New Mexico
ENVIRONMENT DEPARTMENT

525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505
Phone (505) 476-4300
Fax (505) 476-4375
www.env.nm.gov

MICHELLE LUJAN GRISHAM
GOVERNOR

HOWIE C. MORALES
LT. GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

JENNIFER J. PRUETT
DEPUTY SECRETARY

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

Certified Mail No:
Return Receipt Requested

NSR Permit No:	7482-M1
Facility Name:	3 Bear Libby Gas Plant
Facility Owner/Operator:	3 Bear Delaware Operating – NM, LLC.
Mailing Address:	1512 Larimer St. Suite 540 Denver, CO 80202
TEMPO/IDEA ID No:	38067-PRN20190001
AIRS No:	35-025-1281
Permitting Action:	NSR – Significant Revision
Source Classification:	TV Major
Facility Location:	638430 m E by 3601510 m N, Zone 13; Datum WGS84
County:	Lea
Air Quality Bureau Contact	Julia Kuhn
Main AQB Phone No.	(505) 476-4300

Liz Bisbey-Kuehn
Bureau Chief
Air Quality Bureau

4/8/20
Date

TABLE OF CONTENTS

Part A FACILITY SPECIFIC REQUIREMENTS A3
A100 Introduction A3
A101 Permit Duration (expiration) A3
A102 Facility: Description A3
A103 Facility: Applicable Regulations A4
A104 Facility: Regulated Source A5
A105 Facility: Control Equipment A8
A106 Facility: Allowable Emissions A9
A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions A10
A108 Facility: Allowable Operations A13
A109 Facility: Reporting Schedules A13
A110 Facility: Fuel and Fuel Sulfur Requirements A14
A111 Facility: 20.2.61 NMAC Opacity A14
Oil and Gas Industry A15
A200 Oil and Gas Industry A15
A201 Engines A15
A202 Glycol Dehydrators - Not required. A19
A203 Tanks A19
A204 Heaters/Boilers A21
A205 Turbines – Not required. A22
A206 Flares and Thermal Oxidizer A22
A207 Sulfur Recovery Unit – Not required A27
A208 Amine Unit A27
A209 Fugitives A29

PART B GENERAL CONDITIONS (Attached)

PART C MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached)

PART A FACILITY SPECIFIC REQUIREMENTS

A100 Introduction

A. This permit, NSR 7482-M1, supersedes all portions of Air Quality Permit 7482, issued January 8, 2018, except portions requiring compliance tests. Compliance test conditions from previous permits, if not completed, are still in effect, in addition to compliance test requirements contained in this permit.

A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

A102 Facility: Description

A. The function of the 3 Bear Libby Gas Plant is to gather and receive up to 60MMScf/day of gas from three surrounding compressor stations owned and operated by 3Bear as well. Libby will separate natural gas liquids (NGLs) from the field gas, producing natural gas liquids and a residue gas for transmission to a pipeline owned by others. The process utilizes a cryogenic gas separation plant and associated compressors for collecting field gas from the gathering system nearby. Gas and NGLs will be piped to the respective nearby interconnect metering stations, by others. The plant is to be located within 5 miles of the residue gas and NGL pipelines.

B. This facility is located approximately 16.2 miles southwest of Monument, in Lea County, New Mexico.

C. This modification consists of: (1) addition of residue compressor engine options, (2) addition of generator engine, (3) update to TK 1-6 as follows: one gunbarrel tank, four condensate tanks, one slop oil tank, (4) addition of one produced water tank, (5) removal of one methanol tank, (6) addition of one condensate loadout, (7) fugitive emissions update, (8) revision of compressor blowdowns, (9) revision of plant blowdowns, (10) update to emission unit IDs, and (11) increasing emission limits. The description of this modification is for informational purposes only and is not enforceable.

D. Tables 102.A and Table 102.B show the total potential emission rates (PER) from this facility for information only. This is not an enforceable condition and excludes emissions from Minor NSR exempt activities per 20.2.72.202 NMAC.

Table 102.A: Total Potential Emission Rate (PER) from Entire Facility

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NOx)	145.8
Carbon Monoxide (CO)	241.7
Volatile Organic Compounds (VOC) [1]	182.8
Sulfur Dioxide (SO_2)	238.4
Particulate Matter (total suspended)	9.1
Particulate Matter 10 microns or less (PM_{10})	8.9
Particulate Matter 2.5 microns or less ($PM_{2.5}$)	8.9
Greenhouse Gas (GHG) as CO_2e	254,861

1. VOC total includes emissions from Fugitives, SSM and Malfunctions.
2. PM is a regulated new source review pollutant per 20.2.74 NMAC Prevention of Significant

Table 102.B: Total Potential Emissions Rate (PER) for *Hazardous Air Pollutants (HAPs) that exceed 1.0 ton per year

Pollutant	Emissions (tons per year)
Acetaldehyde	2.9
Acrolein	1.8
Formaldehyde	8.5
n-hexane	1.8
Total HAPs**	15.7

* HAP emissions are already included in the VOC emission total.

** The total HAP emissions may not agree with the sum of individual HAPs because only individual HAPs greater than 1.0 tons per year are listed here.

A103 Facility: Applicable Regulations

A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.1 NMAC General Provisions	X	Entire Facility
20.2.3 NMAC Ambient Air Quality Standards	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.38 NMAC Hydrocarbon Storage Facilities	X	TK 2-6
20.2.61 NMAC Smoke and Visible Emissions	X	ENG 1-12, HTR 1-2, TO-1, FL 1-2
20.2.70 NMAC Operating Permits	X	Entire Facility
20.2.71 NMAC Operating Permit Emission Fees	X	Entire Facility
20.2.72 NMAC Construction Permit	X	Entire Facility

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
20.2.74 NMAC Permits – Prevention of Significant Deterioration (PSD)	X	NA
20.2.75 NMAC Construction Permit Fees	X	Entire Facility
20.2.77 NMAC New Source Performance Standards	X	Units subject to 40 CFR 60 ENG 1-12 (potentially), HTR 1-2, FUG-1, COMP, AMINE-1, GEN 1-2
20.2.78 NMAC Emissions Standards for Hazardous Air Pollutants	X	NA Units subject to 40 CFR 61
20.2.82 NMAC Maximum Achievable Control Technology Standards for Source Categories of HAPs	X	Units subject to 40 CFR 63 ENG 1-12 (potentially), GEN 1-2
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility
40 CFR 60, Subpart A, General Provisions	X	ENG 1-12 (potentially), HTR 1-2, FUG-1, COMP, AMINE-1, GEN 1-2
40 CFR 60, Subpart Dc	X	HTR 1-2
40 CFR 60, Subpart IIII	X	GEN 2
40 CFR 60, Subpart JJJJ	X	ENG 1-12 (potentially), GEN-1
40 CFR 60, Subpart OOOOa	X	FUG-1, COMP, AMINE-1
40 CFR 63, Subpart A, General Provisions	X	ENG 1-12 (potentially), GEN 1-2
40 CFR 63, Subpart ZZZZ	X	ENG 1-12 (potentially), GEN 1-2

A104 <u>Facility: Regulated Source</u>

A. Table 104.A lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are not included.

Table 104.A: Regulated Sources List

Unit No.	Unit Type	Make	Model No.	Serial No.	Yr of Construction	Yr of Manufacture	Operating Rate Max/Site	Operating Capacity Max/Site
	Engine Option #1: ENG-1/Caterpillar G3508 or Option #2: ENG-2/Caterpillar G3516							
[1]ENG-1	Caterpillar G3508 4 SLB RICE/Compressor Option 1	Caterpillar	G3508	TBD	12-JUN-06	01-JUL-10	690 hp / 690 hp	690 hp / 690 hp
	Engine Option #1: ENG-1/Caterpillar G3508 or Option #2: ENG-2/Caterpillar G3516							
[1]ENG-2	Caterpillar G3516 4 SLB RICE/Compressor Option 2	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
ENG-3	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
ENG-4	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
	Engine Option #1: ENG-5-8/Caterpillar G3516 or Engine Option #2: ENG-9-12/Waukesha 7044							
[1]ENG-5	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
[1]ENG-6	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
[1]ENG-7	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
[1]ENG-8	Caterpillar G3516 4 SLB RICE/Compressors	Caterpillar	G3516	TBD	12-JUN-06	01-JUL-10	1380 hp / 1380 hp	1380 hp / 1380 hp
	Engine Option #1: ENG-5-8/Caterpillar G3516 or Engine Option #2: ENG-9-12/Waukesha 7044							
[1]ENG-9	Waukesha 7044 4 SLB RICE/Compressors	Waukesha	7044	TBD	12-JUN-06	01-JUL-10	1680 hp / 1680 hp	1680 hp / 1680 hp
[1]ENG-10	Waukesha 7044 4 SLB RICE/Compressors	Waukesha	7044	TBD	12-JUN-06	01-JUL-10	1680 hp / 1680 hp	1680 hp / 1680 hp

Unit No.	Unit Type	Make	Model No.	Serial No.	Yr of Construction	Yr of Manufacture	Operating Rate Max/Site	Operating Capacity Max/Site
[1]ENG-11	Waukesha 7044 4 SLB RICE/Compressors	Waukesha	7044	TBD	12-JUN-06	01-JUL-10	1680 hp / 1680 hp	1680 hp / 1680 hp
[1]ENG-12	Waukesha 7044 4 SLB RICE/Compressors	Waukesha	7044	TBD	12-JUN-06	01-JUL-10	1680 hp / 1680 hp	1680 hp / 1680 hp
TK-1	Gunbarrel Tank	TBD	TBD	TBD	01-APR-18	01-APR-18	500 bbl / 500 bbl	500 bbl / 32172 gal/y
TK-2	Condensate Tank	TBD	TBD	TBD	08-JAN-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 2299500 gal/y
TK-3	Condensate Tank	TBD	TBD	TBD	08-JAN-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 2299500 gal/y
TK-4	Condensate Tank	TBD	TBD	TBD	08-JAN-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 2299500 gal/y
TK-5	Condensate Tank	TBD	TBD	TBD	08-JAN-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 2299500 gal/y
TK-6	Slop Oil Tank	TBD	TBD	TBD	08-JAN-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 64344 gal/y
PWTK-1	Produced Water Tank	TBD	TBD	TBD	01-APR-18	01-APR-18	400 bbl / 400 bbl	400 bbl / 64344 gal/y
HTR-1	Heater	TBD	TBD	TBD	08-JAN-18	01-APR-18	49.42 MM BTU/h / 49.42 MM BTU/h	49.42 MM BTU/h / 49.42 MM BTU/h
HTR-2	Heater	TBD	TBD	TBD	08-JAN-18	01-APR-18	11 MM BTU/h / 11 MM BTU/h	11 MM BTU/h / 11 MM BTU/h
CONDLOAD -1	Truck Loading	NA	NA	NA	NA	NA	219000 bbl/y	219000 bbl/y
OILLOAD-1	Truck Loading	NA	NA	NA	NA	NA	1532 bbl/y	1532 bbl/y
FUG-1	Fugities	NA	NA	NA	NA	NA	NA	NA

