New Mexico
ENVIRONMENT DEPARTMENT

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AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

Certified Mail No: 7013 1710 0001 1215 8095
Return Receipt Requested

NSR Permit No:	5945
Facility Name:	South Eddy Cryo Plant
Facility Operator:	Enterprise Products Operating, LLC.
Permittee Name:	Enterprise Field Services, LLC.
Mailing Address:	PO Box 4324 Houston, TX 77210-4324
TEMPO/IDEA ID No:	34514-PRN20140001
AIRS No:	35 0151114
Permitting Action:	New Permit
Source Classification:	TV Major, PSD Minor
Facility Location:	32°10'8.70" N and 103°49'56.55" W
County:	Eddy County
Air Quality Bureau Contact	Mike Space
Main AQB Phone No.	(505) 476-4300

Richard L. Goodyear, PE
Bureau Chief
Air Quality Bureau

NOV 25 2014
Date

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PART A FACILITY SPECIFIC REQUIREMENTS

A100 Introduction

A. This is a new permit that is Title V Major for NO_x, CO, and VOCs.

A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

A102 Facility: Description

A. The South Eddy Gas Plant (South Eddy) is a proposed natural gas processing plant. The function of the facility is to process natural gas. The facility will use a cryogenic process and is designed to process 240 MMscf/day. The process includes the removal of natural gas liquids, water, and carbon dioxide from field natural gas. Hydrogen sulfide will be removed from the process stream prior to entering the South Eddy facility. The description of this new facility is for informational purposes and is not enforceable.

B. This facility is located approximately 17 miles SE of Loving, New Mexico in Eddy County.

C. Table 102.A and Table 102.B show the total potential emissions from this facility for information only, not an enforceable condition, excluding exempt sources or activities.

Table 102.A: Total Potential Pollutant Emissions from Entire Facility

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NOx)	238.3
Carbon Monoxide (CO)	213.5
Volatile Organic Compounds (VOC) *	207.7

Pollutant	Emissions (tons per year)
Sulfur Dioxide (SO_2)	39.3
Total Suspended Particulates (TSP)	34.5
Particulate Matter less than 10 microns (PM_{10})	33.7
Particulate Matter less than 2.5 microns ($PM_{2.5}$)	33.4
Hydrogen Sulfide (H_2S)	<1
Greenhouse Gas (GHG)	>75,000

* VOC total includes emissions from Fugitives and SSMs

Table 102.B: Total Potential *HAPS that exceed 1.0 ton per year

Pollutant	Emissions (tons per year)
Acetaldehyde; (Ethyl aldehyde)	6.0
Acrolein	3.7
Formaldehyde	8.3
Methanol; (Methyl alcohol)	1.8
n-Hexane	1.6
Total HAPs**	24.9

* 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
20.2.35 NMAC Natural Gas Processing Plant - Sulfur	X	Entire Facility
20.2.37 NMAC Petroleum Processing Facilities		Entire Facility
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
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
20.2.75 NMAC Construction Permit Fees	X	Entire Facility

Applicable Requirements	Federally Enforceable	Unit No.
20.2.77 NMAC New Source Performance	X	E-1, E-2, E-3, E-4, E-5, E-6, RC-1, RC-2, RC-3, RC-4, RC-5, RC-6, T-1, T-2, G-1, G-2, H-2, Amine-1, Dehy-1, FUG
20.2.82 NMAC MACT Standards for Source Categories of HAPS	X	E-1, E-2, E-3, E-4,E-5, E-6
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility
40 CFR 60, Subpart A, General Provisions	X	E-1, E-2, E-3, E-4, E-5, E-6, RC-1, RC-2, RC-3, RC-4, RC-5, RC-6, T-1, T-2, G-1, G-2, H-2, Amine-1, Dehy-1, FUG
40 CFR 60 Subpart Dc	X	H-2
40 CFR 60, Subpart JJJJ	X	E-1, E-2, E-3, E-4,E-5, E-6
40 CFR 60, Subpart OOOO	X	RC-1, RC-2, RC-3, RC-4, RC-5, RC-6, Amine-1, Dehy-1, FUG
NSPS 40 CFR Part 60 Subpart KKKK	X	T-1, T-2, G-1, G-2
40 CFR 63, Subpart A, General Provisions	X	E-1, E-2, E-3, E-4,E-5, E-6, Dehy-1
40 CFR 60, Subpart HH	X	Dehy-1
40 CFR 63, Subpart ZZZZ	X	E-1, E-2, E-3, E-4,E-5, E-6
NESHAP 40 CFR 68	X	Entire Facility

A104 Facility: Regulated Sources

A. Table 104 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: Regulated Sources List

Unit No.	Source Description	Make Model	Serial No.	Maximum/ Operating Capacity	Construction/ Manufacture Dates
Amine-1	Amine Sweetening Unit	TBD	TBD	240 MM SCF/d / 235 MM SCF/d	TBD
Dehy-1	Triethylene glycol dehydrator unit	TBD	TBD	215 MM SCF/d / 215 MM SCF/d	TBD
E-1/RC-1	Inlet Gas Compressor Engine and Compressor	Caterpillar G3612 TALE DM8607-02	TBD	3550 hp / 3550 hp	TBD

