New Mexico
ENVIRONMENT DEPARTMENT

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

SUSANA MARTINEZ
GOVERNOR

JOHN A. SANCHEZ
LIEUTENANT GOVERNOR

RYAN FLYNN
CABINET SECRETARY

BUTCH TONGATE
DEPUTY SECRETARY

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

Certified Mail No: 7014 3490 0001 8188 7614
Return Receipt Requested

NSR Permit No:	1313-M6
Facility Name:	Western Refining -Wingate Facility
Permittee Name:	Western Refining Southwest, Inc.
Mailing Address:	92 Giant Crossing Road Gallup, NM 87301
TEMPO/IDEA ID No:	884-PRN20150001
AIRS No:	35-031-0004
Permitting Action:	Significant Permit Revision
Source Classification:	PSD Major and Title V Major
Facility Location:	714,000m E by 3,935,000m N, Zone 12
County:	McKinley
Air Quality Bureau Contact	Daren K. Zigich
Main AQB Phone No.	(505) 476-4300

Ralph Goodyear for
Richard L. Goodyear, PE
Bureau Chief
Air Quality Bureau

10/9/2015
Date

TABLE OF CONTENTS

PART A FACILITY SPECIFIC REQUIREMENTS

A100 Introduction

A. This permit, NSR 1313M6, supersedes all portions of Air Quality Permit 1313M5R1, issued September 24, 2013; Permit 1313M5R2 issued June 11, 2013; Permit 1313M5R3 issued November 26, 2014 and Permit 1313M5R4 issued December 23, 2014 except the portion requiring compliance tests. Compliance test conditions from previous permits, if not completed, are still in effect, in addition to compliance test requirements contained in this permit.

A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

A102 Facility: Description

A. The previous function of the facility was to fractionate hydrocarbon liquids from a natural gas liquid stream into propane, n-butane, iso-butane and other fractions using a distillation train. After this modification the facility's primary function will be to operate as a petroleum bulk terminal that performs crude oil and LPG storage and transloading activities.

B. This facility is located approximately 6 miles east of Gallup, New Mexico in McKinley County.

C. This modification consists of changing the primary function of the facility from a natural gas processing plant to a crude oil trans-loading facility. As a result, the facility will now be categorized under the SIC code for petroleum bulk stations and terminals (SIC code 5171) instead of under the category for natural gas liquids (SIC code 1321). In addition to the crude trans-loading operations, Western will install a vapor combustion unit (VCU-1) and two external floating roof tanks (TK-1 and TK-2) and retire or remove existing emissions units 7, 11, 12, 19, 27, 28, 29. The description of this modification is for informational purposes only and is not enforceable.

D. 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)	10.3

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

Pollutant	Emissions (tons per year)
Carbon Monoxide (CO)	25.7
Volatile Organic Compounds (VOC) *	217.4
Sulfur Dioxide (SO_2)	0.7
Total Suspended Particulates (TSP)	1.3
Particulate Matter less than 10 microns (PM_{10})	0.5
Particulate Matter less than 2.5 microns ($PM_{2.5}$)	0.4
Greenhouse Gas (GHG)	<75,000

* VOC total includes emissions from Fugitives, SSM and Malfunctions

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

Pollutant	Emissions (tons per year)
n-hexane	1.0
Total HAPs**	9.2

* 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	Facility
20.2.3 NMAC Ambient Air Quality Standards	X	Facility
20.2.7 NMAC Excess Emissions	X	Facility
20.2.61 NMAC Smoke and Visible Emissions	X	VCU-1
20.2.70 NMAC Operating Permits	X	Facility
20.2.71 NMAC Operating Permit Emission Fees	X	Facility
20.2.72 NMAC Construction Permit	X	Facility
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Facility
20.2.74 NMAC Permits - PSD	X	Facility
20.2.75 NMAC Construction Permit Fees	X	Facility
20.2.77 NMAC New Source Performance	X	18, TK-1 and TK-2
40 CFR 50 National Ambient Air Quality Standards	X	Facility
40 CFR 60, Subpart A, General Provisions	X	18, TK-1 and TK-2
40 CFR 60, Subpart Kb	X	TK-1 and TK-2
40 CFR 60, Subpart NNN	X	18

