

**Statement of Basis - Narrative**

**NSR – PSD Permit**

**Type of Permit Action:** PSD-New Permit

**Facility:** Husky Gas Plant and Central Delivery Point (CDP)

**Company:** XTO Energy Inc.

**Permit No(s):** PSD-8245

**Tempo/IDEA ID No.:** 38899 - PRN20190002

**Permit Writer:** James E. Nellessen (including NMED-AQB management decisions)

**Fee Tracking (not required for Title V)**

<b>Tracking</b>	<b>NSR tracking entries completed:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>NSR tracking page attached to front cover of permit folder:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Paid Invoice Attached:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Balance Due Invoice Attached:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	<b>Invoice Comments:</b> Balance paid in full

<b>Permit Review</b>	<b>Date to Enforcement:</b> N/A, enforcement currently not reviewing permits	<b>Date of Enforcement Reply:</b> N/A
	<b>Date to Applicant:</b> 7/31/2020	<b>Date of Applicant Reply:</b> TBD
	<b>Date to EPA:</b> 8/3/2020	<b>Date of EPA Reply:</b> TBD
	<b>Date to Supervisor:</b> June 17, 2020 and July 31, 2020	

**1.0 Plant Process Description:**

**Overall Facility Description:** This application requests a permit to construct a natural gas processing and oil/natural gas liquid (NGL) central delivery point and is to be called the Husky Gas Plant and Central Delivery Point (Husky GP&CDP). The facility will be located approximately 13.9 miles NE of Loving, NM in Eddy County. This is a new facility and there are no existing permits associated with the proposed facility. The facility will produce sales gas, Y-Grade NGL, and spec oil products. The Husky GP&CDP is expected to be built in stages, eventually reaching a full processing capacity of 1.5 billion cubic feet per day (BCFD) of Natural Gas; 200,000 barrels per day (BPD) of Oil Stabilization; and 190,000 BPD of NGL Stabilization. The overall facility will be designed to accommodate three (3) cryogenic (cryo) trains. In addition to the gas processing and CDP equipment, XTO Energy Inc. (XTO) is planning the construction of four (4) Cogen turbines to provide power and auxiliary heat to the facility.

XTO is proposing three operating scenarios for the facility:

- 1) Operation of the facility with full CDP and heater construction but no Cogen,
- 2) Operation of the facility with four Cogen turbines and reduced heater use,
- 3) A combination of turbines and heater use during turbine downtime.

The gas processing portion of the facility will process natural gas using amine sweetening units. Sweetened gas will be dehydrated then flow to cryogenic units to remove NGLs for sale. Heat for the dehydration and cryogenic processes is supplied by gas-fired auxiliary heaters. NGLs from the inlet slug catcher and surrounding compressor stations are stabilized before being transferred offsite via pipeline. Heat for the stabilization process is supplied by gas-fired auxiliary heaters. The CDP portion of the facility will receive up to 200,000 barrels of oil/condensate (oil) per day from surrounding field production batteries. Oil will be transferred directly to storage or stabilized using auxiliary heaters. Oil is transferred offsite via pipeline. Incoming water will be temporarily stored onsite prior to being transferred offsite via pipeline. Water and slop oil can be transferred offsite by truck. The Cogen portion of the facility will be used to generate power for the site and replace process heat provided by the heaters.

### **Natural Gas System**

The Husky GP&CDP gas handling system will be fed by natural gas gathering lines, delivering sweet natural gas to the facility. At the inlet of the facility, these pipelines will be routed to the inlet slug catcher where condensate is separated and routed to the NGL stabilizers to produce Y-Grade NGL product. Gas from the slug catcher will feed each of the three (3) cryo trains. Each cryo train will have a dedicated amine unit (AU1-AU3) to remove CO<sub>2</sub> and a molecular sieve dehydration unit to remove water. The gas will first be treated using MDEA and piperazine in the amine unit to remove carbon dioxide from the gas streams. In the amine regeneration unit for each train, flash gas from the amine flash tank and amine still will be routed to a thermal oxidizer (TO1-TO3) to destroy hazardous air pollutants (HAPs) and volatile organic compounds (VOCs). In the molecular sieve dehydration units, molecular sieve beds are used as to dehydrate the treated gas. In this two-unit design, one unit operates in dehydration mode while the other operates in regeneration mode. Switching from dehydration to regeneration is done by use of automatic switching valves. As the dehydrated unit becomes saturated with water vapor, it is automatically switched to regeneration mode while the regeneration unit becomes active in dehydration mode. When the beds require regeneration due to saturation, a fired regeneration gas heater (RHTR1-RHTR3) with a maximum heat input rate of 39.14 MMBtu/hr will be used to remove water from the mol sieve beds. Following dehydration, the dry gas is cooled and expanded in the cryo units before being boosted by electric drive residue compressor engines into the sales gas pipeline.