Unit No.	Source Description	Make Model	Serial No.	Maximum/ Operating Capacity	Construction/ Manufacture Dates
E-2/RC-2	Inlet Gas Compressor Engine and Compressor	Caterpillar G3612 TALE DM8607-02	TBD	3550 hp / 3550 hp	TBD
E-3/RC-3	Inlet Gas Compressor Engine and Compressor	Caterpillar G3612 TALE DM8607-02	TBD	3550 hp / 3550 hp	TBD
E-4/RC-4	Inlet Gas Compressor Engine and Compressor	Caterpillar G3616 TALE DM8608-02	TBD	4735 hp / 4735 hp	TBD
E-5/RC-5	Inlet Gas Compressor Engine and Compressor	Caterpillar G3616 TALE DM8608-02	TBD	4735 hp / 4735 hp	TBD
E-6/RC-6	Inlet Gas Compressor Engine and Compressor	Caterpillar G3616 TALE DM8608-02	TBD	4735 hp / 4735 hp	TBD
FL-1	Facility Flare, including the pilot	John Zink	TBD	/	TBD
FUG	Facility Fugitive Emissions	N/A	N/A	/	N/A
G-1	Electric Generation Turbine w/SoLo NOx	Solar Mars 100	TBD	11003 kW / 11003 kW	TBD
G-2	Electric Generation Turbine w/SoLo NOx	Solar Mars 100	TBD	11003 kW / 11003 kW	TBD
H-1	Mole Sieve Dehydrator Regeneration Heater w/Low NOx Burners	TBD	TBD	8.82 MM BTU/h / 8.82 MM BTU/h	TBD
H-2	Heat Medium Heater	TBD	TBD	83 MM BTU/h / 83 MM BTU/h	TBD
T-1/CC-1	Refrigeration Compressor Turbine w/SoLo NOx&Centrifugal Compressor w/Dry Seal	TBD	TBD	4540 hp / 4540 hp	TBD
T-2/CC-2	Refrigeration Compressor Turbine w/SoLo NOx&Centrifugal Compressor w/Dry Seal	TBD	TBD	4540 hp / 4540 hp	TBD

Unit No.	Source Description	Make Model	Serial No.	Maximum/ Operating Capacity	Construction/ Manufacture Dates
TO-1	Thermal Oxidizer with Low-NOx burner	TBD	TBD	18.24 MM BTU/h / 18.24 MM BTU/h	TBD

1. All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and NESHAP requirements.

B. The Permittee shall report to the NMED-AQB Compliance and Enforcement Program Manager the TBD values in Table 104 within 15 days after the initial startup date of each unit.

A105 Facility: Control Equipment

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]
TO-1	Thermal Oxidizer (Incinerator)	VOC, HAPs	Amine-1/Dehy-1
E-1/RC-1	Catalytic Oxidation	CO, VOC, HCHO	E-1
E-2/RC-2	Catalytic Oxidation	CO, VOC, HCHO	E-2
E-3/RC-3	Catalytic Oxidation	CO, VOC, HCHO	E-3
E-4/RC-4	Catalytic Oxidation	CO, VOC, HCHO	E-4
E-5/RC-5	Catalytic Oxidation	CO, VOC, HCHO	E-5
E-6/RC-6	Catalytic Oxidation	CO, VOC, HCHO	E-6
FL-1	Facility Flare, including the pilot	VOC, HAPs	FL-1 TO SSM FL-1 BD SSM

1. Control for unit number refers to a unit number from the Regulated Equipment List

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, KKKK, and OOOO; 40 CFR 63, Subparts A and ZZZZ; 20.2.35 and 20.2.37 NMAC; 20.2.72.210.A and B.1 NMAC).

Table 106.A: Allowable Emissions

Unit No.	NO_x[1] pph	NO_x[1] tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy	TSP pph	TSP tpy	PM_{10} pph	PM_{10} tpy	$PM_{2.5}$ pph	$PM_{2.5}$ tpy
Amine -1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dehy-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E-1 /RC-1	3.9	17.1	0.9	3.8	1.8	7.9	0.4	1.5	0.3	1.0	0.3	1.0	0.3	1.0
E-2 /RC-2	3.9	17.1	0.9	3.8	1.8	7.9	0.4	1.5	0.3	1.0	0.3	1.0	0.3	1.0
E-3 /RC-3	3.9	17.1	0.9	3.8	1.8	7.9	0.4	1.5	0.3	1.0	0.3	1.0	0.3	1.0
E-4 /RC-4	5.2	22.9	1.1	5.0	2.3	10.1	0.5	2.1	0.3	1.4	0.3	1.4	0.3	1.4
E-5 /RC-5	5.2	22.9	1.1	5.0	2.3	10.1	0.5	2.1	0.3	1.4	0.3	1.4	0.3	1.4
E-6 /RC-6	5.2	22.9	1.1	5.0	2.3	10.1	0.5	2.1	0.3	1.4	0.3	1.4	0.3	1.4
G-1	5.6	24.7	7.2	31.4	0.4	1.8	1.8	7.7	1.9	8.3	1.9	8.3	1.9	8.3
G-2	5.6	24.7	7.2	31.4	0.4	1.8	1.8	7.7	1.9	8.3	1.9	8.3	1.9	8.3
FUG	-	-	-	-	5.8	25.4	-	-	-	-	-	-	-	-
H-1	0.4	1.9	0.7	3.2	-	-	0.1	0.6	0.1	0.3	0.1	0.3	0.1	0.3
H-2	4.1	17.8	6.8	29.9	0.5	2.0	1.2	5.5	0.6	2.7	0.6	2.7	0.6	2.7
T-1 /CC-1	4.3	18.7	2.6	11.3	0.2	0.7	0.6	2.8	0.7	3.0	0.7	3.0	0.7	3.0
T-2/ CC-2	4.3	18.7	2.6	11.3	0.2	0.7	0.6	2.8	0.7	3.0	0.7	3.0	0.7	3.0
TO-1	0.9	3.9	1.5	6.6	3.7	16.4	0.3	1.2	-	-	-	-	-	-

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2
"-" indicates the application represented emissions of this pollutant are not expected.
NOTE: H_2S in inlet gas is reported to be insignificant so no emission limit has been presented. However, the facility will need to verify on a periodic basis that this remains so.