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
40 CFR 60, Subpart RRR	X	18
40 CFR 64, Compliance Assurance Monitoring	X	RC-LOAD (controlled by VCU-1)

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 Capacity/ Permitted Capacity	Construction Date	Other
16	Fugitive emissions from Truck Rack System	NA	NA	TBD	<1997	NA
18	Butamer Unit	Not Reported	Not Reported	NA	1998	NA
20	Fugitive emissions from Propane Storage and Rail Loading	NA	NA	NA	<1984	NA
21	Fugitive emissions from Isobutane Storage and Rail Loading	NA	NA	NA	<1984	NA
22	Fugitive emissions from N-butane Storage and Rail Loading	NA	NA	NA	<1984	NA
23	Fugitive emissions from Pentanes (natural gasoline) Storage and Rail Loading	NA	NA	NA	<1984	NA
24	Fugitive emissions from Ethyl Mercaptan Storage and Rail Loading	NA	NA	NA	<1984	NA

Table 104: Regulated Sources List

Unit No.	Source Description	Make Model	Serial No.	Maximum Capacity/ Permitted Capacity	Construction Date	Other
25	Fugitive emissions from Product Pumping System	NA	NA	NA	<1984	NA
26	Blowdown from Loading/Off-Loading Hoses at LPG Truck and Rail Racks	NA	NA	NA	<2004	NA
Non-Fugitive LPG Activities	LPG Loading Operations, LPG system pressure reliefs and maintenance activities	NA	NA	NA	<1984	Controlled by Flare Unit 17. See Title V permit NN OP 05-011 issued by the Navajo Nation EPA
TK-1	External Floating Roof Crude Oil Tank	TBD	TBD	120,000 bbl	TBD	NSPS Kb
TK-2	External Floating Roof Crude Oil Tank	TBD	TBD	120,000 bbl	TBD	NSPS Kb
TR-HOSE	Hose disconnect emissions from truck unloading	N/A	N/A	2160 bbl/hr / 9.125 MMbbl/yr	TBD	N/A
RC-FUG	Fugitive emissions from crude oil rail loading	N/A	N/A	N/A	TBD	N/A
RC-LOAD	Crude Oil Rail loading emissions captured by the VCU	N/A	N/A	3465 bbl/hr / 14.6 MMbbl/yr	TBD	N/A
RC-UNCAP	Crude Oil Rail loading emissions uncaptured by the VCU	N/A	N/A	3465 bbl/hr / 14.6 MMbbl/yr	TBD	N/A
RC-HOSE	Hose disconnect emissions from Crude Oil Rail Loading	N/A	N/A	3465 bbl/hr / 14.6 MMbbl/yr	TBD	N/A

Table 104: Regulated Sources List

Unit No.	Source Description	Make Model	Serial No.	Maximum Capacity/ Permitted Capacity	Construction Date	Other
VCU-1	Vapor Combustion Unit	TBD	TBD	1170 scfm vapors/ 1 scfm pilot gas / 250 scfm assist gas	TBD	N/A
HAUL-RD	Crude oil truck traffic	N/A	N/A	N/A	TBD	N/A

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 permit program manager all information identified as "TBD" in Table 104, within 15 days of installation/construction for all units installed/ constructed after August 1, 2015. For all other units, the information shall be reported within 15 days of the issuance date of NSR permit number 1313-M6.