### **NGL System**

Natural gas liquids (NGLs) are gathered from surrounding compressor stations and piped into the facility. These pipelines will be combined with the condensate dropout from the slug catcher. This combined liquid stream will be processed through a two-tower condensate stabilization system to produce a "Y-Grade" NGL and a 9 RVP stabilized spec oil. From the first stabilization tower, the overhead gas will be compressed using electric drive compressor engine and sent to the cryo trains, whereas the liquids will be sent to the second tower to produce Y-Grade NGL. The Y-Grade liquids from the second tower will be stored in pressurized bullets and pumped to the NGL sales pipeline. Any gas from the second tower is routed to the cryo trains. The NGLs from the cryo trains will

also be pumped to and exported via the same pipeline. The stabilized oil from the second tower will be pumped to the internal floating roof oil storage tanks (IFR1-IFR4), where it is combined with on-spec oil, then routed to the oil sales pipeline. Heat for the stabilization process is provided by twelve (12) heaters, each with a maximum heat input rate of 64.83 MMBtu/hr (SHTR1-SHTR12).

### **Oil System**

Oil from surrounding batteries will be routed through the oil inlet surge vessel, which provides initial phase separation of oil and water. Any free water dropout will be routed through a 1,000 bbl gunbarrel separator vessel (GBS1). From GBS1, skimmed oil will be sent to the 500 bbl slop oil tank (OTK7) and the heavier water will be sent to 750 bbl produced water tanks (PWTK1-PWTK2). All tanks are gas blanketed. Slop oil will be pumped back to oil stabilization or trucked offsite. Produced water will be transported offsite via pipeline; however, XTO included produced water loading in the permit application.

Under normal circumstances, the oil received at the CDP is sent directly from the inlet surge vessel to IFR1-IFR4 for temporary storage before transporting the oil offsite via pipeline. If the incoming oil RVP does not meet sales specifications, it is sent to the oil stabilization process. Following stabilization, on-spec oil product will be sent to IFR1-IFR4. For flexibility, the inlet oil may be blended with the oil stabilization product to create desired product. Flash gas from oil stabilization will be recompressed to liquid and routed to the NGL stabilizers.

In addition to receiving oil at the Husky GP&CDP via pipeline, stabilized oil may also be received from third party operators via truck unloading. Husky is designed to process up to 8,000 BOPD of third-party oil via truck unloading. Husky will have truck unloading terminals where the stabilized oil will be routed to OTK1-OTK6. Normal emissions for truck unloading are captured in the combustor by the off gas produced in OTK1-OTK6.

### **Hot Oil System**

Closed-loop natural gas-fired heater hot oil systems will be used to provide process heat to the NGL and oil stabilization packages, as well as the amine and the cryo units. The systems will be packaged units with fired heating, expansion vessel, pumps, and filtration. All NGL stabilizers will be served by a common hot oil loop operating with a 500°F supply temperature. All oil stabilizer will be served by a common hot oil loop operating with a 400°F supply temperature. Supply to each oil/NGL stabilizer hot oil loop will be from 64.83 MMBtu/hr burner packages (SHTR1-SHTR12) and circulation pump skids, which can be set to run at either temperature. Each oil or condensate stabilization package has a nominal maximum duty requirement of 39.14 MMBtu/hr. Each Amine/Cryo train will have its own dedicated hot oil loop operating with a 350°F supply temperature, served by a 103.99 MMBtu/hr burner package (CHTR1-CHTR3) and pump skid with expansion vessel. During operation of Cogen, auxiliary heat for the hot oil system will be provided by the heat recovery steam generators (HRSGs) on the turbines, not by the heaters. The number and type of heaters operating will depend upon the number of turbines operating,

### **Flare System**

All automated vents and process reliefs will be routed to either the low pressure or high pressure headers for the dual-tip flare system, which consists of three dual-tip flares (FL1-FL3). The flares will be permitted to manage pilot, purge, and process vessel SSM gas. Any gas that must be removed from the system during an emergency would also be routed to FL1-FL3. Gas may be routed to one or all of the flares at any given time.