B. Units T-1, T-2, G-1, and G-2 shall comply with the 40 CFR Part 60, Subpart KKKK SO_2 emission limitation of 110 nanograms per joule of gross output (0.90 pounds per megawatt-hour (lb/MWh)) gross output.

C. Units T-1 and T-2 ($\leq$ 50 MMBtu/hr) shall comply with the 40 CFR Part 60, Subpart KKKK emission limitation of 100 ppm of NO_x at 15% O_2 or 690 ng/J of useful output (5.5 lb/MWh).

D. Units G-1 and G-2 (> 50 MMBtu/hr) shall comply with the 40 CFR Part 60, Subpart KKKK emission limitation of 25 ppm of NO_x at 15% O_2 or 150 ng NO_x/J of useful output (1.2 lb/MWh)

E. Units E-1 through E-6 (4SLB RICE engines) shall comply with the 40 CFR 60, Subpart JJJJ, Table 1 emissions limitation of:
- Nitrogen oxides (NOx) emissions not to exceed 1.0 g/hp-hr (or 82 ppmvd at 15 percent oxygen;
- Carbon monoxide (CO) emissions not to exceed 2.0 g/hp-hr (or 270 ppmvd at 15 percent oxygen; and
- Volatile organic compound (VOC) emissions not to exceed 0.7 g/hp-hr (or 60 ppmvd at 15 percent oxygen).

F. Unit FUG, including all equipment, except compressors, within a process unit shall not exceed volatile organic compound (VOC) equipment leak detection standards (500 ppm) according to 40 CFR 60, Subpart OOOO (60.5400).

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

A. The maximum allowable emission limits due to routine and predictable startup, shutdown, and maintenance (SSM) and pilot/purge and process flare emissions for this facility are listed in Table 107.A and were relied upon by the Department to determine compliance with applicable regulations. SSM emissions include blowdown flaring; thermal oxidizer downtime flaring; blowdown venting; and startup/shutdown emissions associated with the turbines.

Table 107.A: Allowable Operational Flare and SSM Emission Limits

Unit No.	NO_x[1] pph	NO_x[1] tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy
SSM Emissions								
T-1 SSM	0.70	0.025	64.4	2.4	3.7	0.14	0.061	3.0E-03
T-2 SSM	0.70	0.025	64.4	2.4	3.7	0.14	0.061	3.0E-03
G-1 SSM	1.9	0.088	166.8	8.0	9.5	0.45	0.14	6.8E-03
G-2 SSM	1.9	0.088	166.8	8.0	9.5	0.45	0.14	6.8E-03
Vent	-	-	-	-	5088.6	20.4	-	-

Unit No.	NO_x[1] pph	NO_x[1] tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy
Flaring Emissions								
FL-1 (pilot/purge)	96.5	7.58	524.4	41.2	1,156	83.0	-	-
FL-1 (process)							-	-
FL-1 TO SSM							-	-
FL-1 BD SSM							-	-

1. Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2
2. T-1, T-2, G-1, and G-2 SSM emissions are uncontrolled.
3. Vent SSMs are derived from inlet or residue gas from the compressors/engines
4. FL-1 TO SSM are derived from the thermal oxidizer during out of service maintenance
5. FL-1 BD SSM are blowdown SSMs from process equipment.
6. Flaring emissions are totaled for modeling purposes and consistent with a single flowmeter.

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. Limit on Annual Startup and Shutdown Cycles for Units T-1, T-2, G-1, & G-2

Requirement: To meet the ton per year emission limits in Table 107A, the permittee shall not exceed 50 startup cycles and 50 shutdown cycles, per unit, per 12-month period for Turbine Units T-1, T-2, G-1, and G-2.

For the purpose of determining when a startup or shutdown cycle has occurred that would exceed the emission limits in Table 107A, they are described as follows:
Startup is that period of time from when fuel is ignited and a flame is established in the combustor and continues until either the generator breaker closes or the startup is aborted by the operator. During an aborted startup cycle, the flame is extinguished before the generator breaker closes.

Shutdown is that period of time from when the 1) operator selects the turbine stop mode, or 2) the generator breaker opens. Shutdown continues until the flame is actually extinguished, indicated by a loss of flame detection.

Monitoring: The permittee shall monitor the unit number, the number of startup cycles and shutdown cycles each month, and corresponding dates per month.

Recordkeeping: The permittee shall maintain either electronic or hard copy records of the following information:

- the startup/shutdown cycle date and specific turbine unit number;

- the total number of turbine startup cycles and shutdown cycles per month; and
- a monthly rolling 12-month total of startup cycles and shutdown cycles.

During the first 12 months from commencement of operation, each month's total shall be used to determine a monthly cumulative total. After the first 12 months from commencement of operation, each month's total shall be used to determine a monthly rolling 12-month total.

The permittee shall meet the recordkeeping required in Condition B109.C.

