DRAFT Statement of Basis - Narrative
PSD Permit

Type of Permit Action: PSD- New Facility
Facility: Zia II Gas Plant
Company: DCP Midstream, L.P.
Permit No(s).: PSD-5217-M1
Tempo/IDEA ID No.: 32800 - PRN20150001
Permit Writer: Kirby Olson

Fee Tracking (not required for Title V)

Tracking	**NSR tracking entries completed:** [X] Yes [] No
	NSR tracking page attached to front cover of permit folder: [X] Yes [] No
	Paid Invoice Attached: [] Yes [X] No
	Balance Due Invoice Attached: [X] Yes [] No
	Invoice Comments: Permit fee paid in full

Permit Review	**Date to Enforcement:** TBD	**Inspector Reviewing:** TBD
	Date Enf. Review Completed: TBD	**Date of Reply:** (if necessary)
	Date to Applicant: TBD	**Date of Reply:** TBD
	Date of Comments from EPA: TBD	**Date to EPA:** TBD
	Date Final Permit to Supervisor: TBD	

1.0 **Plant Process Description:**

The Zia II Gas Plant will be a cryogenic gas processing plant with a nominal rating of 200 MMscf/day. It will be permitted up to maximum of 230 MMscf/d capacity since with good engineering design and practices the actual inlet capacity could reach that amount. The gas plant is designed to treat and process produced natural gas for DCP gathering systems located throughout southeast New Mexico.

Field natural gas entering the Zia II Gas Plant is sent through an inlet separation designed to remove entrained solids and dissolved liquids from the field-gas stream. The water produced from the separation in sent to tanks. Condensate from the inlet will be separated, stabilized, and stored prior to load-out via truck. Working and breathing losses from the tanks and loading emissions are sent to the vapor combustion device. The flash gas vapors are stabilized and sent back to the inlet stream of the plant.

Once the field gas passes through the inlet separation, the stream is sent to an amine treater which will consist of an amine contactor, flash tank, amine tanks, amine pumping system and an amine still. Emissions from the Amine Unit the flash tank will be recovered and sent to the inlet stream of the plant. The primary emissions control from the amine still overheads will be by routing to an AGI well. If not routed to an AGI well, amine unit off gases are routed the acid gas flare for combustion.. The gas for the well will be routed to the acid gas flare (Unit FL2) while the well is out of service. The plant flare (Unit FL1) will combust blow-down emissions from other sources

at the facility. The Lusk flare pilot and purge emissions will be added to this permit and (unit FL3) will be used only as an emergency flare.

After the amine treating, the field gas is sent to a TEG dehydration system which will consist of a TEG contactor, flash tank, and BTEX condenser. Emissions originating from the flash tank will be recovered and sent to the low pressure inlet stream of the plant. TEG regenerator emissions will be re-routed to the inlet. Non-condensables will be sent to the vapor combustion device. The TEG dehydrator system is a completely closed system. Natural Gas Liquid recovery is done through a cryogenic process.

2.0 **Description of this PSD Permit Revision:**

This application revises existing PSD permit No. PSD5217 for a "new" facility as defined at 20.2.74.7.U NMAC. In summary, the revisions include changes to some stack parameters; increases and decreases to the capacity of some units, allowable mass emission limits, and BACT limits; adding new equipment; and removing equipment that is no longer needed.

Changes to the facility include:

- Clarify that 230 MMscf/d is the maximum, not nominal, capacity of the facility and add a permit limit on capacity
- Increase FL1 inlet gas flare processing from 200 MMscf/d to 230 MMscf/d; increase pilot and purge gas flow rate; increase allowable pph/BACT emission limits for all pollutants; increase tpy emission limits for all pollutants
- Decrease FL2 acid gas flare pph/BACT limits and increase tpy emission limits for all pollutants
- Add VOC and CO2e venting emissions (units SSM (CB) and SSM (PV)) during routine or predictable startup, shutdown, and/or maintenance of the facility
- Add FL3 pilot and purge gas emission limits for existing Lusk Flare to be used for emergencies only at Zia II
- Reduce acid gas processing from 16 MMscf/d to 8 MMscf/d; add capacity limit to the permit; and remove requirement to use 2 Acid Gas Injection (AGI) wells to control amine unit emissions due to the decrease in acid gas processing
- Add a new standby emergency generator (GEN-1) and BACT requirements and limit engine to 500 operating hrs/yr
- Add a new Wet Surface Air Cooler (CT-1) and BACT requirements
- Increase capacity of Regeneration Gas Heater Unit H3 from 8 to 10 MMBtu/hr; increase allowable mass emission limits; no change to BACT limits or requirements
- Increase capacity of TEG regenerator Heater H6 from 3 to 3.5 MMBtu/hr; increase tpy emission limits; no change to BACT limits
- Decrease Hot Oil Heater Capacities, Units H4 and H5, from 114 MMBtu/hr to 99 MMBtu/hr; decrease allowable mass emission limits; no change to BACT limits
- Change BACT control requirement for NOx for Heaters H4 and H5 from Ultra Low NOx burners and GCP to Low NOx burners and GCP
- Remove never constructed Stabilizer Heater Unit 2 and Compressor Engines C11-E, C12-E, and C13-E
- Increase allowable tpy VOC emission limits for Fugitives to 31.5 tpy
- Decrease emission limits from haul roads and add paving requirement to permit