Unit No.	Unit Type	Make	Model No.	Serial No.	Yr of Construction	Yr of Manufacture	Operating Rate Max/Site	Operating Capacity Max/Site
AMINE-1	Amine sweetening unit	TBD	TBD	TBD	08-JAN-18	NA	60 MM SCF/d / 60 MM SCF/d	60 MM SCF/d / 60 MM SCF/d
TO-1	Thermal Oxidizer (Incinerator)	TBD	TBD	TBD	08-JAN-18	1-FEB-2018	TBD	TBD
FL-1	Process Flare	TBD	TBD	TBD	08-JAN-18	NA	TBD	TBD
FL-2	Process Flare	TBD	TBD	TBD	08-JAN-18	NA	TBD	TBD
PLANT-BD	Plant Blowdown Flaring	TBD	TBD	NA	NA	NA	NA	NA
COMP	Compressor Blowdown Flaring	TBD	TBD	NA	NA	NA	NA	NA
MAIN-1	Maintenance Activities	NA	NA	NA	NA	NA	NA	NA
UP-MAL	Malfunctions Venting	NA	NA	NA	NA	NA	NA	NA
*GEN-1	Generator Engine	Olympian	250LG6	TBD	After 01-JULY-10	TBD	374 hp / 374 hp	374 hp / 374 hp
*GEN-2	Generator Engine	Generac	TBD	TBD	2019	TBD	65 hp / 65 hp	65 hp / 65 hp

1. The Permittee has an option of installing either Unit ENG-1 or ENG-2 and installing either ENG-5 through ENG-8, or ENG-9 through ENG-12.
2. All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and requirements.
*Exempted equipment under 20.2.72.202.B.3. Added at the request of the permittee.

A105 Facility: Control Equipment

A. Table 105 lists all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.

Table 105: Control Equipment List:

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit Number(s)[1,2]
ENG-1	Oxidation Catalyst and Air Fuel Ratio Controller	VOC, CO and CH2O	ENG-1
ENG 2-8	Oxidation Catalyst and Air Fuel Ratio Controller	VOC, CO and CH2O	ENG 2-8

Table 105: Control Equipment List:

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit Number(s)[1,2]
ENG 9-12	Non-Selective Catalytic Reduction	NOx, CO	ENG 9-12
TO	Thermal Oxidizer	VOC, H2S	AMINE-1
FL-1	Upset/Maintenance Flare	VOC	AMINE-1 (during TO downtime), COMP, PLANT BD
FL-2	Tank Flare	VOC	TK 1-6, PWTK-1, CONDLOAD-1, OILLOAD-1

1. Control for unit number refers to a unit number from the Regulated Equipment List.
2. During operation under scenario 1 or 2 each individual unit shall have the control device listed in Table 105 installed.

A106 Facility: Allowable Emissions

A. The following Section lists the emission units and their allowable emission limits. (40 CFR 50, 40 CFR 60, Subparts A, Dc, JJJJ and OOOOa, 40 CFR 63, Subparts A and ZZZZ, 20.2.72.210.A and B.1 NMAC).

Table 106.A: Allowable Emissions

Unit No.	NO_x (pph.)	[1]NO_x (tpy.)	CO (pph)	CO (tpy)	VOC (pph)	VOC (tpy)	SO_2 (pph)	SO_2 (tpy)	PM_{10} (pph)	PM_{10} (tpy)	$PM_{2.5}$ (pph)	$PM_{2.5}$ (tpy)
[1]ENG-1	1.5	6.7	3.0	13.3	1.4	6.1	<	<	<	<	<	<
[1]ENG-2	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
ENG-3	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
ENG-4	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
[1]ENG-5	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
[1]ENG-6	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
[1]ENG-7	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
[1]ENG-8	3.0	13.3	2.4	10.4	2.4	10.5	<	<	<	<	<	<
[1]ENG-9	1.9	8.3	1.6	6.9	0.7	2.8	<	<	<	<	<	<
[1]ENG-10	1.9	8.3	1.6	6.9	0.7	2.8	<	<	<	<	<	<
[1]ENG-11	1.9	8.3	1.6	6.9	0.7	2.8	<	<	<	<	<	<
[1]ENG-12	1.9	8.3	1.6	6.9	0.7	2.8	<	<	<	<	<	<
TK-1	-	-	-	-	1.1	5.0	-	-	-	-	-	-
TK-2	-	-	-	-	0.1	0.4	-	-	-	-	-	-
TK-3	-	-	-	-	0.1	0.4	-	-	-	-	-	-
TK-4	-	-	-	-	0.1	0.4	-	-	-	-	-	-
TK-5	-	-	-	-	0.1	0.4	-	-	-	-	-	-
TK-6	-	-	-	-	0.04	0.2	-	-	-	-	-	-

Unit No.	NO_x (pph.)	[1]NO_x (tpy.)	CO (pph)	CO (tpy)	VOC (pph)	VOC (tpy)	SO_2 (pph)	SO_2 (tpy)	PM_{10} (pph)	PM_{10} (tpy)	$PM_{2.5}$ (pph)	$PM_{2.5}$ (tpy)
HTR-1	2.4	10.6	4.1	17.8	<	1.2	<	<	<	1.6	<	1.6
HTR-2	1.1	4.7	<	4.0	<	<	<	<	<	<	<	<
CONDLOAD-1	-	-	-	-	*	9.2	-	-	-	-	-	-
OILLOAD-1	-	-	-	-	*	<	-	-	-	-	-	-
FUG-1	-	-	-	-	11.7	51.2	-	-	-	-	-	-
AMINE-1	-	-	-	-	2.8	3.9	-	-	-	-	-	-
TO-1	1.6	6.8	1.3	5.7	<	<	64.5	235.2	-	-	-	-
FL-1 Pilot/Purge	0.03	0.15	0.16	0.68	0.02	0.09	0.0	0.0	6.3	0.9	6.3	0.9
FL-2	<	3.9	4.1	17.8	<	<	<	<	0.0	0.0	0.0	0.0
HR	-	-	-	-	-	-	-	-	3.2	<	<	<

1. The Permittee has an option of installing either Unit ENG-1 or ENG-2 and installing either ENG-5 through ENG-8, or ENG-9 through ENG-12.
2. Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2.
3. For Title V facilities, the Title V annual fee assessments are based on the sum of allowable tons per year emission limits in Sections A106 and A107.
4. Compliance with emergency flare emission limits is demonstrated by limiting combustion to pilot and/or purge gas only.

"-" indicates the application represented emissions of this pollutant are not expected.

"<" indicates that the application represented the uncontrolled mass emission rates are less than 1.0 pph or 1.0 tpy for this emissions unit and this air pollutant. The Department determined that allowable mass emission limits were not required for this unit and this pollutant.

"*" indicates hourly emission limits are not appropriate for this operating situation.

5. To report excess emissions for sources with no pound per hour and/or ton per year emission limits, see condition B110F.

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions

A. The maximum allowable SSM and Malfunction emission limits for this facility are listed in Table 107.A and were relied upon by the Department to determine compliance with applicable regulations.

Table 107.A: Allowable SSM and Malfunction Units, Activities and Emission Limits

Unit No.	Description	NO_x pph	NO_x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy
SSM Venting	MAIN-1 (maintenance activities)[1]	-	-	-	-	*	10.0	-	-

Unit No.	Description	NO_x pph	NO_x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy
SSM Flaring to FL-1	COMP (compressor blowdowns), PLANT-BD (plant blowdowns), & TO-1 (thermal oxidizer downtime)	251.6	26.3	1146.9	120.0	92.9	14.1	57.1	1.3
Malfunction	Malfunction events	-	-	-	-	*	10.0	-	-

1. This authorization does not include VOC combustion emissions.
2. To report excess emissions for sources with no pound per hour and/or ton per year emission limits, see condition B110F.

B. The authorization of emission limits for startup, shutdown, maintenance, and malfunction does not supersede the requirements to minimize emissions according to General Conditions B101.F and B107.A.

C. SSM Venting Emissions (Unit SSM Venting)

Requirement: The permittee shall perform a facility inlet gas analysis once every year based on a calendar year and complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) emission limits in Table 107.A.

Monitoring: The permittee shall monitor each permitted routine and predictable startup and shutdown and scheduled maintenance event.

Recordkeeping:

(1) To demonstrate compliance with the annual limit in Table 107.A, each month records shall be kept of the cumulative total of VOC emissions during the first 12 months due to SSM events and, thereafter of the monthly rolling 12-month total VOC emissions.

(2) Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on the most recent gas analysis, and of the volume of total gas vented in MMscf used to calculate the VOC emissions due to SSM events.

(3) The permittee shall record the demonstrated compliance in accordance with Condition B109, except the requirement in B109.C to record the start and end times of SSM events shall not apply to the venting of known quantities of VOC.

Reporting: The permittee shall report in accordance with Section B110.

D. SSM Flaring Emissions - Flare Unit FL-1

Requirement: Compliance with routine or predictable startup, shutdown, and maintenance (SSM) emission limits in Table 107.A shall be demonstrated by operating the flare in accordance with the requirements of Condition A206.A and A206.B of this permit and completing

monitoring and recordkeeping as specified below.