### **Combustor**

A combustor (ECD1) is used collect and dispose of vapors emitted from OTK1-OTK7, GBS1, and PWTk1-PWTk2. The combustor will also control vapors emitted during the loading of slop oil.

### **Turbines**

The Cogen turbines (TUR1-TUR4), equipped with heat recovery steam generators (HRSGs), will be used to provide power to the Husky GP&CDP and other XTO facilities. The HRSGs will replace supplemental heat from the stabilizer and cryo heaters for the Husky facility while in operation.

### **Emergency Generators**

The emergency generators for the CDP portion of the plant (GEN1-GEN5) will be used to power safety-sensitive equipment in the event of grid power outages. The generators for the Cogen portion of the plant (GEN6-GEN8) will be used to black start the turbines in the event of grid power outages.

## **2.0 Description of this Modification:**

[This is a new facility. Refer to Section 1 Plant Process Description above.](#)

## **3.0 Source Determination:**

1. The emission sources evaluated include **those listed in Table 2-A of the application, those with emissions reported in Tables 2-E and 2-F, and those to which any federal rules apply.**

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, with the caveat that fixed roof oil storage tanks OTK1 to OTK6 are for use by “3<sup>rd</sup> parties” to bring oil by truck into the Husky CDP. Although 3<sup>rd</sup> parties may be bringing in oil, for processing purposes, these tanks are directly linked to other equipment directly managed and controlled by XTO such as the internal floating roof oil storage tanks IFR1 to IFR4, the inlet surge vessel, and an emissions control device, the enclosed combustion device (ECD1). Hence, the 3<sup>rd</sup> party tanks would have to be considered under common control of the entire facility (they are not****

operating and functioning independently).

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, the source as described in the application is a single source under 20.2.72 NMAC. Under 20.2.74 NMAC, in addition to meeting the definition of a major source at 20.2.74.7.AG(2) NMAC, with the “potential to emit two hundred fifty (250) tons per year or more of any regulated new source review pollutant” the facility also has two nested Table 1 sources (20.2.74.501 NMAC). Hence, at 20.2.74.7.AG(1) NMAC: “Any stationary source listed in table 1 (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any regulated new source review pollutant.” The two Table 1 subject sources are: F. Fossil fuel boilers (or combinations thereof) totaling more than 250 million BTU/hr heat input; and Q. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels.**

#### 4.0 **PSD Applicability:**

Once a source is PSD major for any single pollutant, all other pollutants, other than non-attainment pollutants, must be evaluated against Table 20.2.74.502 Significant Emission Rate for applicability regardless if that pollutant is over the 100/250 tpy threshold per 20.2.74.200(d)(1), 74.302.A and 302.B NMAC. See Section A, PSD Applicability, of the 1990 Workshop Manual for details, but keep in mind that the regulation has changed since the guidance was published.

- A. The source, as determined in 3.0 above, **will be a new PSD Major Source.**
- B. The project emissions for this **new facility will meet major source thresholds (see further discussion below).**
- C. **Netting is not required at this time, as a new source there are no prior emissions from this source to net out (all emissions are new).**
- D. **BACT is required for this facility. A full BACT analysis and determination has been made and is attached as a separate document.**

The Husky Gas Plant and Central Delivery Point (Husky facility) meets the PSD applicability criteria at 20.2.74.200.A and B NMAC as a “major stationary source” defined at 20.2.74.7.AG NMAC. The Husky facility falls under two different “major stationary source” categories:

- 1) 250 tpy threshold at paragraph AG(2): “Any stationary source not listed in table 1 (20.2.74.501 NMAC) and which emits or has the potential to emit two hundred fifty (250) tons per year or more of any regulated new source review pollutant.” The Husky facility will exceed the 250 tpy threshold for NO<sub>2</sub> (with emissions of 260 tpy) and VOC (with emissions of 543 tpy).
- 2) 100 tpy threshold at paragraph AG(1): “Any stationary source listed in table 1 (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any regulated new source review pollutant.” The Husky facility has two (2) Table 1 PSD Source Categories (100 tpy threshold) nested into the larger or entire facility:
  - a. 300,000 bbl oil storage facility (Table 1 at 20.2.74.501.Q NMAC “Petroleum

- storage and transfer units with a total storage capacity exceeding 300,000 barrels”); and
- b. 250 MMBtu/hr boiler/heater capacity facility (Table 1 at 20.2.74.501.F NMAC “Fossil fuel boilers (or combinations thereof) totaling more than 250 million BTU/hr heat input”).