A105 Facility: Control Equipment

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

Table 105: Control Equipment List:

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit Number(s)[1]
VCU-1	Vapor Combustion Unit	VOC and HAPs	RC-LOAD

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 and Kb, NNN, RRR, 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
16	-	-	-	-	*	14.5	-	-	-	-	-	-	-	-
18	-	-	-	-	*	27.8	-	-	-	-	-	-	-	-

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
20	-	-	-	-	*	23.6	-	-	-	-	-	-	-	-
21	-	-	-	-	*	19.3	-	-	-	-	-	-	-	-
22	-	-	-	-	*	12.8	-	-	-	-	-	-	-	-
23	-	-	-	-	*	16.3	-	-	-	-	-	-	-	-
24	-	-	-	-	*	5.8	-	-	-	-	-	-	-	-
25	-	-	-	-	*	20.4	-	-	-	-	-	-	-	-
26	-	-	-	-	*	1.1	-	-	-	-	-	-	-	-
TK-1	-	-	-	-	*	4.7	-	-	-	-	-	-	-	-
TK-2	-	-	-	-	*	4.7	-	-	-	-	-	-	-	-
TR-HOSE	-	-	-	-	*	1.7	-	-	-	-	-	-	-	-
RC-FUG	-	-	-	-	*	5.9	-	-	-	-	-	-	-	-
RC-LOAD / RC-UNCAP	-	-	-	-	*	22.4	-	-	-	-	-	-	-	-
RC-HOSE	-	-	-	-	*	0.8	-	-	-	-	-	-	-	-
Haul-Rd	-	-	-	-	-	-	-	-	<	<	<	<	<	<
VCU-1	4.9	10.3	12.2	25.7	12.1	25.6	<	<	<	<	<	<	<	<

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2

2 For Title V facilities, the Title V annual fee assessments are based on the sum of allowable tons per year emission limits in Sections A106 and A107.

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

"<" indicates the application represented uncontrolled emissions are less than 1.0 pph or 1.0 tpy for this pollutant. Allowable limits are not imposed on this level of emissions, except for flares and pollutants with controls.

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

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

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

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

Unit No.	Description	VOC (tpy)	H_2S (pph)	H_2S (tpy)
SSM/M from TK-1 & TK-2, VCU-1 and Liquefied Petroleum Systems	[1]Tank degassing of TK-1 and/or TK-2 VCU-1 bypass and venting of Liquefied Petroleum during Routine and Predictable Startup, Shutdown, and/or Maintenance (SSM) [1]Venting of crude oil loading vapors and Liquefied Petroleum Due to Malfunction	10	<	<

1. This authorization does not include VOC combustion emissions.
"<" indicates the application represented that uncontrolled venting or blowdown emissions of H2S are less than 0.1 pph or 0.44 tpy. Allowable limits, monitoring, and recordkeeping are not required on this level of H2S venting or blowdown emissions.

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. Combined SSM and Malfunction Emissions (VOCs)

Requirement:

(1) **Compliance Method**

The permittee shall sample crude oil from either TK-1 or TK-2 and perform an analysis once every year and, on a monthly basis, complete the following monitoring and recordkeeping to demonstrate compliance with the allowable emission limits in Table 107.A for routine or predictable startup, shutdown, and maintenance (SSM); and/or malfunctions (M) herein referred to as SSM/M.

(2) **Emissions included in Permit Limit and/or Reported as Excess Emissions**

(a) All emissions due to routine or predictable startup, shutdown, and/or maintenance (SSM) must be included under and shall not exceed the 10 tpy SSM/M emission limit in this permit. For emissions due to malfunctions, the permittee has the option to report these malfunction emissions as excess emissions under 20.2.7.110.A(2) NMAC or include the emissions under the 10 tpy limit.

(b) Once emissions from a malfunction event are submitted in the final report (due no later than ten days after the end of the excess emissions event) per 20.2.7.110.A(2) NMAC, the event is considered an excess emission and cannot be applied toward the 10 tpy SSM/M limit in this permit.

(3) **Emissions Exceeding the Permit Limit**

If the monthly rolling 12-month total of SSM/M exceeds the 10 tpy emission limit, the

permittee shall report the emissions as excess emissions in accordance with 20.2.7.110 NMAC.

(4) **Emissions Due to Preventable Events**

Emissions that are due entirely or in part to poor maintenance, careless operation, or any other preventable equipment breakdown shall not be included under the 10 tpy SSM/M emission limit. These emissions shall be reported as excess emissions in accordance with 20.2.7.110 NMAC.

