and 51** Source Description: **Turbine Engines (Modified July 8, 2014)**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	15 ppmvd@ 15 % O <sub>2</sub> and 6.9 lb/hr at ambient temperature > 0 °F [F2]	WAQSR Ch 6, Sec 2 Permit MD-1327A	If required [F8]	Measure emissions annually, maintenance as required [F10]	Testing and monitoring records [F14] Maintenance records [F15]	Report monitoring results semiannually [F18] Semiannual maintenance report [F19] Report excess emissions and permit deviations [F22]
CO	25 ppmvd@ 15 % O <sub>2</sub> and 7.8 lb/hr at ambient temperature > 0 °F [F2]	WAQSR Ch 6, Sec 2 Permit MD-1327A	If required [F8]	Measure emissions annually [F11(a)]	Test records [F14]	Report monitoring results semiannually [F18] Report excess emissions and permit deviations [F22]
<b>SO<sub>2</sub> and NO<sub>x</sub></b>	<b>WAQSR Ch 5, Sec 3 and 40 CFR 60 Subparts A &amp; KKKK</b>					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

**Source ID#: 26 Source Description: TXP2 Amine Unit Regenerator Vent Thermal Oxidizer**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	Ch 6, Sec 2 Permit MD-1603	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC	0.1 lb/hr & 0.5 TPY and remain a viable emissions control device [F3]	WAQSR Ch 6, Sec 2 Permit MD-1603	If required [F8]	Operate and Maintain the thermal oxidizer [F12]	Operation records [F16]	Semiannual emissions control reports [F20] Report excess emissions and permit deviations [F22]

**Source ID#: F2 Source Description: Natural Gasoline Liquid Loading Losses - Vapor Combustor System**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	Ch 6, Sec 2 Permit MD-1603	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC	0.0835 lb/1000 gallons loaded, 2.7 lb/hr & 1.1 TPY; remain a viable emissions control device; install a temperature monitoring device [F3]	WAQSR Ch 6, Sec 2 Permit MD-1603	If required [F8]	Monitor downstream temperature, viable operation and monthly leak detection of the loading rack [F12]	Downstream temperature, operation and leak detection records [F16]	Semiannual emissions control reports; Test reports [F20] Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: 46 Source Descriptions: *Glycol Dehydrator Thermal Oxidizer (Modified July 20, 2011) (Modified July 8, 2014)*

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 <i>Waiver wv-13561 corrected</i>	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC & HAP	Control the <b>1.35 BSCFD</b> glycol dehydrator still vent and flash tank [F3] <i>Minimum operating temp [F3]</i>	WAQSR Ch 6, Sec 2 Permits/ <i>waiver MD-917A3 corrected, MD-12097 and wv-13561 corrected</i>	If required [F8]	Combustion <u>unit</u> temperature [F12]	Temperature records [F16] Test records [F14]	Viable emission control, downstream temperature reports [F20] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	See Table II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permits MD-917A3 <i>corrected</i>	If required [F8]	<i>Once during permit term</i> [F11(c)]	Test records [F14]	Report excess emissions and permit deviations [F22]
CO	See Table II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permits MD-917A3 <i>corrected</i>	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

Source ID#: (n/a) Source Description: *1.35 BSCFD Glycol Dehydrator (Modified July 8, 2014)*

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
<i>Benzene</i>	<i>WAQSR Ch 5, Sec 3; 40 CFR 63 Subparts A and HH</i>					
<i>Benzene</i>	<i>1.0 TPY [F3]</i>	<i>WAQSR Ch 6, Sec 2 Permit MD-12097</i>	<i>If required [F8]</i>	<i>Compliance determined annually per 40 CFR §63.772(b)(2)(i) [F12]</i>	<i>Per Subpart HH [F16]</i>	<i>Monitoring results annually [F20]</i>