Best available control technology (BACT) as defined at 20.2.74.7.K NMAC will be required. The permittee made a BACT analysis as required for the application and the permit writer and Department have assembled a BACT analysis per the PSD rule and this analysis is included as a separate document. The BACT review resulted in numerous required equipment specifications and unit specific emission limits (these can be seen in the BACT determination document and in the draft permit).

5.0 **History (In descending chronological order, showing NSR and TV):** \*The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
*PSD-8245	TBD	PSD New Permit	<p>The facility will produce sales gas, Y-Grade NGL, and spec oil products. The facility will be built over multiple phases to reach a full processing capacity of 1.5 billion cubic feet per day (BCFD) of Natural Gas; 200,000 barrels per day (BPD) of Oil Stabilization; and 190,000 BPD of NGL Stabilization. The overall facility will be designed to accommodate three (3) cryogenic (cryo) trains. In addition to the gas processing and CDP equipment, XTO Energy Inc. (XTO) is planning the construction of four (4) Cogen turbines to provide power and auxiliary heat to the facility.</p> <p>Three operating scenarios are proposed for the facility:</p> <ol style="list-style-type: none"> <li>1) Operation of the facility with full CDP and full heater construction, but without Cogen,</li> <li>2) Operation of the facility with full CDP and with four Cogen turbines and reduced heater use,</li> <li>3) A combination of turbines and heater use during turbine downtime.</li> </ol> <p><b>New PSD permit action and BACT analysis performed and BACT limits set.</b></p>

6.0 **Public Response/Concerns:** Public concern and interest regarding this proposed permit action has been expressed. During the first 30-day public comment period one written letter was received from Jeremy Nichols of WildEarth Guardians (letter dated January 16, 2020). Several air quality concerns were expressed, but one of the major concerns was

whether there will be sufficient demonstration that emissions from the facility will not contribute to continuing violations of the 8-hour ozone National Ambient Air Quality Standard (NAAQS). Based on a determination by the Department Deputy Secretary, AQB will hold a public hearing on the permit application.

**7.0 Compliance Testing:** Not applicable: This is a proposed/planned new facility and no equipment exists to have been tested at this point.

**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? **Yes (technically not applicable yet, as is too early to be applying for a TV permit, but the applicant has reported SSM in the NSR application).**

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. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? **Yes** If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted? **Yes (all emissions that are known at this point in time have been reported in the application)**

**9.0 Compliance and Enforcement Status [Title V and NSR/PSD new or modification]:**  
Not applicable as this facility has not been constructed and will be brand new.

**10.0 Modeling:** The permittee submitted a modeling protocol report (dated September 24, 2019) to the AQB Modeling Section prior to the application as part of the pre-application process to assess potential air quality impacts (20.2.74.305 NMAC). The applicant ultimately submitted modeling to the AQB at the time of the application.

The AQB Modeling Section (Angela Raso, modeler) performed air dispersion modeling and summarized the results in a report dated April 1, 2020 (report approved by Modeling Section Manager, Sufi Mustafa). AERMOD Version 19191 was used for modeling. For this permit, modeling was required for the following pollutants: Carbon Monoxide (CO), Nitrogen Dioxide (NO<sub>2</sub>), Ozone (O<sub>3</sub>), Particulate Matter 2.5 micrometers or less in aerodynamic diameter (PM<sub>2.5</sub>), Particulate Matter 10 micrometers or less in aerodynamic diameter (PM<sub>10</sub>), and Sulfur Dioxide (SO<sub>2</sub>). The following are modeling assumptions: 1) The facility operates continuously; 2) No more than three of the emergency generators may operate at any time; and 3) Generators 6 to 8 may not operate for more than one hour at a time.