- Add make, model, serial numbers, and construction dates for some units

3.0 Source Determination:

1. The emission sources evaluated include all sources at the Zia II Gas Plant (see Tables 2-A and 2-B of the application).

2. Single Source Analysis:

A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? **Yes**

B. Common Ownership or Control: Are the facilities under common ownership or control? **Yes**

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? **Yes**

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? **Yes**

4.0 **PSD Applicability:**

A. The source, as determined in 3.0 above, is a new PSD Major Source that was starting construction when application PSD5217-M1 was submitted.

B. Emissions subject to PSD review include: NOx, which is greater than 250 tpy as defined at 20.2.74.7.AG(2) (and also major for O3); CO, VOC (representing O3), SO2, PM-10, and PM-2.5 which are greater than the significant emission rates in 20.2.74.502 (Table 2). CO2 exceeds 250 tpy (on a mass basis) and exceeds 100,000 tpy (equivalent basis, CO2e) for new sources (20.2.74.7.AZ(3) and AZ(4) NMAC.

C. A revised BACT determination is required for units whose BACT control and/or numerical limits have changed or for new equipment.

The AQB did not re-review any BACT requirements that did not change since the permittee started construction within 18 months of the original permit PSD5217. Please information in the separate BACT summary determination indicating which BACT was changed and needs review in this application. The detailed BACT determinations for the entire facility are found in Tables 1 to 31.

5.0 **History (In descending chronological order, showing NSR and TV):** *The asterisk denotes the current active NSR permit that has not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
PSD-5217M1	TBD	PSD-new	This application revises existing PSD permit No. PSD5217 for a "new" facility as defined at 20.2.74.7.U NMAC. In summary, the revisions include changes to some stack parameters; increases and decreases to the capacity of some units, allowable mass emission limits, and BACT limits; adding new equipment; and removing equipment that is no longer needed. Changes to the facility include: • Clarify that 230 MMscf/d is the maximum, not nominal, capacity of the facility and add a permit limit on capacity • Increase FL1 inlet gas flare processing from 200 MMscf/d to 230 MMscf/d; increase pilot and purge gas flow rate; increase allowable pph/BACT emission limits for all pollutants; increase tpy emission limits for all pollutants • Decrease FL2 acid gas flare pph/BACT limits and increase tpy emission limits for all pollutants • Add VOC and CO2e venting emissions (units SSM (CB) and SSM (PV)) during routine or predictable startup, shutdown, and/or maintenance of the facility • Add FL3 pilot and purge gas emission limits for existing Lusk Flare to be used for emergencies only at Zia II • Reduce acid gas processing from 16 MMscf/d to 8 MMscf/d; add capacity limit to the permit; and remove requirement to use 2 Acid Gas Injection (AGI) wells to control amine unit emissions due to the decrease in acid gas processing • Add a new standby emergency generator (GEN-1) and BACT requirements and limit engine to 500 operating hrs/yr • Add a new Wet Surface Air Cooler (CT-1) and BACT requirements • Increase capacity of Regeneration Gas Heater Unit H3 from 8 to 10 MMBtu/hr; increase allowable mass emission limits; no change to BACT limits or requirements • Increase capacity of TEG regenerator Heater H6 from 3 to 3.5 MMBtu/hr; increase tpy emission limits; no change to BACT limits • Decrease Hot Oil Heater Capacities, Units H4 and H5, from 114 MMBtu/hr to 99 MMBtu/hr; decrease allowable mass emission limits; no change to BACT limits • Change BACT control requirement for NOx for Heaters H4 and H5 from Ultra Low NOx burners and GCP to Low NOx burners and GCP • Remove never constructed Stabilizer Heater Unit 2 and Compressor Engines C11-E, C12-E, and C13-E • Increase allowable tpy VOC emission limits for Fugitives to 31.5 tpy • Decrease emission limits from haul roads and add paving requirement to permit • Add make, model, serial numbers, and construction dates for some units