Emissions Due to Preventable Events
Emissions that are due entirely or in part to poor maintenance, careless operation, or any other preventable equipment breakdown shall not be included under SSM emissions limits. These emissions shall be reported as excess emissions in accordance with 20.2.7.110 NMAC.

Monitoring: The permittee shall monitor the date, time, and duration of routine or predictable startup, shutdown, and scheduled maintenance events.

Recordkeeping: The permittee shall maintain records of all calculations and parameters used to determine emission rates in spreadsheet format and in accordance with Condition B109.

(1) Hourly Emissions Calculations: The permittee shall calculate the pph NOx, CO, VOC, SO_2, and H_2S emission rates for each hour of each SSM event using these parameters:

(a) the calculated average hourly flow rate/mass rate of all gas combusted by the flare including pilot, purge, and assist gas, if applicable, (Condition A206.B(1));

(b) H_2S content, total sulfur content, VOC content, and heating value (BTU/scf) of the gas (Condition A206.B(4));

(c) the current published emission factors for NOx and CO emission rates; and

(d) VOC and H_2S emission rates calculated using a destruction efficiency of no more than 95%.

(2) Annual Emissions Calculations: The permittee shall calculate the total tpy SSM emission rates as a monthly rolling 12-month total, using the pph emission rates for each hour of the month as follows:

(a) During the first 12 months of this condition taking effect, the permittee shall record the monthly total tons of NOx, CO, VOC, SO_2, and H_2S emissions.

(b) After the first 12 months of this condition taking affect, the permittee shall record the monthly rolling 12-month total tpy NOx, CO, VOC, SO_2, and H_2S emissions.

(3) SSM Events: The permittee shall retain monitoring records including the date, time, and duration of each SSM event, as well as a description of the event including maintenance performed.

Reporting: The permittee shall report in accordance with Condition B110.

E. Malfunction Venting Emissions

Requirement: The permittee shall perform a facility inlet gas analysis once every year based on a calendar year and complete the following recordkeeping to demonstrate compliance with malfunction (Malfunction) emission limits in Table 107.A.

Monitoring: The permittee shall monitor all malfunction events that result in VOC emissions including, for each malfunction, the identification of the equipment or activity that is the source of emissions.

Recordkeeping: (1) To demonstrate compliance, each month records shall be kept of the cumulative total of VOC emissions due to malfunction events during the first 12 months and, thereafter of the monthly rolling 12-month total VOC emissions due to malfunction events. (2) Records shall also be kept of the inlet gas analysis, the percent VOC of the gas based on the most recent gas analysis, of the volume of total gas vented in MMscf used to calculate the VOC emissions, and whether the emissions resulting from the event will be used toward the permitted malfunction emission limit or whether the event is reported as excess emissions of the pound per hour limits in Table 106.A (or the pound per hour limits in condition B110F, if applicable), under 20.2.7 NMAC. (3) The permittee shall record the demonstrated compliance in accordance with Condition B109, except the requirement in B109.C to record the start and end times of malfunction events shall not apply to the venting of known quantities of VOC.
Reporting: The permittee shall report in accordance with Section B110.

A108 Facility: Allowable Operations

A. This facility is authorized for continuous operation. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.

B. The Facility Inlet Flowrate Limit

Requirement: Multiple emission limits and the PSD minor source status of this facility were established by limiting the inlet throughput to this facility. Compliance with permitted limits and to ensure the PSD minor source status of this facility, the flowrate of process gas entering the facility shall not exceed 60 MMscf/day.
Monitoring: The Facility inlet flowrate shall be continuously monitored using a monitoring instrument that directly measures natural gas flowrate into the facility with an accuracy of ± 2% or better.
Recordkeeping: Each hour the Permittee shall record the hourly flowrate of process gas (MMscfd) and each day shall record the daily flowrate of process gas (MMscfd) received at the Facility inlet. Records indicating the gas flow shall be maintained onsite for a minimum of five (5) years from the time of recording and made available to Department personnel upon request.
Reporting: The permittee shall report in accordance with Section B110.

A109 Facility: Reporting Schedules

A. The permittee shall report according to the Specific Conditions and General Conditions of this permit.

A110 Facility: Fuel and Fuel Sulfur Requirements

A. Fuel and Fuel Sulfur Requirements (Units ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, HTR-1, HTR-2)

Requirement: All combustion emission units shall combust only natural gas containing no more than 0.95 grains of total sulfur per 100 dry standard cubic feet.

Monitoring: No monitoring is required. Compliance is demonstrated through records.

Recordkeeping:

(1) The permittee shall demonstrate compliance with the natural gas or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel gas analysis, specifying the allowable limit or less.

(2) If fuel gas analysis is used, the analysis shall not be older than one year.

(3) Alternatively, compliance shall be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel.

Reporting: The permittee shall report in accordance with Section B110.

A111 Facility: 20.2.61 NMAC Opacity

A. 20.2.61 NMAC Opacity Limit (Units ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, HTR-1, HTR-2)

Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC.

Monitoring:

(1) Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:

(a) Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required.

(b) If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.

For the purposes of this condition, *Startup mode* is defined as the startup period that is described in the facility's startup plan.

Recordkeeping:

(1) If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:

(a) For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.

(b) For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.

Reporting: The permittee shall report in accordance with Section B110.

OIL AND GAS INDUSTRY

A200 Oil and Gas Industry

A. This section has common equipment related to most Oil and Gas Operations.

A201 Engines

A. Initial Compliance Testing (Units ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing an initial compliance test on each engine.

Monitoring: The permittee shall perform an initial compliance test in accordance with the General Testing Requirements of Section B111 Emission testing is required for NOx and CO.

Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits.

The monitoring exemptions of Section B108 do not apply to this requirement.

For units with g/hp-hr emission limits, the engine load shall be calculated by using the following equation:

$$\text{Load(Hp)} = \frac{\text{Fuel consumption (scfh) x Measured fuel heating value (LHV btu/scf)}}{\text{Manufacturer's rated BSFC (btu/bhp-hr) at 100\% load or best efficiency}}$$

Recordkeeping: The permittee shall maintain records in accordance with the applicable Sections in B109, B110, and B111.

Reporting: The permittee shall report in accordance with the applicable Sections in B109, B110, and B111.

B. Periodic Emissions Testing (Units ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by completing periodic emission tests during the monitoring period.

Monitoring: The permittee shall test using a portable analyzer or EPA Reference Methods subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emission testing is required for NOx and CO and shall be carried out as described below.
Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits.

For units with g/hp-hr emission limits, in addition to the requirements stated in Section B108, the engine load shall be calculated by using the following equation:

$$\text{Load(Hp)} = \frac{\text{Fuel consumption (scfh) x Measured fuel heating value (LHV btu/scf)}}{\text{Manufacturer's rated BSFC (btu/bhp-hr) at 100\% load or best efficiency}}$$

(1) The testing shall be conducted as follows:
(a) Testing frequency shall be once per quarter for units 1-12.
(b) The monitoring period is defined as a calendar quarter for units 1-12.

(2) The first test shall occur within the first monitoring period after completion of the initial compliance test.

(3) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period.

(4) The permittee shall follow the General Testing Procedures of Section B111.

(5) Performance testing required by 40 CFR 60, Subpart JJJJ or IIII or 40 CFR 63, Subpart ZZZZ may be used to satisfy these periodic testing requirements if they meet the requirements of this condition and are completed during the specified monitoring period.

Recordkeeping: The permittee shall maintain records in accordance with Section B109, B110, and B111.

Reporting: The permittee shall report in accordance with Section B109, B110, and B111.

C. Oxidation Catalytic Converter Operation (Units ENG-1, 2, 3, 4, 5, 6, 7, and 8); Non-Selective Catalytic Reduction Operation (Units 9, 10, 11, and 12)

Requirement:

(1) The units ENG-1, 2, 3, 4, 5, 6, 7, and 8 shall be equipped and operated with an oxidation

catalytic converter to control CO, VOC, and HAP emissions. (2) The units 9, 10, 11, and 12 shall be equipped and operated with a non-selective catalytic converter to control NOx, CO, and VOC emissions. These units shall also be equipped with an AFR controlling device, or similar device that performs the same function of maintaining an appropriate air-fuel ratio. The permittee shall maintain the units according to manufacturer's or supplier's recommended maintenance, including replacement of oxygen sensor as necessary for oxygen-based controllers.
Monitoring: The unit(s) shall be operated with the catalytic converter, which includes catalyst maintenance periods. During periods of catalyst maintenance, the permittee shall either (1) shut down the engine(s); or (2) replace the catalyst with a functionally equivalent spare to allow the engine to remain in operation.
Recordkeeping: The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

D. Air Fuel Ratio Operation (Units ENG-1, 2, 3, 4, 5, 6, 7, and 8)

Requirement: The units shall be equipped and operated with an AFR controlling device, or similar device that performs the same function of maintaining an appropriate air-fuel ratio. The permittee shall demonstrate that the manufacturer's or supplier's recommended maintenance is performed, including replacement of oxygen sensor as necessary for oxygen-based controllers.
Monitoring: The unit(s) shall be operated with the AFR, which includes maintenance periods. During periods of AFR maintenance, the permittee shall either (1) shut down the engine(s); or (2) replace the AFR with a functionally equivalent spare to allow the engine to remain in operation.
Recordkeeping: The permittee shall maintain records in accordance with Section B109, including a record of maintenance performed on AFR controllers and the manufacturer's or suppliers' recommended maintenance schedules for AFR Controllers.
Reporting: The permittee shall report in accordance with Section B110.

E. Notification of Engine Option Installation (Units ENG-1 or 2, and ENG-5, 6, 7, and 8 or ENG-9, 10, 11, and 12)

Requirement: The permittee shall install only one engine option from the list of options requested in the application. The permittee shall notify the Permitting Section Chief at the Department in writing of the following: 1. the engine model/option selected (see Table 104.A, footnote 2) and the dates of installation of each unit within 60 days of installation; 2. removal of one option and installation of another option; 3. the resulting total allowable emissions from the facility
Monitoring: None
Recordkeeping: The permittee shall maintain records in accordance with the applicable Sections in B109, B110, and B111.
Reporting: The permittee shall report in accordance with the applicable Sections in B109, B110, and B111.