Modeling Conclusion: The modeling analysis demonstrated that operation of the facility as described neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, and SO<sub>2</sub>; NMAAQs for CO, NO<sub>2</sub>, and SO<sub>2</sub>; and Class I and Class II PSD increments for NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>. Secondary Pollutant Formation: Impacts of secondary pollutant formation for ozone (O<sub>3</sub>) and PM<sub>2.5</sub> were evaluated using

Modeled Emission Rates for Precursors (MERPs). The use of MERPs as a Tier 1 demonstration tool follows US EPA's final "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program" published April 30, 2019. EPA's hypothetical facility located in Terry County Texas was selected as a representative facility.

Ambient impacts to NAAQS that came within 70% or more of a standard are summarized as follows: NO2 1-hr: 76.6%; PM2.5 24-hr: 70.3%; PM2.5 annual: 81.7%; and SO2 1-hr: 95.2%. For Class II PSD increments (percent followed by pollutant, then averaging period: 60.4% of NO2 annual, 79.7% of PM10 24-hr, 42.9% of PM10 annual, 90.4% of PM2.5 24-hr, 81.3% of PM2.5 annual, 72.0% of SO2 24-hr significant impact level (SIL), and 55.0% of SO2 annual SIL. For Class I PSD the source was below the SILs for NO2, PM10, PM2.5, and SO2 (highs of 66.7% of PM2.5 24-hr and 63.3% of PM10 24-hr, and lows < 10% for PM10 annual and SO2 annual).

Regarding secondary ozone impacts using MERPs, the results were below the significance level (1.96 µg/m<sup>3</sup>) for both CoGen (1.29/1.96 = 65.8%) and NoCoGen (1.15/1.96 = 58.7%) operating scenarios. No cumulative analysis was required. More specifics and details on the modeling can be viewed in the Modeling Report.

Pre-application meetings were held with XTO regarding their modeling protocols and pre-construction monitoring research and waiver request. These pre-application communications and meetings (per 20.2.74.403 NMAC and 20.2.74.306 NMAC) included the affected Class I federal land managers (FLM). The FLM and EPA reviewed the modeling protocols, the pre-construction monitoring report, provided input, and reviewed the visibility assessment Q/d ratio (ratio came to 9.64). This is part of the Air Quality Related Values (AQRV) analysis that is required and if the Q/d ratio is less than 10 then no AQRV analysis is required. [Q = sum of emissions of NO<sub>x</sub>, SO<sub>2</sub>, and PM10 (in tpy) and d = distance to nearest Class I Area (Carlsbad Caverns National Park) which is 50.6 km. Hence, for the Husky facility, Q/d = 488.1/50.1 = 9.65].

The turbines (for Cogen) will implement selective catalytic reduction (SCR) to reduce NO<sub>x</sub> and other criteria pollutant emissions, but this process uses ammonia (NH<sub>3</sub>) injection, hence the turbines will be emitting a lot of NH<sub>3</sub> which is a State of NM toxic air pollutant (TAP). With a stack height correction factor based on the 45.7 meter high stack the NH<sub>3</sub> emissions are below the screening level and did not require modeling. Similarly, for sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) another NM TAP emitted by the turbines, based on stack height the emissions were below the screening level for needing modeling.

11.0 **State Regulatory Analysis(NMAC/AOCR):**

<b><u>STATE REGU- LATIONS</u></b>  CITATION 20 NMAC	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
2.1	GENERAL PROVISIONS	Yes, Always	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes	Entire Facility	<b>NSR:</b> 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, Always	Entire Facility	Applies to all of the facility's sources.
2.33	Gas Burning Equipment - Nitrogen Dioxide	No		Applies to facilities with gas 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 (1,000,000 MMBtu/yr).  Although this facility will have new heaters/boilers, all of the units will be below the Btu threshold (which at 8760 hours/year of operation the approximate threshold is 115 MMBtu/hr).  The units to be used at this facility range in heat input from 39.14 MMBtu/hr to 103.99 MMBtu/hr each.
2.34	Oil Burning Equipment - Nitrogen Dioxide	No		Applies to facilities with 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.  This facility will not have oil burning equipment.
2.35	Natural Gas Processing Plant – Sulfur	No		This regulation could apply to existing (prior to July 1, 1974) or new (on or after July 1, 1974) natural gas processing plants that use a Sulfur Recovery Unit to reduce sulfur emissions.  This facility is a “new natural gas processing plant” but it is below all of the sulfur thresholds defined in this rule.