Reporting: The permittee shall report according to Section B110.

D. Compliance with Startup and Shutdown NO_X, CO, & VOC PPH Emission Limits for Units T-1, T-2, G-1, & G-2

Requirement: The permittee shall not exceed the pound per hour (pph) NO_X, CO, and VOC emission limits in Table 107A. Compliance shall be demonstrated by either portable analyzer testing or EPA Method testing during startup and shutdown cycles.

Within the first 5 months that the facility commences operation, the permittee shall complete either portable analyzer or EPA Method test runs to measure NO_X and CO emissions during at least 3 startup cycles and 3 shutdown cycles. The average of the 3 startup cycle test runs and the average of the 3 shutdown cycle test runs shall be used to demonstrate compliance with the Table 107 emission limits. Test runs shall be performed for each turbine model (i.e., T-2 or T-2; and G-1 or G-2), for a total of two models. The time period for each test run shall be 10 minutes. Each test run can occur on the same day or on different days. Unless otherwise specified in this condition, these tests shall be conducted in accordance with Condition B111.C.

Compliance with the CO pph emission limits in Table 107.A is considered to demonstrate compliance with the VOC pph emission limits in Table 107.A.

Monitoring: The permittee shall monitor all data required by either portable analyzer or EPA Method test and the data necessary to provide the information required by condition B111.C.

Additionally, during each test run the permittee shall monitor the fuel flow rate.

Recordkeeping: Records shall be kept of any calculation spreadsheets used to determine the pound per hour emission rates during the startup and shutdown cycles; of the fuel flow rates measured during each test run; of the monitoring required by the portable analyzer test method; and according to Conditions B109.A, B109.B, B111.C, and B111.D.

Reporting: The permittee shall report according to Section B110.

E. Flaring Emissions (FL-1 [pilot/purge/process], FL-1 TO-SSM, and FL-1 BD-SSM)

Requirement: The permittee shall not exceed the pound per hour (pph) and ton per year (tpy) emission limits in Table A107.A for units FL-1 (pilot/purge/process, TO-SSM and BD-SSM), and shall demonstrate compliance with these limits by calculating and summarizing these emission rates as required in recordkeeping.

Monitoring:
A gas flowmeter and flow totalizer, equipped with a chart recorder or data logger (electronic storage), shall be installed in the flare line to measure and record the total standard cubic feet (scf) of gas sent to the flare during each hour and each month.

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 for combustion. The total sulfur content, H_2S content, VOC content, and heating value (Btu/scf) of the natural gas sent to the flare shall be measured at least once annually with an extended gas analysis.

The flow meter, totalizer, 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.

Recordkeeping: The following records shall be kept:

- stain tube and/or inline H_2S measurements (if applicable)
- annual extended gas analyses
- hourly and monthly flowmeter and flow totalizer measurements of gas sent to the flare

Each month, the permittee shall record and summarize in a table format the following.

- H_2S and the total sulfur content
- percent VOC content
- gas heating value (Btu/scf)
- the maximum hourly gas flow rate (scf/hr) that occurred during the month
- the hourly gas flow rate (scf/hr) for any hours that exceeded any pph emission limit during the month
- the total month's scf of gas sent to the flare
- during the first 12-months of monitoring, the cumulative total of gas sent to the flare (scf/yr)
- after the first 12-months of monitoring, the monthly rolling 12-month total of gas sent to the flare (scf/yr)

Each month, the permittee shall record all routine and predictable startups, shutdowns, and scheduled maintenance events and shall also meet the recordkeeping requirements in General Condition B109 of this permit, except the requirement to record the start and end times of known quantities of SSM events shall not apply.

Records of flowmeter, totalizer, and inline monitor certifications, calibrations, breakdowns, reasons for the breakdown, and corrective actions taken shall be maintained.

Each month to demonstrate compliance with emission limits, the permittee shall calculate and summarize the maximum pph emission rate, any pph emission rate exceeding the permitted limits, and the ton per year emission rates of NOx, CO, VOC, and H_2S using the following information:

- the H_2S content, total sulfur content, VOC content, and the gas heating value

(MMBtu/scf) from the most recent extended gas analyses • the emission factors used to calculate NOx, and CO • the maximum hourly gas flow rate (scf/hr) • the hourly gas flow rate (scf/hr) for any hours that exceeded any pph emission limit during the month • during the first 12 months of monitoring, the cumulative total of gas sent to the flare • after the first 12-months of monitoring, the monthly rolling 12-month total of gas sent to the flare (scf/yr)
Reporting: The permittee shall report according to Condition B110.

F. SSM Emissions (Vent)

Requirement: The permittee shall perform a facility inlet gas analysis once every year and complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) emission limits in Table 107A.
Monitoring: The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events.
Recordkeeping: To demonstrate compliance, each month records shall be kept of the cumulative total of VOC emissions due to SSM events during the first 12 months and thereafter, of the monthly rolling 12-month total of VOC emissions due to SSM events. 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. The permittee shall keep the records that demonstrate compliance with Table 107A emission limits 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.

A108 Facility: Allowable Operations

A. This facility is authorized for continuous operation. No monitoring, recordkeeping, and reporting are required to demonstrate compliance with continuous hours of operation.