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: 53 Source Descriptions: *TXP3/TXP5 Amine Unit Thermal Oxidizer Subject to CAM (Modified July 20, 2011) (Modified July 8, 2014)*

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Permit MD-1327A	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC & HAP	Control the flash tank <i>and</i> acid gas vent [F3] Emission limits [F3] <i>Pilot flame [F3]</i>	WAQSR Ch 6, Sec 2 Permit MD-1327A	If required [F8]	Daily CAM [F12] Pilot flame <i>monitoring [F12]</i>	CAM records [F16] Pilot flame records [F16] Test records [F14]	CAM [F20] Viable emission control [F20] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	See Table II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permit MD-1327A	If required [F8]	<i>Once during permit term</i> [F11(c)]	<i>Testing and monitoring</i> records [F14]	Report excess emissions and permit deviations [F22]
CO	See Table II and condition F2 [F2]	WAQSR Ch 6, Sec 2 Permit MD-1327A	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: 40 Source Descriptions: Auxiliary Steam Boiler (Modified July 8, 2014)

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	1.3 lb/hr & 5.5 TPY [F2] Conduct maintenance [F4]	WAQSR Ch 6, Sec 2 Permit MD-917A3 <i>corrected</i>	If required [F8]	Conduct maintenance [F11]	Maintenance records [F15]	Semiannual maintenance report [F19] Report excess emissions and permit deviations [F22]
CO	1.1 lb/hr & 4.6TPY [F2]	WAQSR Ch 6, Sec 2 Permit MD-917A3 <i>corrected</i>	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: - Source Descriptions: **Broach Product Dryer Heater (Modified July 8, 2014)**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	0.3 lb/hr, 1.5 TPY [F2]	WAQSR Ch 6, Sec 2 Permit MD-917A3 <i>corrected</i>	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]
CO	0.3 lb/hr, 1.3 TPY [F2]	WAQSR Ch 6, Sec 2 Permit MD-917A3 <i>corrected</i>	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

Source ID#: **1, 4, 5, 15 & 37** Source Description: **Heaters**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	0.20 lb/MMBtu each [F2] Conduct maintenance [F4]	WAQSR Ch 3, Sec 3	If required [F8]	Conduct maintenance [F11]	Record maintenance activities [F15]	Report on maintenance semiannually [F19] Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

**Source ID#: 6, 16 and 29 Source Description: Heaters including the ~40 assorted small heaters**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	0.20 lb/MMBtu each [F2]	WAQSR Ch 3, Sec 3	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

**Source ID#: 3 Source Description: Heater**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	40 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Gas fired [F9]	Test records [F14]	Report type of fuel fired [F18] Report excess emissions and permit deviations [F22]
NO <sub>x</sub>	0.23 lb/MMBtu [F2]	WAQSR Ch 3, Sec 3	If required [F8]	None	Test records [F14]	Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **18A** Source Description: **TXP3/TXP4/TXP5 Plant Flare (Modified July 8, 2014)**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Permit <i>MD-917A3 corrected</i>	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC	Pilot flame must be present, operate at all times, record gas volumes, remain a viable emissions control device, <i>control glycol dehydrator flash tank</i> [F3]	WAQSR Ch 6, Sec 2 Permits MD-1327A, MD-1603 <i>and MD-12097</i>	If required [F8]	Monitor viable operations [F12]	Test records [F14] Pilot light, gas volumes and operation records [F16]	Semiannual emissions control reports [F20] Report excess emissions and permit deviations [F22]

Source ID#: **18B & 18D** Source Description: **Flares**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	No visible emissions [F1]	Ch 5, Sec 2	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC	Gas volumes [F3]	WAQSR Ch 6, Sec 2 Permit MD-1603	If required [F8]	None	Gas volume records [F16]	Report excess emissions and permit deviations [F22]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **18E** Source Description: **Flare**