Monitoring: The permittee shall monitor all SSM/M events. The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events of the crude oil storage and loading systems including TK-1 and TK-2, VCU-1 and the liquefied petroleum storage and loading systems. The permittee shall also monitor all malfunction events that result in VOC emissions including the identification of the equipment or activity that is the source of emissions.

Recordkeeping:

(1) **Compliance Method**

(a) Each month records shall be kept of the cumulative total of all VOC emissions related to SSM/M during the first 12 months and, thereafter of the monthly rolling 12 month total of SSM/M VOC emissions. Any malfunction emissions that have been reported in a final excess emissions report per 20.2.7.110.A(2) NMAC, shall be excluded from this total.

(b) Records shall also be kept of the crude oil analysis, the percent VOC of the vented gas and the calculations that are used to calculate the VOC emissions from crude oil. For liquefied petroleum products records shall be kept of the type of liquefied petroleum product, the volume of total gas vented in MMscf used to calculate the VOC emissions and the calculations. All liquefied petroleum products shall be assumed to be 100 percent VOC.

(c) The permittee shall identify the equipment or activity and shall describe the event that is the source of emissions.

(2) **Emissions included Under Permit Limit or Reported as Excess Emissions**

The permittee shall record whether emissions are included under the 10 tpy permit limit for SSM/M or if the event is included in a final excess emissions report per 20.2.7.110.A(2) NMAC.

(3) **Condition B109 Records**

The permittee shall keep records in accordance with Condition B109 of this permit except for the following:

(a) The requirement to record the start and end times of SSM/M events shall not apply to venting of known quantities of VOCs as long as the emissions do not exceed the SSM/M emission limit.

(b) The requirement to record a description of the cause of the event shall not apply to SSM/M events as long as the emissions do not exceed the SSM/M emission limit.
Reporting: The permittee shall report in accordance with Section B110.

A108 Facility: Allowable Operations

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

A109 Facility: Reporting Schedules

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

A110 Facility: Fuel and Fuel Sulfur Requirements

A. Fuel and Fuel Sulfur Requirements (Unit VCU-1)

Requirement: Emission unit VCU-1 shall combust only natural gas containing no more than 5.0 grains of total sulfur per 100 dry standard cubic feet and crude oil vapors from crude oil containing no more than 300 ppmw H_2S.
Monitoring: None
Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than one year. The permittee shall demonstrate compliance with the crude oil limit on H_2S by maintaining records of a current crude oil H_2S and total sulfur analysis, specifying the allowable limit or less. The crude oil H_2S and total sulfur analysis shall not be older than one year.
Reporting: The permittee shall report in accordance with Section B110.

A111 Facility: 20.2.61 NMAC Opacity

A. 20.2.61 NMAC Opacity Limit (Unit VCU-1)

Requirement: Visible emissions from unit VCU-1 shall not equal or exceed an opacity of 20 percent.
Monitoring: Once every 90 days of operation, an opacity measurement shall be performed on each Unit for a minimum of 10 minutes in accordance with the procedures of 40 CFR 60, Appendix A, Method 9.

Recordkeeping: The permittee shall record the opacity measures with the corresponding opacity readings in accordance with Method 9 in 40 CFR 60, Appendix A.
Reporting: The permittee shall report in accordance with Section B110.

A112 Facility: Haul Roads – Not Required

A113 Facility: Initial Location Requirements – Not Required

A114 Facility: Relocation Requirements – Not Required

A115 Alternative Operating Scenario – Not Required

A116 Compliance Plan – Not Required

A117 Reducing Facility Emissions

A. Certain terms and conditions of this permit retire or remove specific regulated equipment, Units 7, 11, 12, 19, 27, 28 and 29 and the associated allowable emissions that were permitted previously and currently remain in the facility's Title V operating permit P117R2M1. The compliance date for retirement or removal of Units 7, 11, 12, 19, 27, 28 and 29 is the date of issuance of permit number 1313-M6.