Permit Number	Issue Date	Action Type	Description of Action (Changes)
PSD-5217*	4/25/14	NSR-PSD-new facility	Completely new facility. Zia II will be a natural gas processing plant using a cryogenic process and will gather field natural gas from various locations in central and southern New Mexico. The following pollutants were subject to PSD and BACT analysis: NOx, CO, O3 (as VOC and NOx), SO2, PM-10, PM-2.5, and GHG. Permitted equipment/emissions includes: 13 RICE engines with 13 reciprocating compressors, 6 heaters, 1 facility flare, 1 acid gas flare, 1 vapor combustion device, 1 dehydrator with BTEX condenser, 2 condensate tanks, 3 produced water tanks, truck loadout of condensate, 1 amine unit, 2 acid gas injection wells, a short haul road, and fugitive emissions. Cryogenic equipment and a molecular sieve do not have emissions other than fugitive. Other equipment without emissions includes miscellaneous oil tanks (e.g., lube oil), triethylene glycol tank, methyl alcohol tank, natural gas liquid (NGL) surge tanks.

6.0 **Public Response/Concerns:** As of current date the permit writer is not aware of any public comment.

7.0 **Compliance Testing History:** Not applicable; facility is not yet operating.

8.0 Startup and Shutdown:

A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? **No, no Title V permit at present.**

B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? **Yes**

C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? **Yes**

D. Were emissions from routine and predictable startup, shutdown, and scheduled maintenance operations calculated and included in the emission tables? **Yes. All SSM emissions are included in the application and will be permitted as secondary BACT limits.**

9.0 **Compliance and Enforcement Status [Title V only]:** Not applicable – the facility is not constructed yet.

10.0 **Modeling:** Modeling was submitted for this PSD permit application as required by 20.2.74.303 NMAC. The modeling, including secondary formation of PM-2.5 (due to NO2 and SO2) and the O3 impact analysis, was reviewed by David Heath (modeling report dated 7/30/2015). The modeling report states that the normal operation of the facility does not cause or significantly contribute to any exceedances of an applicable air quality standard and that the permit can be issued based on the air quality analysis. Originally, t**he Lusk Booster Station (a PSD major source located 0.5 miles from the Zia II plant) was not modeled as a surrounding source because Lusk will not operate after the Zia II plant starts operation. Now all of the facility but the Lusk Flare Unit FL-3 will be**

shut down. Pilot and purge emission limits for this flare were included in this air dispersion modeling.

Modeling for PSD additional impacts analysis was also conducted. Level 1 VISCREEN results indicated no potential adverse visibility impacts to Living Desert State Park. Federal Land Managers (FLM) Air Quality Related Values (AQRV) Q/d tests were run (where Q is the combined emissions increase of SO2, NOx, PM-10, and sulfuric acid mist, based on maximum short-term rates; and d is the nearest distance [km] to a Class I area. The application calculated Q/d for all Class I areas within 300 km. The closest Class I area, Carlsbad Caverns National Park, had a Q/d of 4.48. The Q/d for Carlsbad Caverns National Park was verified by the permit writer. Q/d ratios ≤ 10 indicate the project will have no adverse AQRV impact.

11.0 State Regulatory Analysis(NMAC/AQCR):

20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Comments
2.1	GENERAL PROVISIONS	Yes	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code (NMAC) so is subject to Part 1 General Provisions. See Section 116 of regulation for significant figures and rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes	Entire Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
2.7	Excess Emissions	Yes	Entire Facility	Applies to all of the facilities' sources.
2.33	Gas Burning Equipment - Nitrogen Dioxide	No		This facility has new gas burning equipment (external combustion emission sources, such as gas and oil fired boilers and heaters), but the largest capacity heaters are far less than the applicability threshold of heat input of greater than 1,000,000 million British Thermal Units (BTU) per year per unit. The largest heaters will only be 99 million BTU (99 MMBtu) per unit.
2.34	Oil Burning Equipment - Nitrogen Dioxide	No		This facility does not have oil burning equipment (external combustion emission sources, such as gas and oil fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
2.35	Natural Gas Processing Plant – Sulfur	Yes	Entire Facility	This regulation establishes sulfur emission standards for natural gas processing plants. The facility meets the definition of a “new natural gas processing plant” under 20.2.35.7.B NMAC and is subject to the requirements of this regulation. The facility will meet all requirements under 20.2.35 NMAC as applicable.