F. 40 CFR 60, Subpart JJJJ (Units ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12; GEN-1)

Requirement: The units will be subject to 40 CFR 60, Subparts A and JJJJ if the unit is constructed (ordered) and manufactured after the applicability dates in 40 CFR 60.4230 and the permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart JJJJ.
Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4243.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4245.
Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and Subpart JJJJ, including but not limited to 60.4245.

G. 40 CFR 63, Subpart ZZZZ (Units ENG- ENG-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12; GEN-1 and 2)

Requirement: The units will be subject to 40 CFR 63, Subparts A and ZZZZ if they meet the applicability criteria in 40 CFR 63.6590. The permittee shall comply with any applicable notification requirements in Subpart A and any specific requirements of Subpart ZZZZ.
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR

63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.

H. 40 CFR 60, Subpart IIII (Unit GEN-2)

Requirement: The unit will be subject to 40 CFR 60, Subparts A and IIII and shall comply with the notification requirements in Subpart A and the specific requirements of Subpart IIII.
Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and Subpart IIII, including but not limited to 60.4211.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and Subpart IIII, including but not limited to 60.4214.
Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and Subpart IIII, including but not limited to 60.4214.

A202 <u>Glycol Dehydrators</u> - Not required.

A203 <u>Tanks</u>

A. Tank Throughput (Units TK-2, 3, 4, and 5)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the monthly rolling 12-month total condensate throughput to the units to 9,198,000 gallons per year (219,000 barrels/year) and routing all tank emissions to the tank flare Unit FL-2 in accordance with Condition A203.C.
Monitoring: The permittee shall monitor the monthly total throughput once per month.
Recordkeeping: The permittee shall record the monthly total throughput of liquids through each tank. Each month, during the first 12 months of monitoring, the permittee shall record the cumulative total liquid throughput and after the first 12 months of monitoring, the permittee shall calculate and record the monthly rolling 12-month total liquid throughput. Tank pre-control breathing and working emissions were calculated using the USEPA Tanks Program Version 4.0.9.d. Emission rates computed using the same parameters, but with a different Department approved algorithm that exceed these values will not be deemed non-compliance with this permit. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

B. Truck Loading - Oil Loadout (Unit OILLOAD-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total annual oil loadout volume to 64,344 gallons per year (1532 barrels/year) and controlling emissions during load-out operations in accordance with Condition A203.D.
Monitoring: The permittee shall monitor the oil truck loadout volume on a monthly basis.

Recordkeeping: The permittee shall record the monthly oil truck loadout volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative oil loadout volume and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total loadout volume. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

C. Truck Loading - Condensate Loadout (Unit CONDLOAD-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total annual condensate loadout volume to 9,198,000 gallons per year (219,000 barrels/year) and controlling emissions during load-out operations in accordance with Condition A203.D.
Monitoring: The permittee shall monitor the condensate truck loadout volume on a monthly basis.
Recordkeeping: The permittee shall record the monthly condensate truck loadout volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative condensate loadout volume and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total loadout volume. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

D. Flare (FL-2) Collecting Vapors from Condensate (CONDLOAD), Gunbarrel Tank (TK-1), Tanks (TK-2, 3, 4, and 5), Slop Oil Tank (TK-6), and Oil Loadout control (OILLOAD-1)

Requirement: The permittee shall at all times, including during oil-load operations, operate tank Units TK-1 through TK-6 as a closed loop system that captures and routes all VOC emissions to flare FL-2 and do not vent to the atmosphere.
Monitoring At least once per quarter, the permittee shall inspect all piping from the flare and tanks connecting to the flare for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect as soon as practicable and in a manner that minimizes VOC and HAP emissions to the atmosphere.
Recordkeeping: The permittee shall record the results of the inspections chronologically, noting any maintenance or repairs that are required.
Reporting: The permittee shall report in accordance with Section B110.

E. 20.2.38 NMAC, Hydrocarbon Storage Facilities (Units TK-2, 3, 4, 5 and 6)

Requirement: The permittee shall comply with 20.2.38.112 NMAC. The permittee shall install a flare to minimize hydrocarbon and hydrogen sulfide loss to the atmosphere and shall not operate the tank without the control device.
Monitoring: The permittee shall monitor the tanks operation.
Recordkeeping: None.
Reporting: The permittee shall report in accordance with Section B110.

A204 Heaters/Boilers

A. Operational Inspections of Heaters (Units HTR-1, HTR-2)

Requirement: (1) Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing annual inspections to ensure proper operation of the Units. (2) At a minimum, the operational inspections shall meet those recommended by the manufacturer or shall meet the facility specific procedure submitted to the Department. (3) If the permittee is using a facility specific procedure it shall submit an electronic version of the procedure to the Department's Permit Section Manager within 90 days of implementing the procedure. If the plan cannot be submitted within 90 days, the permittee shall obtain written approval to extend the deadline from the Department's Permit Section, either by regular or electronic mail. The permittee shall provide additional information or make changes to the plan as requested by the Department. (4) The permittee shall make changes or improvements to the inspection procedure based on experience with the unit and/or new information provided by the manufacturer. This updated procedure shall be made available to the Department upon request.
Monitoring: (1) Inspections shall be completed at least once per year or at the frequency recommended by the manufacturer. (2) At a minimum, inspections shall include the following: (a) checking indicators to verify that the optimal amount of excess combustion air is introduced into the boiler combustion process such as a blue colored, steady flame; (b) inspections of the unit's components and housing for cracks or worn parts.
Recordkeeping: (1) The permittee shall maintain records of operational inspections, including the indicators used to verify optimal excess combustion air, a description of the indicators, the unit component and housing inspections, and any adjustments needed to ensure optimal operation of the unit. (2) The permittee shall also keep records of the manufacturer's recommended or the permittee's facility specific operational inspection procedure and shall keep records of the percent of excess combustion air required for optimal performance.

(3) The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

B. 40 CFR 60, Subpart Dc (Units HTR-1 and HTR-2)

Requirement: The units are subject to 40 CFR 60, Subpart Dc and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart Dc.
Monitoring: The permittee shall comply with all applicable monitoring and testing requirements of 40 CFR 60, Subpart Dc.
Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.48c.
Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.48c and the Section B110 of the permit.

A205 <u>Turbines</u> – Not required.

A206 <u>Flares and Thermal Oxidizer</u>

A. Visible Emissions for Flares and Thermal Oxidizer Flames (20.2.61 NMAC) (Units FL-1, FL-2, and TO-1)

Requirement: The flares and thermal oxidizer are subject to the 20% opacity standards in 20.2.61 NMAC and complying with the no visible emissions requirements demonstrates compliance with 20.2.61 NMAC opacity limit. Compliance with the VOC and H_2S emission limits in Tables 106.A and 107.A shall be demonstrated by equipping the flare (Units FL-1 and FL-2) with a system to ensure that it is operated with a flame present at all times and operated with no visible emissions. The thermal oxidizer (Unit TO-1) shall be equipped with a pilot thermocouple and an alarm and notification system indicating when the Thermal Oxidizer fails to light, to ensure that it is operated with a flame present any time that vapors are routed to the unit.
Monitoring: **(1) Thermal Oxidizer and Flare Pilot Flame:** The permittee shall continuously monitor the presence of a thermal oxidizer and flare pilot flame using a thermocouple or any equivalent device approved by the Department and shall be equipped with a continuous recorder and alarm or equivalent, to detect the presence of a flame. **(2) Visible Emissions:** Annually, or whenever visible emissions are observed, the permittee shall conduct a visible emissions observation in accordance with the requirements at 40 CFR 60,

Appendix A, Reference Method 22 to certify compliance with the no visible emission requirement on the process flare. The observation period is at least 2 consecutive hours where visible emissions are not to exceed a total of 5 minutes during any 2 consecutive hours.

At least once per year during a blow down event (Unit FL-1), the permittee shall conduct a visible emissions observation in accordance with the requirements at 40 CFR 60, Appendix A, Reference Method 22 to certify compliance with the no visible emission requirements. Each Method 22 test shall occur for the duration of the blow down event or for 30 minutes, whichever is less. Visible emissions shall not occur for more than 5 minutes during any consecutive 30-minute period. For blowdown events that occur for less than 30 minutes, visible emissions shall not occur for more the 15% during the duration of the blow down event.

If the flare is located at an unmanned site, used only for emergencies, and where there are no scheduled blowdown-maintenance events to observe flare combustion, the permittee shall at a minimum conduct the visible emissions observation in accordance with the requirements of EPA Method 22 on the pilot flame.

Recordkeeping:

(1) Thermal Oxidizer and Flare Pilot Flame:

The permittee shall record all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions, and maintenance activities.

(2) Visible Emissions:

For any visible emissions observations conducted in accordance with EPA Method 22, the permittee shall record the information on the form referenced in EPA Method 22, Section 11.2.

For blowdown flares when a flaring event may occur without someone present:

For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2. If the visible emissions observation was conducted only on the pilot flame, the record shall also include the reasons that the test could not be conducted during a blowdown event.

Reporting: The permittee shall report in accordance with Section B110.

B. Gas Flow Monitoring and Gas Analysis for Flares and Thermal Oxidizer Operation (Units FL-1, FL-2, and TO-1)

Requirement: Compliance with the allowable emission limits in Tables 106.A and 107.A shall be demonstrated by completing the monitoring, recordkeeping, and reporting specified below.

Monitoring:

(1) <u>Flow Monitoring</u>:

a. Each flare shall be equipped with a gas flow or a mass flow meter, equipped with a chart recorder or data logger (electronic storage), to monitor gas flow/mass flow

and record the total standard cubic feet (scf) of gas sent to Flare Units FL-1 and FL-2, and TO-1.

b. The permittee:

(i) May use manufacturer's specifications to determine pilot, purge, and assist gas flow rates.

(ii) May use the manufacturer's specification or modeling estimations using Promax, E&P Tanks, or another approved method, to determine process gas flow rates.