EQUIPMENT SPECIFIC REQUIREMENTS

OIL AND GAS INDUSTRY

A200 Oil and Gas Industry

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

A201 Engines – Not Required

A202 Glycol Dehydrators – Not Required

A203 Tanks, Loading and Loading Disconnects

A. 40 CFR 60, Subpart Kb (Tanks TK-1 and TK-2)

Requirement: The tanks are subject to 40 CFR 60, Subpart Kb and the permittee shall comply

with the VOC standard as specified by 40 CFR 60.112b.
Monitoring: The permittee shall comply with the testing requirements of 40 CFR 60.113b and the monitoring requirements of 40 CFR 60.116b.
Recordkeeping: The permittee shall maintain records as specified by 40 CFR 60.115b and 60.116b.
Reporting: The permittee shall comply with reporting requirements of 40 CFR 60.115b.

B. Truck Unloading – Crude oil (Units TR-HOSE, Haul-Rd)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total annual crude oil truck unloading (delivery) volume to 9,125,000 barrels per year.
Monitoring: The permittee shall monitor the crude oil truck unloading volume on a monthly basis.
Recordkeeping: The permittee shall record the monthly crude oil truck unloading volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative crude oil truck unloading volume and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total unloading volume. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

C. Railcar Loading – Crude oil (Units RC-LOAD / RC-UNCAP, RC-HOSE, TK-1 and TK-2)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total annual crude oil loadout volume to 14,600,000 barrels per year and by capturing, routing and controlling the loading emissions through the use of a cap and capture loadout device, closed vent system and Vapor Combustion Unit (VCU-1).
Monitoring: The permittee shall monitor the crude oil loadout volume on a monthly basis.
Recordkeeping: The permittee shall record the monthly crude oil loadout volume. Each month during the first 12 months of monitoring the permittee shall record the cumulative crude oil loadout volume and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total loadout volume. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

D. Railcar and Truck Loading – Liquefied Petroleum Products (Unit 26 – Hose Blowdowns)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by limiting the total number of Truck Rack blowdown events to 9,912 and Rail Rack blowdown events to 5,676 per year.
Monitoring: The permittee shall monitor the Truck Rack blowdown events and Rail Rack blowdown events on a monthly basis.
Recordkeeping: The permittee shall record the monthly Truck Rack blowdown events and monthly Rail Rack blowdown events. Each month during the first 12 months of monitoring the permittee shall record the cumulative Truck Rack blowdown events and the cumulative Rail Rack blowdown events and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total Truck Rack blowdown events and a monthly rolling 12-month total Rail Rack blowdown events. Records shall also be maintained in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

A204 Heaters/Boilers - Not Required

A205 Turbines - Not Required

A206 Vapor Combustor Units

A. Operation (Unit VCU-1)

Requirement: Crude Oil Railcar loadout shall be controlled by the unit VCU-1. The vapor combustion unit shall be maintained and operated to achieve the emissions limits stated in Section A106. During all crude oil railcar loadout the vapor combustion unit shall maintain proper combustion control over the entire loading period, defined as the period crude oil is flowing into the railcar, by maintaining the temperature at or above the temperature recorded during the latest stack test that demonstrated compliance with the emission limits in Section A106.
Monitoring: The presence of combustion in the thermal oxidizer shall be monitored continuously using a flame scanner, or any other equivalent device, **and** a thermocouple to detect the presence of a flame and proper operation. In addition, the vapor combustion unit shall be equipped with a well-maintained alarm that signals non-combustion during operation and an associated loadout interlock that automatically shuts down the crude oil loadout when non-combustion is detected. Additionally, time stamps (date and time) of each alarm shall be continuously monitored. The monitoring and recording devices shall be maintained in good operating condition.
Recordkeeping: The permittee shall maintain the following records in accordance with Section B109: - Strip chart or electronic records of the time stamp for each alarm signaling non-

combustion during operation.
- Manual or electronic record of date and time when loadout is performed without VCU operating.
- Strip chart or electronic records of thermocouple temperature readings. Reading shall be recorded a minimum of once every 15 minutes.
- Maintenance records for the Vapor Combustion Unit and monitoring devices.