20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Comments
2.37	Petroleum Processing Facilities	Yes	Entire Facility	This purpose of this regulation is to minimize emissions from petroleum or natural gas processing facilities. The facility meets the definition of a "new petroleum processing facility" under 20.2.37.7.C NMAC and is subject to this regulation. The facility will meet all applicable requirements under this regulation. NOTE: When this regulation applies then 20.2.61 NMAC does not apply. Special note is made to the particulate matter emission standard at: 20.2.37.202.A NMAC.
2.38	Hydrocarbon Storage Facilities	No		No sections of this regulation apply.
2.39	Sulfur Recovery Plant – Sulfur	No		This regulation establishes sulfur emission standards for sulfur recovery plants which are not part of petroleum or natural gas processing facilities. This facility does not have a sulfur recovery unit.
2.61	Smoke and Visible Emissions	No		This regulation establishes controls on smoke and visible emissions from certain sources. The facility is not subject to this regulation because it will be subject to 20.2.37 NMAC (see 20.2.61.109 NMAC).
2.70	Operating Permits	Yes	Entire Facility	Within 12 months of commencement of operation of as a Title V source, this facility will need to submit an application for a Part 70 permit (per 20.2.70.300.B(1) NMAC). The facility is a TV major source for NOx, CO, SOx, and VOCs (PTE is ≥ 100 tpy), formaldehyde, and total HAPs as defined at 20.2.70.7.R and 20.2.70.200 NMAC (≥ 10 tpy for a single HAP and ≥ 25 tpy total HAPs).
2.71	Operating Permit Fees	Yes – in future	Entire Facility	This is a Title V major source
2.72	Construction Permits	Yes	Entire Facility	The facility is a stationary source that has potential emission rates (PER) greater than 10 pounds per hour and 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard [20.2.72.200.A(1), A(3), and A(6) NMAC]. This regulation applies.
2.73	NOI & Emissions Inventory Requirements	Yes	Entire Facility	Applicable to all facilities that require a permit. This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC (PER > 10 tpy for several regulated air contaminants).

20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Comments
2.74	Permits-Prevention of Significant Deterioration	Yes	Entire Facility	PTE ≥ 250 tpy for NOx and a major stationary source as defined in 20.2.74.7.AG(2) NMAC (and also major for O3 because is major for NOx). In addition, the PTE for CO, VOC (representing O3), SO2, PM10, and PM2.5 are greater than the significant emission rates in 20.2.74.502 (Table 2). Finally, the facility is also subject to BACT for greenhouse gas emissions.
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC and is also subject to 20.2.75 NMAC.
2.77	New Source Performance	Yes	See equipment subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60.
2.78	Emissions Standards for HAPs	No		This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61. At present there are no applicable rules within 40 CFR Part 61.
2.79	Permits – Nonattainment Areas	No		This facility is not located in a non-attainment area nor does it affect an adjacent non-attainment area. This rule does not apply.
2.80	Stack Heights	Yes	Entire Facility	It applies to "all persons who own or operate a source or who intend to construct or modify a source" (20.2.80.2). Stacks must meet good engineering practice for dispersion of pollutants, without setting specific requirements.
2.82	MACT Standards for Source Categories of HAPs	Yes	See equipment subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

12.0 Federal Regulatory Analysis:

Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Applies (Y/N)	Comments
C	Federal Ambient Air Quality Standards	Y	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
A	General Provisions	Y	Applies if any other subpart applies