(2) Calibration: The flow meter(s), mass meter(s), totalizer(s), and if used, the inline monitor shall be operated, calibrated, and maintained as specified by the manufacturer or equivalent and as necessary to ensure correct and accurate readings.

(3) Hourly Flow Rate: Gas flow or mass flow rates shall be logged during, or calculated for, each hour and each month that the flare/TO is in operation.

(4) Gas Analysis: The permittee shall measure the H_2S content, the total sulfur content, the VOC content, and the heating value (Btu/scf) of the gas sent to the flare/TO for combustion or to the amine unit. H_2S shall be measured at least quarterly using a stain tube of the appropriate size range or an inline H_2S monitor; or measured annually with an extended gas analysis. The total sulfur content, VOC content, and heating value (Btu/scf) of the natural gas sent to the flare/TO shall be measured at least once annually with an extended gas analysis.

Recordkeeping: The following records shall be kept:

(1) Flow Monitoring & (2) Calibration: Records of flowmeter or mass meter, totalizer, and inline monitor certifications, calibrations, breakdowns, reasons for the breakdown, and corrective actions. If manufacturer's specifications are used to determine pilot and purge fuel gas flow, the manufacturer's specification documentation must be maintained.

(2) Hourly Flow Rate: Records of the calculated average hourly flowmeter/mass meter and flow/mass totalizer measurements of process and assist gas sent to the flare/TO or the amine unit in scf/hr.

(3) Gas Analysis: Sample documentation as received from the laboratory including H_2S content, the total sulfur content, the VOC content, and the heating value (Btu/scf) and analysis method utilized.

The permittee shall maintain all records in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

C. Control Efficiency for Thermal Oxidizer (Unit TO-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by maintaining a flame anytime gas is routed to the oxidizer and maintaining a burning temperature that achieves a destruction efficiency at or above 98% for VOCs and H2S, and monitoring unit downtime or malfunction. Temperature is used as the indicator for the estimated destruction efficiency.

Monitoring: The permittee shall determine a combustion temperature that achieves the required destruction efficiency from periodic emissions testing performed in accordance with A206.G and monitor the combustion temperature of the Thermal Oxidizer continuously and record the temperature once per 24-hour period. Compliant combustion temperature is defined as within +/- 5% of the temperature during the emissions test.

Recordkeeping: The permittee shall maintain records including the date and time of each temperature reading, detail any deficiencies in operation identified, and record any corrective actions taken to restore the control device to operation.

Records shall also be maintained in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

D. Emissions Calculation for Thermal Oxidizer (Unit TO-1)

Requirement: Compliance with the thermal oxidizer allowable emission limits in Table 106.A shall be demonstrated by operating the thermal oxidizer in accordance with the requirements, monitoring, and recordkeeping of Condition A206.B and completing emissions calculations as specified in this condition.

Monitoring: .Monitoring as required to establish input values for the recordkeeping requirements. Compliance is demonstrated through records.

Recordkeeping: The permittee shall maintain records of all calculations and parameters used to determine emission rates in spreadsheet format and in accordance with Condition B109.

(1) Hourly Emissions Calculations: The permittee shall calculate the pounds per hour (pph) NOx, CO, VOC, SO_2, and H_2S emission rates using these parameters:

(a) the calculated average hourly flow rate of all gas combusted by the flare including pilot, purge, and assist gas, if applicable, (Condition A206.B(1));

(b) gas analysis including H_2S content, total sulfur content, VOC content, and heating value (BTU/scf) of the gas (Condition A206.B(2));

(c) the TNRCC RG-109 (high Btu; other) emission factors for NOx and AP-42 Tables 13.5-1 and 13.5-2emission factors for NOx and CO emission rates; and

(d) VOC and H_2S emission rates calculated using a destruction efficiency of 98% based on the manufacturers guarantee.

(2) Annual Emissions Calculations: The permittee shall calculate the total ton per year (tpy) emission rates as a monthly rolling 12-month total, using the totaled pph emission rates for each hour of the month:

(a) During the first 12 months of this condition taking effect, the permittee shall record the total tons of NOx, CO, VOC, SO_2, and H_2S emissions.

(b) After the first 12 months of this condition taking affect, the permittee shall record the monthly rolling 12-month total tpy NOx, CO, VOC, SO_2, and H_2S emissions.

Reporting: The permittee shall report in accordance with Section B110.

E. Initial and Periodic Emissions Testing for Thermal Oxidizer (Unit TO-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by emission tests for NOx and CO and calculating the destruction efficiency for VOCs and H2S of the thermal oxidizer during the monitoring period.

Monitoring:

NOx and CO: The permittee shall complete an initial compliance test for NOx and CO using a portable analyzer or EPA Reference Method Test subject to the requirements and limitations of Section B111. The initial compliance test shall take place within 180 days of permit issuance.

VOC and H_2S Destruction Efficiency: The permittee shall conduct periodic emissions tests using EPA Reference Method 25a or Method 18 subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emission testing is required for un-speciated VOCs pre-control and post-TO (stack). Periodic emissions testing shall be carried out as described below.

Test results for pre-control and post-control VOCs shall be used to calculate the destruction efficiency of the thermal oxidizer at the operating combustion temperature. Compliant destruction efficiency is defined as a percentage equal to or greater than 98%. Compliance with the destruction efficiency of 98% for VOCs shall also demonstrate compliance for H_2S.

(1) The Periodic emissions tests shall be conducted as follows:
(a) The first test shall take place within 180 days of permit issuance and thereafter;
(b) Testing frequency shall be once per year.
(c) The monitoring period is defined as a calendar year.

(2) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period.

(3) The permittee shall follow the General Testing Procedures of Section B111.

Recordkeeping: The permittee shall maintain records in accordance with Section B109, B110, and B111.

Reporting: The permittee shall report in accordance with Section B109, B110, and B111.

F. Emissions Calculation for Flares (Units FL-1, FL-2)

Requirement: Compliance with the flare allowable emission limits in Table 106.A shall be demonstrated by operating the flare in accordance with the requirements, monitoring, and recordkeeping of Condition A206.D and completing emissions calculations as specified in this condition.

Monitoring: No monitoring is required. Compliance is demonstrated through records.

Recordkeeping: The permittee shall maintain records of all calculations and parameters used to determine emission rates in spreadsheet format and in accordance with Condition B109.

(1) Hourly Emissions Calculations: The permittee shall calculate the pounds per hour (pph) NOx, CO, VOC, SO_2, and H_2S emission rates using these parameters:

(a) the calculated average hourly flow rate/mass rate of all gas combusted by the flare including pilot, purge, and assist gas, if applicable, (Condition A206.D(1));

(b) gas analysis including H_2S content, total sulfur content, VOC content, and heating value (BTU/scf) of the gas (Condition A206.D(4));

(c) the current published emission factors for NOx and CO emission rates; and

(d) VOC and H_2S emission rates calculated using a destruction efficiency of no more than 98%.

(2) Annual Emissions Calculations: The permittee shall calculate the total ton per year (tpy) emission rates as a monthly rolling 12-month total, using the totaled pph emission rates for each hour of the month:

(a) During the first 12 months of this condition taking effect, the permittee shall record the total tons of NOx, CO, VOC, SO_2, and H_2S emissions.

(b) After the first 12 months of this condition taking affect, the permittee shall record the monthly rolling 12-month total tpy NOx, CO, VOC, SO_2, and H_2S emissions.

Reporting: The permittee shall report in accordance with Section B110.

A207 <u>Sulfur Recovery Unit</u> – Not required

A208 <u>Amine Unit</u>

A. Extended Gas Analysis (AMINE-1)

Requirement:

A. To demonstrate compliance with the allowable H2S emission limits in Table 106.A, the permittee shall conduct the following analyses:
   1. An annual extended gas analysis on a representative sample upstream of the sweetening unit.
   2. Verification sampling and analysis will be conducted biannually (every two years) on regenerator still vent emissions.

B. Every two years, the extended gas analysis will include sampling and analysis for H2S. The value presented will be a numerical value, or if less than the laboratory method detectable limit, the minimum detection limit will be reported.

Monitoring: The permittee shall conduct an annual extended gas analysis of the inlet gas.

1. Confirmation testing on amine emission points (e.g. flash tank, regenerator, still vent) will be performed biannually (every two years).
Recordkeeping: Records shall be kept of the following: 1. Gas analysis H2S, CO2, VOC content of the inlet gas. 2. An annual calculation of the average hourly and total annual emissions for [H2S, VOC] based on the most recent annual extended gas analysis will be performed using, but not limited to, AmineCalc, HYSYS, or ProMax. 3. All parameters that were used as inputs to the model or calculations [i.e.; AmineCalc, HYSYS, or ProMax]. 4. Verification sampling and analysis on flash tank and/or regenerator still vent emissions.
Reporting: The permittee shall report in accordance with Section B110.

B. Amine pump circulation rate (AMINE-1)

Requirement: To demonstrate compliance with the allowable VOC emission limits in Table 106.A, the amine pump circulation rate for the unit shall not exceed 27,000 gallons per hour (450 gallons per minute).
Monitoring: Monitoring: The permittee shall monitor the circulation rate (gph) monthly.
Recordkeeping: Recordkeeping: The permittee shall keep records in accordance with Section B109 and of the following: 1. Pump flow rate in gph. 2. Basis for determination of flowrate.
Reporting: The permittee shall report in accordance with Section B110.

C. Sweetening Unit (AMINE-1) with Control Devices TO-1 (Thermal Oxidizer) and FL-1 (Flare)

Requirement: To demonstrate compliance with the allowable emission limits in Table 106.A, the amine sweetening unit shall have a closed system with still vent and flash tank emissions routed at all times to TO-1 except for TO-1 downtime. During TO-1 downtime, emissions shall be routed to FL-1. The closed vent system shall be designed and operated so that there are no leaks to the atmosphere. At no time shall any emissions be emitted directly to the atmosphere.
Monitoring: The permittee shall inspect the amine treatment unit and the control equipment semi-annually to ensure it is operating as initially designed or in accordance with the manufacturer's recommended procedures. The permittee shall inspect the pipe routed from the AMINE-1 still vent and flash tank to TO-2 and to FL-1 semi-annually to ensure that there is no degradation of welds or other deficiencies.