Pollutant	Emissions Limit / Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F1]	WAQSR Ch 3, Sec 2 (a)	If required [F8]	Quarterly Method 22 [F9]	Monitoring records [F14]	Monitoring reports [F18] Report excess emissions and permit deviations [F22]
VOC	Gas volumes [F3]	WAQSR Ch 6, Sec 2 Permit MD-1603	If required [F8]	None	Gas volume records [F16]	Report excess emissions and permit deviations [F22]

Source ID#: **SB-01, SB-02, SB-03 and SB-04** Source Description: **Diesel Fired Engines (Modified July 8, 2014)**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	30 percent opacity [F1]	WAQSR Ch 3, Sec 2	Testing if required [F8]	Visual observation during periodic availability tests [F9]	Record monitoring results [F14]	Report excess emissions and permit deviations [F22]
Operating Requirements	SB-01 & SB-02: 100 hrs non-emergency; SB-03: 500 hrs non-emergency; SB-04: 1,000 hrs per year & U.S. EPA Tier 4i certified [F4]	WAQSR Ch 6, Sec 2 Waivers wv-15407 and wv-15955-1	Testing if required [F8]	Operate and maintain in accordance with good air pollution control practices [F4] Monitor operating hours [F11]	Record monitoring results [F14] Record maintenance [F15] Record Tier 4i certification for SB-04 [F15]	Semiannual: report monitoring results [F18] Report excess emissions and permit deviations [F22] Submit notification of start-up for SB-04 [F24]
Additional NO <sub>x</sub> , CO, and VOC	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & IIII, as applicable.					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & ZZZZ					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

## ABBREVIATIONS

AQD	Air Quality Division
BACT	Best available control technology (see Definitions)
Btu	British thermal unit
BSCFD	Billion standard cubic foot per day
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon monoxide
°F	Degrees Fahrenheit
DEQ	Wyoming Department of Environmental Quality
EPA	United States Environmental Protection Agency (see Definitions)
g	Gram(s)
g/hp-hr	Gram(s) per horsepower hour
gal	Gallon(s)
H <sub>2</sub> S	Hydrogen sulfide
HAP(s)	Hazardous air pollutant(s)
hp	Horsepower
hr	Hour(s)
ID#	Identification number
l	Liter
lb	Pound(s)
M	Thousand
MACT	Maximum available control technology (see Definitions)
mfr	Manufacturer
mg	Milligram(s)
MM	Million
MWh	Megawatt hour(s)
N/A	Not applicable
NMHC(s)	Non-methane hydrocarbon(s)
NO <sub>x</sub>	Oxides of nitrogen
O <sub>2</sub>	Oxygen
OPP	Operating Permit Program
PM	Particulate matter
PM <sub>10</sub>	Particulate matter less than or equal to a nominal diameter of 10 micrometers
ppmv	Parts per million (by volume)
ppmv <sub>d</sub>	Parts per million (by volume) on a dry basis
ppmw	Parts per million (by weight)
QIP	Quality improvement plan
RVP	Reid Vapor Pressure
SCF	Standard cubic foot (feet)
SCM	Standard cubic meter(s)
SIC	Standard Industrial Classification
SO <sub>2</sub>	Sulfur dioxide
SO <sub>3</sub>	Sulfur trioxide
SO <sub>x</sub>	Oxides of sulfur
TBD	To be determined
TPY	Tons per year
U.S.C.	United States Code
µg	Microgram(s)
VOC(s)	Volatile organic compound(s)
W.S.	Wyoming Statute
WAQSR	Wyoming Air Quality Standards & Regulations (see Definitions)

## DEFINITIONS

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

**"Administrator"** means Administrator of the Air Quality Division, Wyoming Department of Environmental Quality.

**"Applicable requirement"** means all of the following as they apply to emissions units at a source subject to Chapter 6, Section 3 of the WAQSR (including requirements with future effective compliance dates that have been promulgated or approved by the EPA or the State through rulemaking at the time of issuance of the operating permit):