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
40 CFR 60.40Da, Subpart Da	Standards of Performance for Electric Utility Steam Generating Units	N	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.
40 CFR 60.40b, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	N	60.40b(a) "The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour)." There are no steam generating units >99 MMBTU/hr at the facility
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Y	Per 60.40c(a). The facility has steam generating units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr). **This regulation applies to Units H1,H3, H4, and H5.** These units will only burn natural gas and **therefore will not subject performance tests, reporting requirements, or emission limits under this regulation.** The facility will follow all record keeping requirements for these units. Unit H6 is less than 10 MMBtu/hr and is therefore not subject to this regulation. 60.42c(a)-(e) no SO2 standards applies since no heaters combust coal or oil. 60.43c(a)-(c) & (e) no PM standards applies since no heaters combustion coal or oil.
40 CFR 60 Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and **Prior** to July 23, 1984	N	Each petroleum liquid storage vessel at the facility has a capacity of less than 1,589,873 liters (420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer is not an affected facility and, therefore, is exempt from the requirements of this subpart (60.110a(b)).
40 CFR 60 Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	N	Each petroleum liquid storage vessel at the facility has a capacity of less than 1,589.874 m^3 (420,002 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer (60.110b(d)(4)). The tanks at the facility are therefore exempt from the requirements of this subpart.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
40 CFR 60 Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	N	Affected Facility with Leaks of VOC from Onshore Gas Plants. Any affected facility that commenced construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011, is subject to the requirements of this subpart. The facility will be constructed after August 23, 2011 and is therefore not subject to this regulation.
40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions	N	This regulation establishes standards of performance for SO_2 emissions from onshore natural gas processing with sweetening units or sweetening units with sulfur recovery units constructed, reconstructed, or modified after January 20, 1984, and on or before August 23, 2011. The rule does not apply to sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere (60.640(e)). The Zia II facility will be constructed after August 23, 2011, and is therefore not subject to this regulation. Zia II is also using acid gas injection wells.
40 CFR Part 60 Subpart IIII (Quad-I)	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Y	The 70 hp diesel standby generator (unit GEN-1) is subject to 60.4205(b) because the unit was constructed after July 1, 2005 and manufactured after April 1, 2006. This subsection of the regulation requires the engine to meet 60.4202. Subsection 60.4202 requires that the engine meet the corresponding emission standards under 40 CFR Part 89.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine? If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.(a) **If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.** **§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine? (a)** If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, **except as permitted under paragraph (g) of this section:**(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;(2) Change only those emission-related settings that are permitted by the manufacturer; **and(3) Meet the requirements of 40 CFR parts 89**, 94 and/or 1068, as they apply to you. **(f) If you own or operate an emergency stationary ICE**, you **must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3)** of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. **If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines**. **(g) If you do not install, configure, operate,** and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: **(1)** If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.			
40 CFR Part 60 Subpart JJJJ (Quad-J)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Y	The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of section 60.4230. Engines C1-E to C10-E at the facility will be new 4-stroke lean burn engines with horsepower greater than 500 located at a major source of HAPs. **All engines are subject to NO_x and VOC standards per Table 1 of NSPS JJJJ.** Engines will meet NSPS JJJJ CO standards by meeting MACT ZZZZ CO standards per Table 1 of NSPS JJJJ.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
40 CFR Part 60 Subpart OOOO (Quad-O)	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution	Y	"Affected" facilities that are constructed, modified, or reconstructed after Aug 23, 2011 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels. There are standards for: gas wells (60.5375); centrifugal compressors (60.5380); reciprocating compressors (60.5385): controllers (60.5390); storage vessels (60.5395); equipment leaks (60.5400); sweetening units (60.5405).

NSPS OOOO: The facility will be constructed after August 23, 2011, so all compressors, and all equipment addressed under equipment leak standards are subject to this regulation. **Applicable to units-equipment: C1-C to C10-C and FUG (includes all equipment subject to equipment leak standards). Equipment leak standards (which cover a broad range of equipment) includes all equipment involved in a process unit, except the compressors. Equipment leaks applies to Unit FUG, and Unit FUG includes unnamed equipment such as piping, valves, flanges, connections, cryogenic equipment, but also includes named units Amine, Dehy, tanks, and L1. Inlet Flare (FL1) controls some fugitive emissions and so is subject to 40 CFR 60.18.**

60.5365(f) identifies that a group of all equipment (except compressors) within a process unit is an affected facility and is covered by 60.5400 (equipment leak standards), 60.5401 (exceptions to equipment leak standards), 60.5402 (alternative emission limitations), 60.5421(notification, recordkeeping and reporting requirements) and 60.5422 (additional reporting requirements). Pursuant to 60.5365(f)(3), this equipment includes equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system or LNG unit (a cold plant and refrigeration unit would be part of the LNG unit). The facility will comply with this regulation upon startup.