Recordkeeping: The permittee shall record the name of the person conducting the inspection and the results of all equipment and control device inspections chronologically, noting any maintenance or repairs needed to bring the amine treatment unit into compliance. The permittee shall maintain a copy of the manufacturer's maintenance recommendations.
Reporting: The permittee shall report in accordance with Section B110.

A209 <u>Fugitives</u>

A. 40 CFR 60, Subpart OOOOa (for all applicable process unit equipment, including Units FUG 1, COMP (Compressors for Units 1-12), and AMINE-1)

Requirement: Equipment in VOC or in wet gas service (as defined in 40 CFR §60.5430a) within process units FUG-1, COMP (Units 1-12), and AMINE-1 are subject to the GHG and VOC equipment leak standards at 40 CFR §60.5400a of 40 CFR 60, Subpart OOOOa. The permittee shall comply with all applicable requirements in Subparts A and OOOOa.
Monitoring: The permittee shall implement a leak detection and repair program and shall comply with the standards as specified at 40 CFR §60.5400a except as provided in §60.5401a.
Recordkeeping: The permittee shall comply with the recordkeeping requirements specified at 40 CFR §§60.5400a(e) and 60.486a except as provided in §§60.5401a and 60.5421a.
Reporting: The permittee shall comply with the reporting requirements specified at 40 CFR §§60.5400a(e) and 60.487a except as provided in §§60.5401a and 60.5422a.

PART B GENERAL CONDITIONS (Attached)

PART C MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached)

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

GENERAL CONDITIONS AND MISCELLANEOUS

TABLE OF CONTENTS

Part B GENERAL CONDITIONS B2
B100 Introduction B2
B101 Legal B2
B102 Authority B3
B103 Annual Fee B3
B104 Appeal Procedures B3
B105 Submittal of Reports and Certifications B4
B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations B4
B107 Startup, Shutdown, and Maintenance Operations B5
B108 General Monitoring Requirements B5
B109 General Recordkeeping Requirements B7
B110 General Reporting Requirements B9
B111 General Testing Requirements B11
B112 Compliance B14
B113 Permit Cancellation and Revocation B15
B114 Notification to Subsequent Owners B15
B115 Asbestos Demolition B16
B116 Short Term Engine Replacement B16
Part C MISCELLANEOUS C1
C100 Supporting On-Line Documents C1
C101 Definitions C1
C102 Acronyms C3

PART B GENERAL CONDITIONS

B100 Introduction

A. The Department has reviewed the permit application for the proposed construction/modification/revision and has determined that the provisions of the Act and ambient air quality standards will be met. Conditions have been imposed in this permit to assure continued compliance. 20.2.72.210.D NMAC, states that any term or condition imposed by the Department on a permit is enforceable to the same extent as a regulation of the Environmental Improvement Board.

B101 Legal

A. The contents of a permit application specifically identified by the Department shall become the terms and conditions of the permit or permit revision. Unless modified by conditions of this permit, the permittee shall construct or modify and operate the Facility in accordance with all representations of the application and supplemental submittals that the Department relied upon to determine compliance with applicable regulations and ambient air quality standards. If the Department relied on air quality modeling to issue this permit, any change in the parameters used for this modeling shall be submitted to the Department for review. Upon the Department's request, the permittee shall submit additional modeling for review by the Department. Results of that review may require a permit modification. (20.2.72.210.A NMAC)

B. Any future physical changes, changes in the method of operation or changes in restricted area may constitute a modification as defined by 20.2.72 NMAC, Construction Permits. Unless the source or activity is exempt under 20.2.72.202 NMAC, no modification shall begin prior to issuance of a permit. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

C. Changes in plans, specifications, and other representations stated in the application documents shall not be made if they cause a change in the method of control of emissions or in the character of emissions, will increase the discharge of emissions or affect modeling results. Any such proposed changes shall be submitted as a revision or modification. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

D. The permittee shall establish and maintain the property's Restricted Area as identified in plot plan submitted with the application. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

E. Applications for permit revisions and modifications shall be submitted to:

Program Manager, Permits Section
New Mexico Environment Department

Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

F. The owner or operator of a source having an excess emission shall, to the extent practicable, operate the source, including associated air pollution control equipment, in a manner consistent with good air pollutant control practices for minimizing emissions. (20.2.7.109 NMAC). The establishment of allowable malfunction emission limits does not supersede this requirement.

B102 Authority

A. This permit is issued pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (NMAC), (20.2.72 NMAC), Construction Permits and is enforceable pursuant to the Act and the air quality control regulations applicable to this source.

B. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).

B103 Annual Fee

A. The Department will assess an annual fee for this Facility. The regulation 20.2.75 NMAC set the fee amount at $1,500 through 2004 and requires it to be adjusted annually for the Consumer Price Index on January 1. The current fee amount is available by contacting the Department or can be found on the Department's website. The AQB will invoice the permittee for the annual fee amount at the beginning of each calendar year. This fee does not apply to sources which are assessed an annual fee in accordance with 20.2.71 NMAC. For sources that satisfy the definition of "small business" in 20.2.75.7.F NMAC, this annual fee will be divided by two. (20.2.75.11 NMAC)

B. All fees shall be remitted in the form of a corporate check, certified check, or money order made payable to the "NM Environment Department, AQB" mailed to the address shown on the invoice and shall be accompanied by the remittance slip attached to the invoice.

B104 Appeal Procedures

A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for hearing before the Environmental Improvement Board. The petition shall be made in writing to the

Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: (20.2.72.207.F NMAC)

For Mailing:
Administrator, New Mexico Environmental Improvement Board
P.O. Box 5469
Santa Fe, NM 87502-5469

For Hand Delivery:
Administrator, New Mexico Environmental Improvement Board
1190 St. Francis Drive, Harold Runnels Bldg.
Santa Fe, New Mexico 87505

B105 Submittal of Reports and Certifications

A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us or as directed by the Department.

B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)

C. Routine reports shall be submitted to the mailing address below, or as directed by the Department:

Manager, Compliance and Enforcement Section
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations

A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c), unless specifically exempted in the applicable subpart.

B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart.

B107 <u>Startup, Shutdown, and Maintenance Operations</u>

A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (SSM work practice plan) (20.2.7.14.A NMAC)

B108 <u>General Monitoring Requirements</u>

A. These requirements do not supersede or relax requirements of federal regulations.

B. The following monitoring requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.

C. If the emission unit is shutdown at the time when periodic monitoring is due to be completed, the permittee is not required to restart the unit for the sole purpose of conducting the monitoring. Using electronic or written mail, the permittee shall notify the Department's Compliance and Enforcement Section of a delay in emission tests prior to the deadline for completing the tests. Upon recommencing operation, the permittee shall submit pre-test notification(s) to the Department's Compliance and Enforcement Section and shall complete the monitoring.

D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke the monitoring period exemption at B108.D(2), hours of operation shall be monitored and recorded.

(1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.

(2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.

(3) If invoking the monitoring **period** exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during any five-year period.

E. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.

F. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.

G. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance.

H. Unless otherwise indicated by Specific Conditions or regulatory requirements, all instrumentation used to measure parameters including but not limited to flow, temperature, pressure and chemical composition, or used to continuously monitor

emission rates and/or other process operating parameters, shall be subject to the following requirements:

(1) The owner or operator shall install, calibrate, operate and maintain monitoring instrumentation (monitor) according to the manufacturer's procedures and specifications and the following requirements.

(a) The monitor shall be located in a position that provides a representative measurement of the parameter that is being monitored.

(b) At a minimum, the monitor shall complete one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(c) At a minimum, the monitor shall be spanned to measure the normal range +/- 5% of the parameter that is being monitored.

(d) At least semi-annually, perform a visual inspection of all components of the monitor for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion.

(e) Recalibrate the monitor in accordance with the manufacturer's procedures and specifications at the frequency specified by the manufacturer, or every two years, whichever is less.

(2) Except for malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall operate and maintain all monitoring equipment at all times that the emissions unit or the associated process is operating.

(3) The monitor shall measure data for a minimum of 90 percent of the time that the emissions unit or the associated process is in operation, based on a calendar monthly average.

(4) The owner or operator shall maintain records in accordance with Section B109 to demonstrate compliance with the requirements in B108H (1)-(3) above, as applicable.

B109 General Recordkeeping Requirements

A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any other applicable requirements that become effective after permit issuance. The minimum information to be included in these records is as follows:

(1) Records required for testing and sampling:

(a) equipment identification (include make, model and serial number for all tested equipment and emission controls)

(b) date(s) and time(s) of sampling or measurements

(c) date(s) analyses were performed

(d) the qualified entity that performed the analyses

(e) analytical or test methods used

(f) results of analyses or tests

(g) operating conditions existing at the time of sampling or measurement

(2) Records required for equipment inspections and/or maintenance required by this permit:

(a) equipment identification number (including make, model and serial number)

(b) date(s) and time(s) of inspection, maintenance, and/or repair

(c) date(s) any subsequent analyses were performed (if applicable)

(d) name of the person or qualified entity conducting the inspection, maintenance, and/or repair

(e) copy of the equipment manufacturer's or the owner or operator's maintenance or repair recommendations (if required to demonstrate compliance with a permit condition)

(f) description of maintenance or repair activities conducted

(g) all results of any required parameter readings

(h) a description of the physical condition of the equipment as found during any required inspection

(i) results of required equipment inspections including a description of any condition which required adjustment to bring the equipment back into compliance and a description of the required adjustments

B. Except as provided in the Specific Conditions, records shall be maintained on-site or at the permittee's local business office for a minimum of two (2) years from the time of recording and shall be made available to Department personnel upon request. Sources subject to 20.2.70 NMAC "Operating Permits" shall maintain records on-site for a minimum of five (5) years from the time of recording.

C. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine or predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

(1) The owner or operator of a source subject to a permit shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC -

Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.

(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

(3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a description of the event. **Malfunction means** any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit.