- (a) Any standard or other requirement provided for in the Wyoming implementation plan approved or promulgated by EPA under title I of the Act that implements the relevant requirements of the Act, including any revisions to the plan promulgated in 40 CFR Part 52;
- (b) Any standards or requirements in the WAQSR which are not a part of the approved Wyoming implementation plan and are not federally enforceable;
- (c) Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D of the Act and including Chapter 5, Section 2 and Chapter 6, Sections 2 and 4 of the WAQSR;
- (d) Any standard or other requirement promulgated under Section 111 of the Act, including Section 111(d) and Chapter 5, Section 2 of the WAQSR;
- (e) Any standard or other requirement under Section 112 of the Act, including any requirement concerning accident prevention under Section 112(r)(7) of the Act and including any regulations promulgated by EPA and the State pursuant to Section 112 of the Act;
- (f) Any standard or other requirement of the acid rain program under title IV of the Act or the regulations promulgated thereunder;
- (g) Any requirements established pursuant to Section 504(b) or Section 114(a)(3) of the Act concerning enhanced monitoring and compliance certifications;
- (h) Any standard or other requirement governing solid waste incineration, under Section 129 of the Act;
- (i) Any standard or other requirement for consumer and commercial products, under Section 183(e) of the Act (having to do with the release of volatile organic compounds under ozone control requirements);
- (j) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under title VI of the Act, unless the EPA has determined that such requirements need not be contained in a title V permit;
- (k) Any national ambient air quality standard or increment or visibility requirement under part C of title I of the Act, but only as it would apply to temporary sources permitted pursuant to Section 504(e) of the Act; and
- (l) Any state ambient air quality standard or increment or visibility requirement of the WAQSR.
- (m) Nothing under paragraphs (A) through (L) above shall be construed as affecting the allowance program and Phase II compliance schedule under the acid rain provision of Title IV of the Act.

**"BACT" or "Best available control technology"** means an emission limitation (including a visible emission standard) based on the maximum degree of reduction of each pollutant subject to regulation under the WAQSR or regulation under the Federal Clean Air Act, which would be emitted from or which results for any proposed major emitting facility or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application or production processes and available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, he may instead prescribe a design, equipment, work practice or operational standard or combination thereof to satisfy the requirement of Best Available Control Technology. Such standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results. Application of BACT shall not result in emissions in excess of those allowed under

Chapter 5, Section 2 of the WAQSR and any other new source performance standard or national emission standards for hazardous air pollutants promulgated by EPA but not yet adopted by the state.

**"Department"** means the Wyoming Department of Environmental Quality or its Director.

**"Director"** means the Director of the Wyoming Department of Environmental Quality.

**"Division"** means the Air Quality Division of the Wyoming Department of Environmental Quality or its Administrator.

**"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 that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

**"EPA"** means the Administrator of the U.S. Environmental Protection Agency or the Administrator's designee.

**"Fuel-burning equipment"** means any furnace, boiler apparatus, stack, or appurtenances thereto used in the process of burning fuel or other combustible material for the purpose of producing heat or power by indirect heat transfer.

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

**"Insignificant activities"** means those activities which are incidental to the facility's primary business activity and which result in emissions of less than one ton per year of a regulated pollutant not included in the Section 112 (b) list of hazardous air pollutants or emissions less than 1000 pounds per year of a pollutant regulated pursuant to listing under Section 112 (b) of the Act provided, however, such emission levels of hazardous air pollutants do not exceed exemptions based on insignificant emission levels established by EPA through rulemaking for modification under Section 112 (g) of the Act.

**"MACT" or "Maximum achievable control technology"** means the maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory that shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than:

(a) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emission information), excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(b) the average emission limitation achieved by the best performing five sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

**"Modification"** means any physical change in, or change in the method of operation of, an affected facility which increases the amount of any air pollutant (to which any state standards applies) emitted by such facility or which results in the emission of any such air pollutant not previously emitted.