Units not subject to NSPS OOOO: Tanks (TK-2100, TK-22000, TK-6100, and TK-6150) are not subject since there are federally enforceable emission limits in the permit that controls VOC emissions to below 6 tpy (see 60.5365(e)). Tank emissions are controlled by the VCD1 unit. The vapor combustion device is an enclosed combustion device. Although the VCD1 is not subject to NSPS OOOO, the unit will meet the enclosed combustion device standards for closed vent systems and control devices in Subpart VVa (60.482-10a (c)). Compressors C11 to C13 are screw compressors and are not subject to NSPS OOOO.

The Amine unit is not subject to sulfur standards because it is controlled by the acid gas injection well(s). The acid gas from the amine unit (sweetening unit) at the facility is injected into oil or gas-bearing geological strata (AGI well) and is not subject to 60.5405 through 60.5407, 60.5410(g), and 60.5423 of this subpart [60.5365(g)(4)]. When the acid gas flare (FL2) is used during planned SSM, the acid gas (or at least some of it) is not going to the AGI well. Although not subject to NSPS OOOO, since the flare will be used as a control device during planned SSM, the flare will meet NSPS 60.18 to show compliance with 98% destruction efficiency per agreement with the permittee.

The pneumatic devices located at the facility will not be continuous bleed and therefore will not have applicable requirements under this regulation.

NESHAP Subpart (40 CFR 61)	Title	Applies (Y/N)	Comments
A	General Provisions	N	Applies if any other subpart applies and no other subparts apply.

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
A	General Provisions	Y	Applies if any other subpart applies and DDDDD (5-D), HH, IIII, and ZZZZ (Quad-Z) apply.
40 CFR 63.760 Subpart HH	National Emissions Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	Y, but no emission standards apply	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. The facility is a major source of HAPs and meets the definition of a natural gas processing plant. The **dehydrator** will have a natural gas flow rate equal to or greater than 85 thousand standard cubic feet. The dehydrator vents less than 0.90 megagrams of benzene per year to the atmosphere and is **therefore exempt from the general standards of MACT HH per 63.764(e)(1)(ii).** The facility is not subject to the equipment leak standards under this regulations since the equipment at the facility has a total VHAP concentration less than 10 percent by weight [63.764(e)(2)(i)] and **the facility is subject to equipment leak standards under NSPS OOOO** which exempts them from the equipment leak standards under MACT HH. The tanks at the facility are not storage vessels with the potential for flash emissions. The condensate is sent to a stabilizer before transferred to the condensate tanks. There are no flash emissions associated with the condensate tanks therefore the tanks are not subject to this regulation.
40 CFR 63 Subpart HHH	National Emissions Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities	N	This subpart applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. This regulation does not apply because this facility is not a natural gas transmission or storage facility as defined in this regulation [40 CFR Part 63.1270(a)].
40 CFR 63 Subpart ZZZZ (Quad Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Y	A facility is subject to this subpart if they own or operate stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. **All engines (C1-E to C10-E)** at the facility that will be new 4-stroke lean burn engines greater than 500 hp located at a major source of HAPs. Units are subject to CO emission standards at

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
			63.6600(b), Tables 2a and 2b. **GEN-1** is a 70 hp diesel emergency generator and will also have requirements (maintenance and tune up) under this subpart. Engines C11-E to C13-E are electric, and not subject to this subpart
40 CFR 63 Subpart DDDDD (5-Ds)	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters	Y	Permittee is subject to this subpart if it owns or operates an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP as defined in 63.7575for oil and natural gas production facilities (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in §63.7491. The facility is a major source of HAPS. All units will be constructed after the June 4, 2010 applicability date. The boilers **(H1, H4 and H5)** will be combusting natural gas (gas 1 fuel as defined) and will have the following compliance requirement: Emission standard Tables 1 & 2 do not include any numerical emission limits for gas 1 fuel burning units. Per 63.7540 (a)(10) - Tune up every year (except for boilers and process heaters with continuous oxygen trim system which conduct a tune-up every 5 years). **Heater H6** is less than 10 MMBtu/hr and will be combusting natural gas. Requirements for this heater are: Per 63.7500 (e) - Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540(a)(12). Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540(a)(11). Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart. **Heater H3** is now 10 MMBtu/hr, not "less than 10 MMBtu/hr" and must comply with

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
			63.7540(a)(10).
40 CFR 63 Subpart JJJJJJ (6-Js)	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Source	N	This regulation establishes emission standards for hazardous air pollutants for industrial, commercial, and industrial boilers area sources. This regulation does not apply to the facility, as the facility is a major source of HAPs.