B. The Facility Inlet Flowrate Limit

Requirement: The flowrate of process gas entering the facility shall not exceed 240 MMscf/day.
Monitoring: The Facility inlet flowrate shall be continuously monitored. The flowrate shall be determined using a monitoring instrument that directly measures natural gas flowrate into the facility with an accuracy of ± 2% or better.
Recordkeeping: The Permittee shall record the daily flowrate of process gas (MMscfd) received at the Facility inlet. Records indicating the daily 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.

C. Inlet Gas H_2S Content

Requirement: The Facility shall process only natural gas containing no more than 5 grains per 100 dscf hydrogen sulfide (H_2S). This includes process gas monitored at the Facility inlet.
Monitoring: The facility inlet gas shall be monitored for H_2S quarterly. Monitoring may be performed using the Draeger tube screening method with an appropriate tube range to get an accurate H_2S measurement and to compare against the above limit. In lieu of this screening method, Reference Method 15 shall be used. Use of any other alternate method must receive prior approval from the Compliance and Enforcement Section of the Department.
Recordkeeping: A record shall be kept of the quarterly monitoring results for H_2S at the facility inlet.
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 Sulfur Requirements

A. Fuel and Fuel Sulfur Requirements: Units E-1 to E-6, T-1 and T-2, G-1 and G-2, H1 and H2, TO-1, and pilot/process flare (FL-1)

Requirement: **(1)** To demonstrate compliance with the PM2.5, PM10, and SO_2 emission limits in Tables 106.A and 107.A, all listed combustion emission units shall combust only pipeline quality natural gas containing no more than 5.0 grains of total sulfur per 100 dry standard cubic feet. **(2)** For the purposes of this permit, pipeline quality natural gas is defined as having no more than 5 gr total sulfur/100 dscf and processed through the inlet separator, amine unit, and TEG dehydrator to remove impurities (or equivalent if fuel gas is received from outside the plant). If fuel gas is received from outside the facility the permittee shall maintain records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel gas purchased, including fuel gas analysis specifying the fuel meets the defined sulfur content and processing requirements.
Monitoring: Compliance is demonstrated through recordkeeping.
Recordkeeping: The permittee shall demonstrate compliance with the pipeline quality natural gas limit on total sulfur content by maintaining records of fuel gas analyses, specifying the total sulfur content. The analysis shall not be older than six months or, if purchased, a valid purchase contract not older than one year.
Reporting: The permittee shall report in accordance with Section B110.

A111 Facility: 20.2.37 NMAC Particulate Matter

A. 20.2.37 NMAC Opacity Limit: Entire Facility

Requirement: The entire facility is subject to 20.2.37 NMAC. Pursuant to 20.2.37.202.A NMAC, particulate emissions from fuel burning equipment shall not exceed 0.05 gr/dscf of exit gas. The permittee shall demonstrate compliance with 20.2.37.202.A NMAC through the use of pipeline quality natural gas as defined at A110.A.
Monitoring: The permittee shall meet the monitoring in Condition A110.A.
Recordkeeping: The permittee shall recordkeeping requirements in Condition A110.A.
Reporting: The permittee shall report according to Section B110.

EQUIPMENT SPECIFIC REQUIREMENTS

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. Periodic Testing (Units E-1, E-2, E-3, E-4, E-5, E-6)

Requirement: Compliance with the allowable NO_x, CO, and VOC emission limits in Table 106.A shall be demonstrated by periodic emission tests.
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. For periodic testing of NOx and CO, emissions tests 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. (1) The monitoring period shall be quarterly. The quarterly monitoring period shall be defined as: January 1 to March 31; April 1 to June 30; July 1 to September 30; and October 1 to December 31. (2) For Units E-1, E-2, E-3, E-4, E-5, E-6 the first test shall occur within the first full monitoring period after the initial compliance test has been completed (Condition A201.B). (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 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.

B. Initial Compliance Test (Units E-1, E-2, E-3, E-4, E-5, E-6)

Requirement: Compliance with the allowable NO_x, CO, and VOC emission limits in Table 106.A shall be demonstrated by performing an initial compliance test.
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.
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.

C. Catalytic Converter Operation (Units E-1, E-2, E-3, E-4, E-5, E-6)

Requirement: The units shall be equipped and operated with an oxidation catalytic converter to control CO, VOC, and HAP emissions.
Monitoring: The units 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. 40 CFR 60, Subpart JJJJ (Units E-1, E-2, E-3, E-4, E-5, E-6)

Requirement: The unit 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.

E. 40 CFR 63, Subpart ZZZZ (Units E-1, E-2, E-3, E-4, E-5, E-6)

Requirement: Units E-1 through E-6 are subject to 40 CFR 63, Subpart ZZZZ. Per 63.6590(c), Units E-1 through E-6 must meet Subpart ZZZZ requirements by meeting 40 CFR Part 60, Subpart JJJJ requirements.

Monitoring: NA
Recordkeeping: NA
Reporting: NA

A202 Glycol Dehydrators

A. Extended Gas Analysis and GRI-GLYCalc calculation (Unit Dehy-1)

Requirement: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by conducting an annual extended gas analysis on the dehydrator inlet gas and calculate emissions using GRI-GLYCalc.
Monitoring: The permittee shall conduct an annual GRI-GlyCalc analysis using the most recent extended gas analysis, and verify the input data. The permittee may use a method of calculating dehydrator emissions other than the most current version of GRI-GlyCalc if approved by the Department. Changes in the calculated emissions due solely to a change in the calculation methodology shall not be deemed an exceedance of an emission limit.
Recordkeeping: The permittee shall identify in a summary table all parameters that were used as inputs in the GRI-GLYcalc model. The permittee shall keep a record of the results, noting the VOC and HAP emission rates for the dehydrator obtained from estimates using GRI-GLYcalc.
Reporting: The permittee shall report in accordance with Section B110.