**"Permittee"** means the person or entity to whom a Chapter 6, Section 3 permit is issued.

**"Potential to emit"** means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in title IV of the Act or the regulations promulgated thereunder.

**"Regulated air pollutant"** means the following:

- (a) Nitrogen oxides (NO<sub>x</sub>) or any volatile organic compound;
- (b) Any pollutant for which a national ambient air quality standard has been promulgated;
- (c) Any pollutant that is subject to any standard established in Chapter 5, Section 2 of the WAQSR or Section 111 of the Act;
- (d) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act; or
- (e) Any pollutant subject to a standard promulgated under Section 112 or other requirements established under Section 112 of the Act, including Sections 112(g), (j), and (r) of the Act, including the following:
  - (i) Any pollutant subject to requirements under Section 112(j) of the Act. If EPA fails to promulgate a standard by the date established pursuant to Section 112(e) of the Act, 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 pursuant to Section 112(e) of the Act; and
  - (ii) Any pollutant for which the requirements of Section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to Section 112(g)(2) requirement.
- (f) Pollutants regulated solely under Section 112(r) of the Act are to be regulated only with respect to the requirements of Section 112(r) for permits issued under this Chapter 6, Section 3 of the WAQSR.

**"Renewal"** means the process by which a permit is reissued at the end of its term.

**"Responsible official"** means one of the following:

- (a) For a corporation:
  - (i) 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
  - (ii) 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:
    - (A) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
    - (B) the delegation of authority to such representative is approved in advance by the Division;
- (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; or
- (d) For affected sources:
  - (i) The designated representative or alternate designated representative in so far as actions, standards, requirements, or prohibitions under title IV of the Act or the regulations promulgated thereunder are concerned; and
  - (ii) The designated representative, alternate designated representative, or responsible official under Chapter 6, Section 3 (b)(xxvi) of the WAQSR for all other purposes under this section.

**"WAQSR"** means the Wyoming Air Quality Standards and Regulations promulgated under the Wyoming Environmental Quality Act, W.S. §35-11-101, *et seq.*

**Appendix A**  
Preventative Maintenance Plan  
*(Modified July 8, 2014)*



**Maintenance Plan For Opal Gas Plant Turbines**  
**(Emission Unit Nos. 32, 33, 34, 35 and 36)**

**Condition Based Maintenance Plan:**

Maintenance on all units will be based upon the operating condition of the units. If maintenance is needed downtime will be scheduled as necessary. Below are criteria that will generally be followed through Empac, our preventative maintenance program.

**Programs:**

Empac  
Citgo Lube Alert Oil Samples  
Solar-Fired Hour Agreement  
Turbine Vibration Monitoring

**Daily**

The natural gas producer (NGP) speed and exhaust temperature of each turbine are monitored continually to ensure proper operation. The shut down points for natural gas producer speed and exhaust temperature are listed below for each turbine. Should either parameter reach the limit shown below, the turbine will be shut down.

AQD Source ID	Type of Turbine	NGP Over Speed Shutdown (rpm)	Exhaust Temperature (T5) Shut Down (°F)
32	Centaur 40-T4700S	15,375	1,250
33	Taurus 70-T10302S	15,580	1,480
34	Centaur 50-T5700S	15,888	1,450
35	Mars 100-T15000S	11,319	1,440
36	Mars 100-T15000S	11,319	1,440

**Monthly**

Downtime reports generated to look at Run Time %.  
Oil Samples taken and analysis reviewed.  
Monthly scheduled maintenance is done on all combustion engines as required.

**Annually**

Solar inspection and water wash of Solar Turbines, if required.  
Annual shutdown as needed for maintenance determined by all of the above  
ESD and Cause and Effect testing.  
Turbine emissions testing for NO<sub>x</sub> and CO in accordance with the Wyoming DEQ's most recent protocol for portable emissions testing. Turbines to be tested include AQD Emission Unit Nos. 32, 33, 34, 35 and 36.