<u>STATE REGULATIONS</u> CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.38	Hydrocarbon Storage Facilities	Yes	IFR1 to IFR4, and OTK1 to OTK7	This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities.  Tanks IFR1 to IFR4 and OTK1 to OTK7 are subject at 20.2.38.109 and 112 NMAC due to their throughput and storage capacities. IFR1 to IFR4 have floating roofs and OTK1 to OTK7 have fixed roofs and vent to an enclosed combustion device.
2.61	Smoke and Visible Emissions	Yes	SHTR1-12, CHTR1-3, RHTR1-3, FL1-3, ECD1, TO1-3, TUR1-4, GEN1-8	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).  Applies to all combustion equipment at the facility.
2.70	Operating Permits	Will apply in the near future	Entire Facility	This facility, as described in the NSR application, and once obtaining an NSR permit, will be a Title V Major Source as defined at 20.2.70.7 NMAC.
2.71	Operating Permit Fees	Will apply in the near future	Entire Facility	Source will be subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Yes	Entire Facility	According to Section 200.A(1): Potential Emission Rate (PER) > 10 pph or 25 tpy for a criteria pollutant.
2.73	NOI & Emissions Inventory Requirements	Yes, Always	Entire Facility	Applicable to all facilities that require a permit. PER > 10 tpy for a regulated air contaminant.
2.74	Permits-Prevention of Significant Deterioration	Yes	Entire Facility	Applies to major sources and major modifications as defined in 20.2.74 NMAC (20.2.74.7.AE and AG Major Modification and Major Stationary Source, 20.2.74.200 Applicability, and 20.2.74.201 Exemptions).  The proposed Husky Gas Plant and CDP falls under a couple of major source categories as described below:  <b>20.2.74.7.AG (1)</b> A stationary source listed in Table 1 of this Part (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any stack and fugitive emissions (as defined) of any regulated air pollutant;  <b>Husky Gas Plant and CDP has 2 nested Table 1 sources:</b>

<u>STATE REGULATIONS</u> CITATION <b>20</b> <b>NMAC</b>	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
				<p>F. Fossil fuel boilers (or combinations thereof) totaling more than 250 million BTU/hr heat input; and            Q. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels.</p> <p>The heaters/boilers collectively (all 18 of them) will emit 150 tpy of NOx. Considering that heaters/boilers keep essential gas plant processes functioning and including flare cryo blowdowns and half the reported fugitives brings VOC total over 250 tpy.</p> <p>Petroleum storage category includes all of the tanks, their control equipment, flare overhead blowdowns, 2 necessary oil stabilization heaters, and including half of the reported fugitives brings the VOC total over 300 tpy.</p> <p><b>20.2.74.7.AG (2)</b> A stationary source not listed in Table 1 of this Part (20.2.74.501 NMAC) and which emits or has the potential to emit stack emissions of two hundred fifty (250) tons per year or more of any regulated pollutant;</p> <p>Husky Gas Plant and CDP is major (&gt;250 tpy) for NOx and for VOC: Maximum scenario under full CoGen (with 4 turbines): NOx – 257 tpy and VOC 742 tpy.</p> <p><b>20.2.74.200.7.AG(5)</b> The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the stationary source categories found in Table 1 of this Part (20.2.74.501 NMAC) or any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.</p> <p>The Husky facility will be a major source without counting fugitive emissions and note the fugitive emissions for Husky will count, as the exclusion does not apply to Table 1 sources, and as described above, this facility encompasses 2 Table 1 source categories.</p>
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC.
2.77	New Source Performance	Yes	See Sources 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.

<u>STATE REGULATIONS</u> CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.78	Emissions Standards for HAPs	No	See Sources subject to 40 CFR 61	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits – Nonattainment Areas	No, not at this time		This facility <b>is presently not located in a regulatorily defined (designated) nonattainment area and is presently not “determined” to affect a regulatorily defined nonattainment area. It is correct that AQB ambient air monitoring data in both Carlsbad and Hobbs stations in recent years has recorded exceedances of the 8-hr ozone design standard. Potential issues and concerns regarding monitored ozone standard exceedances are being investigated and assessed through AQB’s Ozone Attainment Initiative a joint initiative between the permitting and planning sections of AQB (see Memo of April 1, 2020, AQB contacts are Ted Schooley and Kerwin Singleton). Modeling results (see Section 10 for AQB modeling summary and report) did not show exceedances.</b>
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources 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:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 60	Applies if any other subpart applies and Subparts Db, Dc, Kb, KKKK, JJJJ, and OOOOa apply.
40 CFR60.40a Subpart Da	Standards of Performance for Electric Utility Steam Generating Units,	No		(a) Except as specified in paragraph (e) of this section, the affected facility to which this subpart applies is each electric utility steam generating unit:  (e) Applicability of this subpart to an electric utility combined cycle gas turbine