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

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

B. Railcar Loading Vapor Capture Device Inspection (Unit RC-LOAD / RC-UNCAP)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by operating a vapor capture system, that captures and routes VOC emissions from all railcars being loaded to the vapor combustion unit VCU-1.

Monitoring: At least once per month, the permittee shall inspect the vapor capture system for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatch covers, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect as soon as practicable and in a manner that minimizes VOC and HAPs emissions to the atmosphere.

Recordkeeping: The permittee shall record the results of the vapor recovery unit inspections chronologically, noting any maintenance or repairs that are required.

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

C. Initial Compliance Test (Unit VCU-1)

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by performing an initial compliance test for NOx and CO. VOC (TOC) testing shall be used to verify the manufacturer's guaranteed emission rate of 10 mg TOC/liter of petroleum loaded.

Monitoring: The permittee shall perform an initial compliance test in accordance with a Department approved test protocol submitted in accordance with the General Testing Requirements of Section B111. Emission testing is required for NOx, CO and VOC. Testing shall occur during periods of near maximum crude oil vapor production (equal to or greater than 90 percent of the maximum hourly loading capacity 3465 bbl/hr or in accordance with the paragraph (1) below) and shall occur during periods when the ambient temperature is above 60^{o} F. Testing for NOx and CO shall occur simultaneously with the VOC (TOC) testing specified below.

The owner or operator shall verify the 10 mg TOC/liter controlled emission rate as follows:
(1) The performance test shall be 1 hours long during which at least 300,000 liters of petroleum liquid is loaded. If this is not possible, the test may be continued the same day until

300,000 liters of petroleum liquid is loaded or the test may be resumed the next day with another complete 1-hour period. In the latter case, the 300,000-liter criterion need not be met. However, as much as possible, testing should be conducted during the 1-hour period in which the highest throughput normally occurs.
(2) If the vapor processing system is intermittent in operation, the performance test shall begin at a reference vapor holder level and shall end at the same reference point. The test shall include at least two startups and shutdowns of the vapor processor. If this does not occur under automatically controlled operations, the system shall be manually controlled.
(3) The emission rate (E) of total organic compounds shall be computed using the following equation:

$$E = K\sum_{i=1}^{n}(V_{esi}C_{ei}) / (L\,10^{6})$$

where:
E = emission rate of total organic compounds, mg/liter of petroleum liquid loaded.
Vesi = volume of air-vapor mixture exhausted at each interval "i", scm.
Cei = concentration of total organic compounds at each interval "i", ppm.
L = total volume of petroleum liquid loaded, liters.
n = number of testing intervals.
i = emission testing interval of 5 minutes.
K = density of calibration gas, 1.83 × 106 for propane and 2.41 × 106 for butane, mg/scm.
(4) The performance test shall be conducted in intervals of 5 minutes. For each interval "i", readings from each measurement shall be recorded, and the volume exhausted (Vesi) and the corresponding average total organic compounds concentration (Cei) shall be determined. The sampling system response time shall be considered in determining the average total organic compounds concentration corresponding to the volume exhausted.
(5) The following methods shall be used to determine the volume (Vesi) air-vapor mixture exhausted at each interval:
(i) Method 2B shall be used for combustion vapor processing systems.
(ii) Method 2A shall be used for all other vapor processing systems.
(6) Method 25A or 25B shall be used for determining the total organic compounds concentration (Cei) at each interval. The calibration gas shall be either propane or butane. The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the Department.
(7) To determine the volume (L) of petroleum liquid dispensed during the performance test period at all loading racks whose vapor emissions are controlled by the processing system being tested, terminal records or readings from petroleum liquid dispensing meters at each loading rack shall be used.

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.