B. Glycol pump circulation rate (Unit Dehy-1)

Requirement: Compliance with the allowable VOC emission limits in Table 106.A shall be demonstrated by monitoring the glycol pump circulation rate for the unit shall not exceed 2,868 gallons per hour (47.8 gallons per minute).
Monitoring: The permittee shall monitor the circulation rate monthly. Monitoring shall include a calibration or visual inspection of pump rate setting or other method previously approved by the Department.
Recordkeeping: The permittee shall maintain records that include a description of the monitoring and are in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

C. Control Device Inspection (Unit Dehy-1/TO-1)

Requirement: The permittee shall ensure that dehydrator emissions shall be routed at all times to the thermal oxidizer (TO-1) and incinerated. TO-1 shall be installed, operated, and maintained according to manufacturer's specifications.
Monitoring: The permittee shall inspect the glycol dehydrator and the thermal oxodizer semi-annually to ensure all equipment components are operating as initially designed and in accordance with the manufacturer's recommended procedures.
Recordkeeping: The permittee shall record the results of all equipment and control device inspections chronologically, noting any maintenance or repairs needed to bring the dehydrator into compliance. The permittee shall maintain a copy of the manufacturer's maintenance recommendations.

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

D. 40 CFR 63, Subpart HH (Unit Dehy-1)

Requirement: The unit is subject to 40 CFR 63, Subpart HH and the permittee shall comply with all applicable requirements.
Monitoring: The permittee shall monitor as required by 40 CFR 63.772(b)(2) to demonstrate that the facility is exempt from general standards.
Recordkeeping: The permittee shall generate and maintain the records required by 40 CFR 63.774(d)(1)(ii) to demonstrate compliance with the general standard exemptions found in 40 CFR 63.764(e).
Reporting: The permittee shall meet all applicable reporting in 40 CFR 63, Subparts A and HH and in Section B110.

A203 Tanks – Not Required

A204 Heaters/Boilers

A. Operational Inspections (Units H-1 and H-2)

Requirement: The permittee shall perform periodic inspections to ensure proper operations.
Monitoring: The permittee shall conduct annual operational inspections on Unit H-1, and monthly inspections on Unit H-2 to determine that the heaters are operating properly. The operational inspections shall include operational checks for indications of insufficient excess air, or too much excess combustion air. These operational checks shall include observation of common physical indications of improper combustion, including indications specified by the heater manufacturer, and indications based on operational experience with these units.
Recordkeeping: The permittee shall maintain records of operational inspections, describing the results of all operational inspections noting chronologically any adjustments needed to bring the heaters into compliance. The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110. Within ninety (90) days of permit issuance, the permittee shall submit for Department approval a procedure which the permittee will use to carry out the operational inspections. The permittee may at any time submit revisions for Department approval.

B. Excess Air Checks (Unit H-2)

Requirement: The permittee shall monitor excess air as described below.
Monitoring: The permittee shall monitor the excess air level in the flue gas semi-annually using a portable oxygen analyzer or other method approved in advance by the Department. Excess air measurements that use an electronic analyzer must conform to the procedures in the manufacturer's recommendations.

The permittee shall carry out a minimum of five minutes of uninterrupted sampling for each stack.
Recordkeeping: The permittee shall maintain records of excess combustion air to include the boiler's fuel flow rate and firing box temperature. If an electronic O_2 sensor is used, records shall be kept of instrument calibration data, and the make and model of the instrument. The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall summarize in chronological order the results of excess air measurements noting any adjustments needed to bring the boiler into compliance with permit conditions. The permittee shall report according to Section B110.

C. Initial Compliance Test (Units H-1 and H-2)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing initial compliance tests.
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 CO, and VOCs. 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.
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. The test report shall also include the gas flow rate (or generator load), the stack gas temperature, the level of excess air, and the percent moisture.

D. 40 CFR 60, Subpart Dc (Unit H-2)

Requirement: Unit H-2 is 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. The permittee shall report according to B110.

A205 Turbines

A. Periodic Emissions Tests (Units T-1, T-2, G-1, and G-2)

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

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. For periodic testing of NOx, CO, and VOC emissions tests 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.

1. The test period shall be annual.
2. The first test shall occur within the first monitoring period occurring after permit issuance.
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 KKKK 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. The permittee shall also record the results of the periodic emissions tests, including the turbine's fuel flow rate and horsepower at the time of the test, and the type of fuel fired (natural gas, field gas, etc.).

If a combustion analyzer is used to measure excess air in the exhaust gas, records shall be kept of the make and model of the instrument and instrument calibration data. If an ORSAT apparatus or other gas absorption analyzer is used, the permittee shall record all calibration results.

The permittee shall also keep records of all raw data used to determine exhaust gas flow and of all calculations used to determine flow rates and mass emissions rates.

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

B. Initial Compliance Test (Units T-1, T-2, G-1, and G-2)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing initial compliance testing.

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

C. 40 CFR 60, Subpart KKKK (Units T-1, T-2, G-1, and G-2)

Requirement The units are subject to 40 CFR 60, Subpart KKKK and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart KKKK.
Monitoring: The permittee shall comply with all applicable monitoring and testing requirements, including but not limited to 40 CFR 60.4333.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements, including but not limited to 40 CFR 60.7.
Reporting: The permittee shall comply with all applicable reporting requirements, including but not limited to 40 CFR 60.4375, 60.4395, and 60.7.