Miscellaneous	Title	Applies (Y/N)	Comments
40 CFR 64	Compliance Assurance Monitoring	Y – in future for the TV permit	This regulation defines compliance assurance monitoring. Emissions from the Amine Unit, dehydrator (Unit Dehy), engines (Units C1 to C8), and loading (Unit L1) at the facility are subject to a CAM plan. The units have potential pre-control emission levels of an applicable major source threshold [40 CFR 64.2(a)(3)]. The control devices for the Amine Unit at the facility are the two AGI wells (Units AGI1 and AGI2) and the acid gas flare (Unit FL2). The control device for the tanks, dehydrator, and loading is the vapor combustion device (Unit VCD1). The engines are controlled by catalysts.
40 CFR 68	Chemical Accident Prevention	Y	An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under §68.115 Threshold determination and 68.130 List of substances. The facility is an affected facility, as it will use flammable process chemicals such as propane at quantities greater than the thresholds (10,000 lb per Table 3 in 68.130). The facility will develop and maintain an RMP Plan for these chemicals.

13.0 **Additional Reported Equipment without emissions that do not require monitoring**:

Additional Equipment at the Zia II Gas Plant Facility (not entered into Tempo database)

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]
TK-7015	Engine/Compressor Oil Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7020	Amine Storage Tank with Blanket Gas	Palmer	NA	400	Not a regulated source of emissions.	11/1/2014
			ST1407196	bbl	N/A	2/1/2015
TK-7025	Used Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7035	Jacket/Aux Water Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7045	Engine/Compressor Oil Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7050	R.O. Water Storage Tank	Palmer	NA	175	Not a regulated source of emissions.	2/1/2014
			OF1408083	bbl	N/A	2/1/2015
TK-7055	Used Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	bbl	N/A	2/1/2015
TK-7065	Jacket/Aux Water Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2015
			NA	bbl	N/A	2/1/2015

TK-7070	R.O. Wastewater Tank	Palmer	NA	195	Not a regulated source of emissions.	2/1/2015
			OF1408086	bbl	N/A	2/1/2015
TK-7075	Compressor Crank Case Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7085	Used Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7095	Compressor Lubrication Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7105	Compressor Lubrication Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7115	Compressor Lubrication Oil Storage Tank	Willborn Bros	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7400	Refrigerant Compressor Lube Oil Storage Tank with Blanket Gas	Willborn Bros	NA	500	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7410	Used Refrigerant Compressor Oil Storage Tank	Willborn Bros	NA	500	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/15/2015
TK-7500	H.M.O. Make-up Tank	Palmer	TBD	150	Not a regulated source of emissions.	2/1/2015
			ST-1409494	bbl	N/A	3/1/2015
TK-7600	Glycol Storage Tank	Palmer	TBD	150	Not a regulated source of emissions.	11/1/2014
			ST-1406954	bbl	N/A	3/1/2015
TK-7700	Methanol Storage Tank	Highland	NA	1,500	Not a regulated source of emissions.	8/1/2014

			NA	gal	N/A	2/1/2015
TK-7750	Methanol Storage Tank	Highland	NA	1,500	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-7800	Methanol Storage Tank	Highland	NA	1,036	Not a regulated source of emissions.	8/1/2014
			NA	gal	N/A	2/1/2015
TK-WATER	Raw Water Storage Tank	Power Pipe and Tank	NA	1,000	Not a regulated source of emissions.	1/1/2015
			NA	bbl	N/A	2/1/2015
TK-L1	Lusk Slop Tank	TBD	TBD	210	Not a regulated source of emissions.	TBD
			TBD	bbl	N/A	TBD
TK-L2	Lusk Methanol Tank	Palmer	NA	443	Not a regulated source of emissions.	Sep-83
			AT-2784	bbl	N/A	Sep-83
TK-3	Diesel Tank	N/A	NA	1,000	Not a regulated source of emissions.	NA
			NA	gal	N/A	May-15

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

A. Table A104: Added units GEN-1, CT-1, SSM(CB), SSM(PV), and FL3. Removed unit H2, C11-E to C13-E, and TK-C. Added serial numbers and manufacture/construction dates reported in the application. Changed capacities for heaters. Revised tank numbers, but not changes to tank capacity or content.

B. Conditions A104.C and D are required so that the AQB has accurate construction and modification dates for PSD purposes. Not all information was submitted in the application. Since the facility is new, the permittee shall begin with keeping accurate records.