A207 Sulfur Recovery Unit - Not Required

A208 Amine Unit - Not Required

A209 Fugitives

A. Leak Detection and Repair Program (Units 16, 18, 20, 21, 22, 23, 24, 25 and RC-FUG)

Requirement: To demonstrate compliance with the allowable emission limits in Table 106.A, the permittee shall limit weight percent of VOC in key containers or pipeline to those values used to calculate allowable emission limits, and repair component leaks (>10,000 ppm) within 30 days of discovery.
Monitoring: The permittee shall conduct an annual chemical analysis of the pipe contents; and an annual inspection of components in VOC service (VOC weight >10%). An inspection of components in VOC service shall also be performed within 15 days of any maintenance or repair that affects components. The permittee shall place a visible tag on all components that have a liquid leak or a vapor leak greater than 10,000 ppm VOCs until those components are repaired.
Recordkeeping: The permittee shall maintain the following records. 1) Component identification or description and location 2) Date a leak is detected 3) Dates of attempts to repair 4) Designation of "repair delayed" and reason for delay if the leak is not repaired within 30 days of leak discovery 5) Date of successful leak repair
Reporting: The permittee shall report the following in accordance with Section B110: 1) The number of leaking components discovered, 2) The number of leaking components not repaired within 30 days, and 3) The duration of the leaks that exceeded 30 days.

B. 40 CFR 60, Subpart NNN (Unit 18, Butamer Deisobutanizer)

Requirement: The unit is subject to 40 CFR 60, Subpart NNN and the permittee shall comply with all applicable requirements of Subpart A and Subpart NNN.
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart NNN.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart NNN.
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and NNN.

C. 40 CFR 60, Subpart RRR (Unit 18, Isobutanizer Reactors)

Requirement: The units are subject to 40 CFR 60, Subpart RRR and the permittee shall comply with all applicable requirements of Subpart A and Subpart RRR.
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40

CFR 63, Subpart A and Subpart RRR.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart RRR.
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and RRR.

D. Non-Fugitive LPG Activities

Requirement: The following non-fugitive LPG activities shall be controlled by a vapor capture system and routed to Flare Unit 17 permitted under Title V permit NN OP 05-011, issued by the Navajo Nation EPA: 1) Venting of 'liquid empty' LPG railcars prior shipment / loading 2) Venting of fuel gas – the 'push' gas used to offload LPG railcars. 3) Venting from LPG storage tanks / pumps / piping as a means to maintain safe operating limits. 4) Venting for maintenance purposes.
Monitoring: At least once per month, the permittee shall inspect the vapor capture system for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatch covers, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect as soon as practicable and in a manner that minimizes VOC and HAPs emissions to the atmosphere.
Recordkeeping: The permittee shall record the results of the vapor recovery unit inspections chronologically, noting any maintenance or repairs that are required.
Reporting: The permittee shall report in accordance with Section B110.

PART B GENERAL CONDITIONS (Attached)

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

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

GENERAL CONDITIONS AND MISCELLANEOUS

TABLE OF CONTENTS

PART B GENERAL CONDITIONS

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 as follows:

(1) Records required for testing and sampling:

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

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

(c) date(s) analyses were performed

(d) the qualified entity that performed the analyses

(e) analytical or test methods used

(f) results of analyses or tests

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

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

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

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

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

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

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

(f) description of maintenance or repair activities conducted

(g) all results of any required parameter readings

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

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

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

Sources subject to 20.2.70 NMAC "Operating Permits" shall maintain records on-site for a minimum of five (5) years from the time of recording.

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

(1) The owner or operator of a source subject to a permit shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC - Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.

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

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

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

B110 General Reporting Requirements

(20.2.72 NMAC Sections 210 and 212)

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

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

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

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

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

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

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

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

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

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

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 and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Method 19. This information shall be included with the test report furnished to the Department.

(5) Stack gas flow rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf) determined from a fuel sample obtained preferably during the day of the test, but no earlier than three months prior to the test date. Alternatively, stack gas flow rate may be determined by using EPA Methods 1-4.

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