**Appendices B & C**  
***Reserved***  
***(Modified July 8, 2014)***



**Appendix D**  
Compliance Assurance Monitoring Plan  
*(Modified July 8, 2014)*



**COMPLIANCE ASSURANCE MONITORING PLAN:  
TXP3/TXP5 AMINE UNIT THERMAL OXIDIZER  
WILLIAMS FIELD SERVICES COMPANY OPAL GAS PLANT**

---

I. Background

A. Emissions Unit

Description: TXP3 & TXP5 Amine Units treating NGL  
Both flash tank vents and regenerator vents are controlled by thermal oxidizer

AQD ID: 53  
Facility: Opal Gas Plant  
Opal, WY

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulation: Permit No. MD-1327A;  
Emission limits and origin: 7.1 tpy VOC (Condition 14, MD-1327A)  
Indicator(s) monitored: Operating temperature within combustion chamber

C. Control Technology:

Control device: Thermal oxidizer

II. Monitoring Approach

- A. Indicator: Temperature within combustion chamber.
- B. Indicator Range: The temperature within the combustion chamber is continuously monitored by an electronic data control system to ensure that the system is operated in accordance with manufacturer's specifications. The acceptable range of temperatures within the combustion chamber is 1,500 to 1,800 °F.
- C. Performance Criteria:
1. Data Representativeness: Temperature is measured within the combustion chamber by a thermocouple. The minimum accuracy is  $\pm 5^{\circ}\text{F}$ .  
Verification of Operational Status: n/a
  2. QA/QC Practices and Criteria: Thermocouple checked annually.
  3. Monitoring Frequency: Temperature measured continuously.  
Data Collection Procedures: An electronic data control system records the thermal oxidizer temperature.
  4. Averaging Period: None, not to exceed minimum and maximum temperatures.

08-28-2013 032018

## MONITORING APPROACH JUSTIFICATION

### III. Background

Amine treatment systems are often used at natural gas processing facilities to remove acid gases such as hydrogen sulfide (H<sub>2</sub>S) and carbon dioxide (CO<sub>2</sub>) from natural gas or natural gas liquid (NGL) streams. The two main processes within an amine unit are absorption and regeneration. A feed stream containing acid gases, either natural gas or NGL, is introduced into an absorption column where the inlet stream is counter-currently contacted with an amine solution. The amine solution absorbs the acid gases, and, to some extent, small quantities of hydrocarbons in the feed stream. After the absorption process, sweet gas or NGL is ready for consumer use or further processing.

After absorbing the acid gases, the rich amine must be regenerated before it can be reused. The rich amine is sent to a regeneration column to strip the absorbed gases. Commonly, a flash tank downstream of the absorber column is used to remove small amounts of hydrocarbons absorbed in the rich amine stream. These regeneration processes result in acid gases and hydrocarbons released to the atmosphere. When there exist hydrocarbons in the waste gas streams, rather than venting the waste gas streams directly to atmosphere, thermal oxidation and/or flaring is often used to control these emissions.

The elevated combustion temperatures found in a thermal oxidizer are required to ensure sufficient destruction (98+%) of the volatile organic compound (VOC) fraction of the hydrocarbons while overcoming the flame-dampening characteristics found in a CO<sub>2</sub>-rich environment. Flares are commonly used to destroy waste gas streams with a high Btu content (300+ Btu/scf).

### IV. Rationale for Selection of Performance Indicators

The performance of a thermal oxidizer in terms of waste gas destruction efficiency is usually tied to the operating temperature of the unit. A higher operating temperature results in more of the waste gas oxidized to water and carbon dioxide. The combustion chamber operating temperature is the performance indicator monitored to ensure that the thermal oxidizer is working properly. The thermal oxidizer will be operated in accordance with manufacturer's recommendations and specifications to achieve destruction of VOCs.

08-28-2013 032018