C. Condition A104.E and F replaces footnote 1 to Table 104. It ensure that all like-kind engine exchanges have PSD, NSPS, and MACT determinations completed before making the change. Also, since compressors are not listed separately, it requires serial numbers and construction/reconstruction dates be kept for these units for NSPS and PSD applicability.

D. Table A105.A: Summarizes all BACT control requirements. Removed requirement for 2 AGIs, added BACT for FL3, SSM CB and PV, CT-1, GEN-1. Revised BACT for haul road to paved.

E. Table A106.A: Changes allowable mass emission limits for heaters H3 to H6; TK2100, TK2200 (BACT in 106.B does not change). Tanks 2100 and 2200 are to be controlled 100% so should not have limits. The tank VOC limits of 0.3 tpy appear to be the uncombusted VOC emissions coming from the VCD1. Those limits are already listed under the limits for VCD1 so should not also be listed under the tanks. Added mass emission limits for FL3, CT-1, and GEN-1.

F. Table A106.B: Added BACT numerical limits for unit GEN-1

G. Revised Table 107.A allowable limits for FL1 and FL2. The PPH limits are BACT, except for CO2e where the tpy limits are BACT. Add VOC BACT limits for newly reported direct venting, CB and PV, during SSM.

H. Condition A107.C changed "extended gas analysis" to analysis and replace with the term total sulfur which is what the AQB meant by "extended" analysis. DCP explained that an extended analysis is to speciate all VOCs not to measure total sulfur (H2S, mercaptans, and thiols)

I. A107.E – Add condition for direct SSM venting

J. A107.F Add BACT requirements for all SSM events to reference the requirements in the excess emissions rule plan to minimize emissions during SSM (20.2.7.14 NMAC).

K. A108.B Add Limit on Gas Plant Inlet processing. The first application calculated some emission rates using 200 MMscf/d. In this application, some emission rates were changed to reflect a maximum inlet capacity of 230 MMscf/d. A PSD permit must limit the capacity of a facility to ensure that no debottlenecking occurs without first going through PSD review.

L. Condition A112.A: Modified condition to reflect that haul road has been paved

M. Revised/Added condition A113.A and A113.B to ensure Lusk Booster station is shutdown and ensure that engines, heaters, and tank removed from the permit are enforceable. Zia II will replace the inlet compressors provided by the Lusk Booster station. Since Lusk emissions were not included in the modeling, a condition requiring

it be shut down is necessary to ensure compliance with emission standards. DCP determined that they need to keep the flare at Lusk to accept gas when the inlet compressors must be shutdown. Lusk Flare FL3 can be used only for emergencies.

N. Condition A201.I: Opacity limit for unit GEN-1 for 20.2.61NMAC
O. Condition A201.J: maintenance and repair for unit GEN-1
P. Condition A201.K: fuel and fuel sulfur for unit GEN-1 for Subpart ZZZZ
Q. Condition A206.E and F: added FL3 to requirements
R. Condition A206.G: added condition for emergency operation of FL3, the Lusk flare
S. A208.B Added limit on acid gas processing. DCP requested that the permit be revised to require only 1 AGI. They stated that they will be processing only 8 MMscf/d which is also the capacity of 1 AGI, rather than 16 MMscf/d. Sour gas process limits ensure that the AGI can sufficient control amine unit overheads.
T. A208.C Revise AGI condition to account for 1 AGI being removed.
U. A208.D Add NSPS OOOO requirements for the amine unit.
V. Condition A210.A: Modified text because only one AGI well may be constructed initially
W. Condition A212.A: Added condition for maintenance of the drift eliminators on the new wet surface cooling tower

15.0 <u>For Title V action: Not Applicable at this time for this action: Cross Reference Table between NSR Permit PSD-5217 and TV Permit (there is no TV permit at this time). This is a new PSD-NSR permit and there is nothing to cross reference to a TV permit at this time:</u>

16.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.

A. Since the acid gas processing rate is being lowered from 16 MMscf/d to 8 MMscf/d only one AGI well must be installed. In the original application, two AGI wells were required since the overall capacity was 16 MMscf/d and each well can handle only up to 8 MMscf/d. The second AGI well will be constructed if needed, so it will remain in the permit.
B. Speed humps are no longer required for the haul road because emission factors for paved roads are not based on the speed of the vehicle.
C. Changed "extended gas analysis" to "gas analysis including total sulfur" throughout permit because NMED does not have a definition of extended gas analysis and the individual conditions specify what analytes need to be included to meet the requirement.