A206 Flares

A. Operation (Unit FL-1)

Requirement: Unit FL-1 shall be tested in accordance with the requirements contained in 40 CFR 60, Subpart A, Section 60.8 (performance tests) and 60.18 (general control device) to comply with 40 CFR 60 or 61 requirements.
Monitoring: The permittee shall monitor the performance test and flare operation per 40 CFR 60.18(c) through (f).
Recordkeeping: The permittee shall maintain records of the applicable requirements.
Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.8 and 60.19.

B. Facility Blowdown System – 20.2.37.205.E NMAC (Unit FL-1)

Requirement: The permittee shall not operate a blowdown system without disposing of the gases in a manner which will minimize hydrocarbon emissions to the atmosphere. (20.2.37.205.E NMAC)
Monitoring: The permittee shall ensure that the blowdown flare is a smokeless flare, defined as a flare with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
Recordkeeping: The permittee shall maintain a record of the date and duration of any visible emissions.
Reporting: The permittee shall report in accordance with Section B110.

C. Refer to Section 107 for all other flare monitoring conditions.

A207 Sulfur Recovery Unit –Not Required

A208 Amine Unit

A. Extended Gas Analysis (Unit Amine-1)

Requirement: 6. To demonstrate compliance with the allowable emission limits in Table 106.A, the permittee shall conduct an annual extended gas analysis on a representative sample upstream of the sweetening unit. 7. Permitee shall use the extended inlet gas analysis, as collected in Condition A108.C, and other representative operating data to estimate emissions using an acceptable simulation software (i.e. Promax, DOW, HYSYS) to verify VOC emissions from the amine flash tank and still vent being sent to TO-1.
Monitoring: The permittee shall conduct an annual extended gas analysis of the inlet gas. Sample collected per A108(C) may also be used if it is deemed representative.
Recordkeeping: Records shall be kept of the following: 1. Gas analysis [H_2S, VOC] content of the inlet gas. 2. An annual calculation of the average hourly and total annual emissions for [H_2S and VOC] based on the most recent annual extended gas analysis will be performed using, but not limited to, Dow Oil and Gas simulation software, HYSYS, or ProMax. 3. All parameters that were used as inputs to the model or calculations.
Reporting: The permittee shall report in accordance with Section B110.

B. Gas Throughput (Unit Amine-1)

Requirement: To demonstrate compliance with the allowable emission limits in Table 106.A, the unit(s) inlet gas stream shall not exceed 235 MMscf/day. The permittee shall install, calibrate and maintain a flow meter that measures the flow rate of gas into the contactor.
Monitoring: 1. The permittee shall calibrate the flow meter quarterly in accordance with the manufacturer's recommended schedule. The calibration shall be in accordance with the specifications at 40 CFR 98. 2. The permittee shall monitor the natural gas flow rate daily (in units of MMscf/day).
Recordkeeping: The permittee shall keep records in accordance with Section B109, and of the following: 1. Flow meter calibration results 2. Daily total of natural gas throughput each day in units of MMscf/day
Reporting: The permittee shall report in accordance with Section B110.

C. Amine Pump Circulation Rate (Unit Amine-1)

Requirement: To demonstrate compliance with the allowable emission limits in Table 106.A, the amine pump circulation rate for the unit shall not exceed 60,000 gallons per hour (1,000 gallons per minute).
Monitoring: The permittee shall monitor the circulation rate [gph or gpm] monthly.
Recordkeeping: The permittee shall keep records in accordance with Section B109 and of the following: 1. Pump flow rate in [gph or gpm]. 2. Basis for determination of flowrate.
Reporting: The permittee shall report in accordance with Section B110.

D. Sweetening Unit Inspection (Unit Amine-1)

Requirement: The amine sweetening unit is a closed system where emissions shall be routed to the thermal oxidizer (TO-1).
Monitoring: The permittee shall inspect the amine treatment unit and the thermal oxidizer (TO-1) semi-annually to ensure it is operating as a closed system with emissions routed to TO-1, except for during TO-1 shutdown events.
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 and TO-1 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 Fugitives

A. 40 CFR 60, Subpart OOOO (Unit Amine-1)

Requirement: The unit is subject to 40 CFR 60, Subpart OOOO, as the source is constructed after the applicability date in 40 CFR 60.5365. Because the design capacity is less than 2 long tons per day (LT/D) of hydrogen sulfide (60.5365(g)(3)) in the acid gas (expressed as sulfur), the permittee shall comply with the notification requirements in Subpart A and with the recordkeeping and reporting requirements specified below, but is not required to comply with §§60.5405 through 60.5407 and §§60.5410(g) and 60.5415(g) of Subpart OOOO.
Monitoring: The permittee shall maintain records as described below to demonstrate facility is exempt from monitoring.
Recordkeeping: The permittee shall generate and maintain the records required by 40 CFR 60.5420, and 60.5423(c) to demonstrate exemptions found in 40 CFR 60.5365(g)(3) from standards, test methods, and monitoring in 60.5405 through 60.5407, 60.5410(g), and 60.5415(g) (if applicable).
Reporting: The permittee shall meet all applicable reporting in 40 CFR 60, Subpart A, in 60.5423(b) and in Section B110.