(4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)

B110 General Reporting Requirements

(20.2.72 NMAC Sections 210 and 212)

A. Records and reports shall be maintained on-site or at the permittee's local business office unless specifically required to be submitted to the Department or EPA by another condition of this permit or by a state or federal regulation. Records for unmanned sites may be kept at the nearest business office.

B. The permittee shall notify the Department's Compliance Reporting Section using the current Submittal Form posted to NMED's Air Quality web site under Compliance and Enforcement/Submittal Forms in writing of, or provide the Department with (20.2.72.212.A and B):

(1) the anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date. Notification may occur prior to issuance of the permit, but actual startup shall not occur earlier than the permit issuance date;

(2) after receiving authority to construct, the equipment serial number as provided by the manufacturer or permanently affixed if shop-built and the actual date of initial startup of each new or modified source within fifteen (15) days after the startup date; and

(3) the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.

C. The permittee shall notify the Department's Permitting Program Manager, in writing of, or provide the Department with (20.2.72.212.C and D):

(1) any change of operators or any equipment substitutions within fifteen (15) days of such change;

(2) any necessary update or correction no more than sixty (60) days after the operator knows or should have known of the condition necessitating the update or correction of the permit.

D. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.

E. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

F. Allowable Emission Limits for Excess Emissions Reporting for Flares and Other Regulated Sources with No Pound per Hour (pph) and/or Ton per Year (tpy) Emission Limits.

(1) When a flare has no allowable pph and/or tpy emission limits in Sections A106 and/or A107, the authorized allowable emissions include only the combustion of pilot and/or purge gas. Compliance is demonstrated by limiting the gas stream to the flare to only pilot and/or purge gas.

(2) For excess emissions reporting as required by 20.2.7 NMAC, the allowable emission limits are 1.0 pph and 1.0 tpy for each regulated air pollutant (except for H2S) emitted by that source as follows:

(a) For flares, when there are no allowable emission limits in Sections A106 and/or A107.

(b) For regulated sources with emission limits in Sections A106 or A107 represented by the less than sign ("<").

(c) For regulated sources that normally would not emit any regulated air pollutants, including but not limited to vents, pressure relief devices, connectors, etc.

(3) For excess emissions reporting as required by 20.2.7 NMAC for H2S, the allowable limits are 0.1 pph and 0.44 tpy for each applicable scenario addressed in paragraph (2) above.

B111 General Testing Requirements

Unless otherwise indicated by Specific Conditions or regulatory requirements, the permittee shall conduct testing in accordance with the requirements in Sections B111A, B, C, D and E, as applicable.

A. Initial Compliance Tests

The permittee shall conduct initial compliance tests in accordance with the following requirements:

(1) Initial compliance test requirements from previous permits (if any) are still in effect, unless the tests have been satisfactorily completed. Compliance tests may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)

(2) Initial compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.

(3) The default time period for each test run shall be **at least** 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.

(4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate

(5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.

(6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.

B. EPA Reference Method Tests

The test methods in Section B111.B(1) shall be used for all initial compliance tests and all Relative Accuracy Test Audits (RATAs), and shall be used if a permittee chooses to use EPA test methods for periodic monitoring. Test methods that are not listed in Section B111.B(1) may be used in accordance with the requirements at Section B111.B(2).

(1) All compliance tests required by this permit shall be conducted in accordance with the requirements of CFR Title 40, Part 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by CFR Title 40, Part 60, Appendix A:

(a) Methods 1 through 4 for stack gas flowrate

(b) Method 5 for particulate matter (PM)

(c) Method 6C SO_2

(d) Method 7E for NO_X (test results shall be expressed as nitrogen dioxide (NO_2) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO_2 is equivalent to 1.194 x 10-7 lb/SCF)

(e) Method 9 for visual determination of opacity

(f) Method 10 for CO

(g) Method 19 for particulate, sulfur dioxide and nitrogen oxides emission rates. In addition, Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate. The permittee shall provide a contemporaneous fuel gas analysis (preferably on the day of the test, but no earlier than three months prior to the test date) and a recent fuel flow meter calibration certificate (within the most recent quarter) with the final test report.

(h) Method 7E or 20 for Turbines per §60.335 or §60.4400

(i) Method 22 for visual determination of fugitive emissions from material sources and smoke emissions from flares

(j) Method 25A for VOC reduction efficiency

(k) Method 29 for Metals

(l) Method 30B for Mercury from Coal-Fired Combustion Sources Using Carbon Sorbent Traps

(m) Method 201A for filterable PM_{10} and $PM_{2.5}$

(n) Method 202 for condensable PM

(o) Method 320 for organic Hazardous Air Pollutants (HAPs)

(2) Permittees may propose test method(s) that are not listed in Section B111.B(1). These methods may be used if prior approval is received from the Department.

C. Periodic Monitoring and Portable Analyzer Requirements for the Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters

Periodic emissions tests (periodic monitoring) shall be conducted in accordance with the following requirements:

(1) Periodic emissions tests may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of the current version of ASTM D 6522. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.

(2) The default time period for each test run shall be **at least** 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.

(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.E.

(4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Reference Method 19. This information shall be included with the test report furnished to the Department.

(5) Stack gas flow rate shall be calculated in accordance with Reference Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf). The permittee shall provide a contemporaneous fuel gas analysis (preferably on the day of the test, but no earlier than three months prior to the test date) and a recent fuel flow meter calibration certificate (within the most recent quarter) with the final test report. Alternatively, stack gas flow rate may be determined by using EPA Reference Methods 1-4.

(6) The permittee shall submit a notification and protocol for periodic emissions tests upon the request of the Department.

D. Initial Compliance Test and RATA Procedures

Permittees required to conduct initial compliance tests and/or RATAs shall comply with the following requirements:

(1) The permittee shall submit a notification and test protocol to the Department's Program Manager, Compliance and Enforcement Section, at least thirty (30) days before the test date and allow a representative of the Department to be present at the test. Proposals to use test method(s) that are not listed in Section B111.B(1) (if applicable) shall be included in this notification.

(2) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.

(3) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.

(4) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed

E. General Compliance Test Procedures

The following requirements shall apply to all initial compliance and periodic emissions tests and all RATAs:

(1) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.

(2) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Reference Method 1 or the current version of ASTM D 6522, as applicable.

(3) Test reports shall be submitted to the Department no later than 30 days after completion of the test.

B112 <u>Compliance</u>

A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to

demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)

B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.72.210.B.4 NMAC)

C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit.

B113 Permit Cancellation and Revocation

A. The Department may revoke this permit if the applicant or permittee has knowingly and willfully misrepresented a material fact in the application for the permit. Revocation will be made in writing, and an administrative appeal may be taken to the Secretary of the Department within thirty (30) days. Appeals will be handled in accordance with the Department's Rules Governing Appeals From Compliance Orders.

B. The Department shall automatically cancel any permit for any source which ceases operation for five (5) years or more, or permanently. Reactivation of any source after the five (5) year period shall require a new permit. (20.2.72 NMAC)

C. The Department may cancel a permit if the construction or modification is not commenced within two (2) years from the date of issuance or if, during the construction or modification, work is suspended for a total of one (1) year. (20.2.72 NMAC)

B114 Notification to Subsequent Owners

A. The permit and conditions apply in the event of any change in control or ownership of the Facility. No permit modification is required in such case. However, in the event of any such change in control or ownership, the permittee shall notify the succeeding owner of the permit and conditions and shall notify the Department’s Program Manager, Permits Section of the change in ownership within fifteen (15) days of that change. (20.2.72.212.C NMAC)

B. Any new owner or operator shall notify the Department’s Program Manager, Permits Section, within thirty (30) days of assuming ownership, of the new owner’s or operator’s name and address. (20.2.73.200.E.3 NMAC)

B115 Asbestos Demolition

A. Before any asbestos demolition or renovation work, the permittee shall determine whether 40 CFR 61 Subpart M, National Emissions Standards for Asbestos applies. If required, the permittee shall notify the Department's Program Manager, Compliance and Enforcement Section using forms furnished by the Department.

B116 Short Term Engine Replacement

A. The following Alternative Operating Scenario (AOS) addresses engine breakdown or periodic maintenance and repair, which requires the use of a short term replacement engine. The following requirements do not apply to engines that are exempt per 20.2.72.202.B(3) NMAC. Changes to exempt engines must be reported in accordance with 20.2.72.202.B NMAC. A short term replacement engine may be substituted for any engine allowed by this permit for no more than 120 days in any rolling twelve month period per permitted engine. The compliance demonstrations required as part of this AOS are in addition to any other compliance demonstrations required by this permit.

(1) The permittee may temporarily replace an existing engine that is subject to the emission limits set forth in this permit with another engine regardless of manufacturer, model, and horsepower without modifying this permit. The permittee shall submit written notification to the Department within 15 days of the date of engine substitution according to condition B110.C(1).

(a) The potential emission rates of the replacement engine shall be determined using the replacement engine's manufacturer specifications and shall comply with the existing engine's permitted emission limits.

(b) The direction of the exhaust stack for the replacement engine shall be either vertical or the same direction as for the existing engine. The replacement engine's stack height and flow parameters shall be at least as effective in the dispersion of air pollutants as the modeled stack height and flow parameters for the existing permitted engine. The following equation may be used to show that the replacement engine disperses pollutants as well as the existing engine. The value calculated for the replacement engine on the right side of the equation shall be equal to or greater than the value for the existing engine on the left side of the equation. The permitting page of the Air Quality Bureau website contains a spreadsheet that performs this calculation.

EXISTING ENGINE REPLACMENT ENGINE

$$\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} <= \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$$

Where
g = gravitational constant = 32.2 ft/sec^2
h1 = existing stack height, feet
v1 = exhaust velocity, existing engine, feet per second
c = specific heat of exhaust, 0.28 BTU/lb-degree F
T1 = absolute temperature of exhaust, existing engine = degree F + 460
q1 = permitted allowable emission rate, existing engine, lbs/hour
h2 = replacement stack height, feet
v2 = exhaust velocity, replacement engine, feet per second
T2 = absolute temperature of exhaust, replacement engine = degree F + 460
q2 = manufacturer's potential emission rate, replacement engine, lbs/hour

The permittee shall keep records showing that the replacement engine is at least as effective in the dispersion of air pollutants as the existing engine.