B. 40 CFR 60, Subpart OOOO (Units RC-1, RC-2, RC-3, RC-4, RC-5, RC-6, Dehy-1, FUG)

Requirement: The Units are subject to 40 CFR 60, Subparts A and OOOO and the permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart OOOO, including standards in 60.5400.
Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and Subpart OOOO, including but not limited to 60.5410 and 60.5415.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and Subpart OOOO, including but not limited to 60.5420.
Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and Subpart OOOO, including but not limited to 60.5420, and in Section B110.

A210 Acid Gas Injection – Not required

A211 Thermal Oxidizers

A. Good Combustion Practices (GCP) and Annual VOC Monitoring (Unit TO-1)

Requirement: The permittee shall meet the following GCPs. **(1)** The permittee shall conduct operational inspections, semi-annually (two times per 12-months), to determine that the thermal oxidizer (TO-1) is operating in accordance with manufacturer's specifications. The permittee shall retain the manufacturer's TO-1 specifications and prepare an inspection protocol within 3 months of facility startup. At a minimum, the protocol shall include methods for inspecting and adjusting proper residence time within the combustion chamber, minimum combustion temperature, proper air distribution, and annual VOC sampling consistent with B111. **(2)** The permittee shall implement the proposed site specific inspection and maintenance protocol within the time lines specified in Condition B108.G. **(3)** To ensure on-going good combustion practice of the units, the permittee shall update the approved inspection and maintenance protocol as needed based on operational experience with the unit.
Monitoring: Inspections and visible emissions monitoring shall be conducted when the TO-1 is operating. The permittee shall conduct the semi-annual inspections according to the Department approved inspection protocol.
Recordkeeping: The permittee shall keep the following records: **(1)** A copy of the manufacturer's TO-1 specifications and an inspection protocol **(2)** The dates, parameters inspected, the results of the inspections, VOC sampling, and any repairs or adjustments needed as a result of the inspections. **(3)** The permittee shall also maintain records in accordance with Section B109 and B111.
Reporting: The permittee shall report according to Section B110.

B. Excess Air Checks (Unit TO-1)

Requirement: The permittee shall conduct excess air checks as required below.
Monitoring: The permittee shall monitor the excess air level in the flue gas semi-annually using a portable oxygen analyzer or other method approved in advance by the Department. Excess air measurements that use an electronic analyzer must conform to the procedures in the manufacturer's recommendations. The permittee shall carry out a minimum of five minutes of uninterrupted sampling for each stack.
Recordkeeping: The permittee shall maintain records of excess combustion air to include the unit's fuel flow rate and firing box temperature. If an electronic O_2 sensor is used, records shall be kept of instrument calibration data, and the make and model of the instrument. The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall summarize in chronological order the results of excess air measurements noting any adjustments needed to bring the unit into compliance with permit conditions. The permittee shall report according to Section B110.

C. Initial Compliance Test (Unit TO-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing initial compliance tests.
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, CO, and VOCs. The unit will also be monitored to ensure the combustion air temperature and excess combustion air (%) is as recommended by the manufacturer. VOC emissions shall be determined utilizing 40 CFR 60, Appendix A, Reference Method 18, 40 CFR 63, Appendix A, Reference Method 320, ASTM D6348-03 or an equivalent method approved by the Department. The monitoring exemptions of Section B108 do not apply to this requirement.
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. The test report shall also include the gas flow rate (or generator load), the stack gas temperature, the level of excess air, and the percent moisture.

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)

Secretary, New Mexico Environmental Improvement Board
1190 St. Francis Drive, Runnels Bldg. Rm. N2153
Santa Fe, New Mexico 87502

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 Startup, Shutdown, and Maintenance Operations

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 General Monitoring Requirements

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 accomplished, the permittee is not required to restart the unit for the sole purpose of performing 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 accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish 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.

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:

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

(2) date(s) and time(s) of sampling or measurements;

(3) date(s) analyses were performed;

(4) the qualified entity that performed the analyses;

(5) analytical or test methods used;

(6) results of analyses or tests; and

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

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.

B111 General Testing Requirements

A. Compliance Tests

(1) 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) 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) Unless otherwise indicated by Specific Conditions or regulatory requirements, 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, subject to the approval of the Department.

(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

(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of 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 TSP

(c) Method 6C and 19 for 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 opacity

(f) Method 10 for CO

(g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).

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

(i) Method 29 for Metals

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

(k) Method 202 for condensable PM

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

(m) Method 25A for VOC reduction efficiency

(n) Method 30B for Mercury

(2) Alternative test method(s) may be used if the Department approves the change

C. Periodic Monitoring and Portable Analyzer Requirements

(1) Periodic emissions tests (periodic monitoring) 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 ASTM D 6522-00. 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) Unless otherwise indicated by Specific Conditions or regulatory requirements, 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, O_2 concentration and fuel flow rate shall be monitored and recorded. This information shall be included with the test report furnished to the Department.

(5) Pollutant emission rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) and fuel heating value (Btu/scf) obtained during the test.

D. Test Procedures:

(1) The permittee shall notify 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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 Method 1 or ASTM D 6522-00 as applicable.

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

(7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.

B112 Compliance

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

(3) SOP for Use of Portable Analyzers in Performance Tests

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. **"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.

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

D. **"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.

E. **"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)

F. **"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)

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

H. **"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.

I. **"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/).

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

K. **"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)

L. "**NOx**" see NO_2

M. "**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.

N. **"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.

O. "**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.

P. **"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.

Q. **"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.

R. **"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