(c) Test measurement of NOx and CO emissions from the temporary replacement engine shall be performed in accordance with Section B111 with the exception of Condition B111A(2) and B111B for EPA Reference Methods Tests or Section B111C for portable analyzer test measurements. Compliance test(s) shall be conducted within fifteen (15) days after the unit begins operation, and records of the results shall be kept according to section B109.B. This test shall be performed even if the engine is removed prior to 15 days on site.

i. These compliance tests are not required for an engine certified under 40CFR60, subparts IIII, or JJJJ, or 40CFR63, subpart ZZZZ if the permittee demonstrates that one of these requirements causes such engine to comply with all emission limits of this permit. The permittee shall submit this demonstration to the Department within 48 hours of placing the new unit into operation. This submittal shall include documentation that the engine is certified, that the engine is within its useful life, as defined and specified in the applicable requirement, and shall include calculations showing that the applicable emissions standards result in compliance with the permit limits.

ii. These compliance tests are not required if a test was conducted by portable analyzer or by EPA Method test (including any required by 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) within the last 12 months. These previous tests are valid only if conducted at the same or lower elevation as the existing engine location prior to commencing operation as a temporary replacement. A copy of the test results shall be kept according to section B109.B.

(d) Compliance tests for NOx and CO shall be conducted if requested by the Department in writing to determine whether the replacement engine is in compliance with applicable regulations or permit conditions.

(e) Upon determining that emissions data developed according to B116.A.1(c) fail to indicate compliance with either the NOx or CO emission limits, the permittee shall notify the Department within 48 hours. Also within that time, the permittee shall implement one of the following corrective actions:

i. The engine shall be adjusted to reduce NOx and CO emissions and tested per B116.A.1(c) to demonstrate compliance with permit limits.

ii. The engine shall discontinue operation or be replaced with a different unit.

(2) Short term replacement engines, whether of the same manufacturer, model, and horsepower, or of a different manufacturer, model, or horsepower, are subject to all federal and state applicable requirements, regardless of whether they are set forth in this permit (including monitoring and recordkeeping), and shall be subject to any shield afforded by this permit.

(3) The permittee shall maintain a contemporaneous record documenting the unit number, manufacturer, model number, horsepower, emission factors, emission test results, and serial number of any existing engine that is replaced, and the replacement engine. Additionally, the record shall document the replacement duration in days, and the beginning and end dates of the short term engine replacement.

(4) The permittee shall maintain records of a regulatory applicability determination for each replacement engine (including 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) and shall comply with all associated regulatory requirements.

B. Additional requirements for replacement of engines at sources that are major as defined in regulation 20.2.74 NMAC, Permits – Prevention of Significant Deterioration, section 7.AG. For sources that are major under PSD, the total cumulative operating hours of the replacement engine shall be limited using the following procedure:

(1) Daily, the actual emissions from the replacement engine(s) of each pollutant regulated by this permit for the existing engine shall be calculated and recorded.

(2) The sum of the total actual emissions since the commencement of operation of the replacement engine(s) shall not equal or exceed the significant emission rates in Table 2 of 20.2.74 NMAC, section 502 for the time that the replacement engine is located at the facility.

C. All records required by this section shall be kept according to section B109.

PART C MISCELLANEOUS

C100 Supporting On-Line Documents

A. Copies of the following documents can be downloaded from NMED's web site under Compliance and Enforcement or requested from the Bureau.

(1) Excess Emission Form (for reporting deviations and emergencies)

(2) Universal Stack Test Notification, Protocol and Report Form and Instructions

C101 Definitions

A. **"Daylight"** is defined as the time period between sunrise and sunset, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

B. **"Decommission"** and **"Decommissioning"** applies to units left on site (not removed) and is defined as the complete disconnecting of equipment, emission sources or activities from the process by disconnecting all connections necessary for operation (i.e. piping, electrical, controls, ductwork, etc.).

C. **"Exempt Sources"** and **"Exempt Activities"** is defined as those sources or activities that are exempted in accordance with 20.2.72.202 NMAC. Note; exemptions are only valid for most 20.2.72 NMAC permitting actions.

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

E. **"Insignificant Activities"** means those activities which have been listed by the department and approved by the administrator as insignificant on the basis of size, emissions or production rate. Note; insignificant activities are only valid for 20.2.70 NMAC permitting actions.

F. **"Malfunction"** for the requirements under 20.2.7 NMAC, means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC)

G. **"Natural Gas"** is defined as a naturally occurring fluid mixture of hydrocarbons that contains 20.0 grains or less of total sulfur per 100 standard cubic feet (SCF) and is either composed of at least 70% methane by volume or has a gross calorific value of between 950 and 1100 Btu per standard cubic foot. (40 CFR 60.631)

H. **"Natural Gas Liquids"** means the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas. (40 CFR 60.631)

I. **"National Ambient air Quality Standards"** means, unless otherwise modified, the primary (health-related) and secondary (welfare-based) federal ambient air quality standards promulgated by the US EPA pursuant to Section 109 of the Federal Act.

J. **"Night"** is the time period between sunset and sunrise, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

K. **"Night Operation** or **Operation at Night"** is operating a source of emissions at night.

L. **"NO2"** or "Nitrogen dioxide" means the chemical compound containing one atom of nitrogen and two atoms of oxygen, for the purposes of ambient determinations. The term **"nitrogen dioxide,"** for the purposes of stack emissions monitoring, shall include nitrogen dioxide (the chemical compound containing one atom of nitrogen and two atoms of oxygen), nitric oxide (the chemical compound containing one atom of nitrogen and one atom of oxygen), and other oxides of nitrogen which may test as nitrogen dioxide and is sometimes referred to as NOx or NO_2. (20.2.2 NMAC)

M. "**NOx**" see NO_2

N. "**Paved Road**" is a road with a permanent solid surface that can be swept essentially free of dust or other material to reduce air re-entrainment of particulate matter. To the extent these surfaces remain solid and contiguous they qualify as paved roads: concrete, asphalt, chip seal, recycled asphalt and other surfaces approved by the Department in writing.

O. **"Potential Emission Rate"** means the emission rate of a source at its maximum capacity to emit a regulated air contaminant under its physical and operational design, provided any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, 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 physical and operational design only if the limitation or the effect it would have on emissions is enforceable by the department pursuant to the Air Quality Control Act or the federal Act.

P. "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.

Q. **"Shutdown"** for requirements under 20.2.72 NMAC, means the cessation of operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing out of batch process units.

R. **"SSM"** for requirements under 20.2.7 NMAC, means routine or predictable startup, shutdown, or scheduled maintenance.

(1) **"Shutdown"** for requirements under 20.2.7 NMAC, means the cessation of operation of any air pollution control equipment or process equipment.

(2) **"Startup"** for requirements under 20.2.7 NMAC, means the setting into operation of any air pollution control equipment or process equipment.

S. **"Startup"** for requirements under 20.2.72 NMAC, means the setting into operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing in of batch process units.

C102 Acronyms

2SLB ..... 2-stroke lean burn
4SLB ..... 4-stroke lean burn
4SRB ..... 4-stroke rich burn
acfm ..... actual cubic feet per minute
AFR ..... air fuel ratio
AP-42 ..... EPA Air Pollutant Emission Factors
AQB ..... Air Quality Bureau
AQCR ..... Air Quality Control Region
ASTM ..... American Society for Testing and Materials
Btu ..... British thermal unit
CAA ..... Clean Air Act of 1970 and 1990 Amendments
CEM ..... continuous emissions monitoring
cfh ..... cubic feet per hour
cfm ..... cubic feet per minute
CFR ..... Code of Federal Regulation
CI ..... compression ignition
CO ..... carbon monoxides
COMS ..... continuous opacity monitoring system
EIB ..... Environmental Improvement Board
EPA ..... United States Environmental Protection Agency
gr/100 cf ..... grains per one hundred cubic feet
gr/dscf ..... grains per dry standard cubic foot
GRI ..... Gas Research Institute
HAP ..... hazardous air pollutant
hp ..... horsepower
H_2S ..... hydrogen sulfide
IC ..... internal combustion
KW/hr ..... kilowatts per hour

lb/hr ..... pounds per hour
lb/MMBtu ..... pounds per million British thermal unit
MACT ..... Maximum Achievable Control Technology
MMcf/hr ..... million cubic feet per hour
MMscf ..... million standard cubic feet
N/A ..... not applicable
NAAQS ..... National Ambient Air Quality Standards
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NG ..... natural gas
NGL ..... natural gas liquids
NMAAQS ..... New Mexico Ambient Air Quality Standards
NMAC ..... New Mexico Administrative Code
NMED ..... New Mexico Environment Department
NMSA ..... New Mexico Statues Annotated
NOx ..... nitrogen oxides
NSCR ..... non-selective catalytic reduction
NSPS ..... New Source Performance Standard
NSR ..... New Source Review
PEM ..... parametric emissions monitoring
PM ..... particulate matter (equivalent to TSP, total suspended particulate)
PM_{10} ..... particulate matter 10 microns and less in diameter
$PM_{2.5}$ ..... particulate matter 2.5 microns and less in diameter
pph ..... pounds per hour
ppmv ..... parts per million by volume
PSD ..... Prevention of Significant Deterioration
RATA ..... Relative Accuracy Test Assessment
RICE ..... reciprocating internal combustion engine
rpm ..... revolutions per minute
scfm ..... standard cubic feet per minute
SI ..... spark ignition
SO_2 ..... sulfur dioxide
SSM ..... Startup Shutdown Maintenance (see SSM definition)
TAP ..... Toxic Air Pollutant
TBD ..... to be determined
THC ..... total hydrocarbons
TSP ..... Total Suspended Particulates
tpy ..... tons per year
ULSD ..... ultra low sulfur diesel
USEPA ..... United States Environmental Protection Agency
UTM ..... Universal Transverse Mercator Coordinate system
UTMH ..... Universal Transverse Mercator Horizontal
UTMV ..... Universal Transverse Mercator Vertical
VHAP ..... volatile hazardous air pollutant
VOC ..... volatile organic compounds