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>other than an IGCC electric utility steam generating unit is as specified in paragraphs (e)(1) through (3) of this section.</p> <p>(1) Affected facilities (<i>i.e.</i> heat recovery steam generators used with duct burners) associated with a stationary combustion turbine that are capable of combusting more than 73 MW (250 MMBtu/h) heat input of fossil fuel are subject to this subpart except in cases when the affected facility (<i>i.e.</i> heat recovery steam generator) meets the applicability requirements of and is subject to subpart KKKK of this part.</p> <p>The HRSG duct burners associated with the turbines (TUR1-TUR3) are subject under KKKK.</p>
40 CFR 60.40b Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Yes	CHTR1 to CHTR3	<p>(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).</p> <p>Hot oil heaters CHTR1 to CHTR3 each have a 103.99 MMBtu/hr heat input, which exceeds the 100 MMBtu/hr threshold. These units will be subject to this rule. Burning low sulfur natural gas the units are exempt from SO<sub>2</sub> standards per §60.40b(k)(2). The heater NO<sub>x</sub> emission rate of 0.0334 lb/MMBtu (that is being set as BACT) meets the §60.44b(a) NO<sub>x</sub> natural gas standard for 0.1 lb/MMBtu. There are no PM standards for units burning natural gas.</p>
40 CFR 60.40c Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Yes	SHTR1 to SHTR12, and RHTR1 to RHTR3	Applicable to: facilities with 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 million Btu/hour) or less, but greater than or equal to 2.9 MW (10 million Btu/hour).

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>This regulation applies to heater units SHTR1 to SHTR12, and RHTR1 to RHTR3. The heaters have an input rating greater than 10 MMBtu/hr and are subject per §60.40c(a). Since the units burn only natural gas, there are no applicable control, monitoring, or reporting requirements. Fuel use records are required per §60.48c(g).</p>
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 <b>Prior</b> to July 23, 1984	No		<p>Applies to tanks that have a storage capacity greater than 151,416 liters (40,000 gallons) that are used to store petroleum liquids for which construction is commenced after May 18, 1978 and prior to July 23, 1984.</p> <p>The tanks will be newer than the applicable dates for this rule.</p>
40 CFR 60 Subpart Kb	Standards of Performance for Storage Vessels for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced <b>After</b> July 23, 1984	Yes	IFR1 to IFR4	<p>The facility has storage vessels IFR1 to IFR4 each with storage capacity greater than 75 m<sup>3</sup> (471 bbl = 19,782 gal) that are used to store volatile organic liquids and for which construction, reconstruction, or modification commenced after 7/23/84.</p> <p>Although the hydrocarbons are stored prior to custody transfer, the storage volume for each of IFR1 to IFR4 is greater than 1589.874 m<sup>3</sup> (these tanks are 15,899 m<sup>3</sup>) so the exemption in §60.110b(d)(4) does not apply. The tanks use internal floating roof tanks to comply with the control requirements.</p> <p>Remaining tanks such as OTK1 to OTK6 are less than 1589.874 m<sup>3</sup> (all other oil/condensate tanks are 318 m<sup>3</sup> or less), so they do meet the exemption at §60.110b(d)(4).</p>
40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No		<p>Applies to turbines that have a heat input greater than the 10 MMBtu/hour threshold, that were installed after the October 3, 1977 applicability date and before the applicability date of February 18, 2005, for Subpart KKKK.</p> <p>The turbines to be installed at this facility will be subject to Subpart KKKK.</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
40 CFR 60 Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants: Commences construction, reconstruction, or modification <b>after</b> January 20, 1984 and commences construction, modification or reconstruction <b>before</b> August 23, 2011	No		<p>Affected Facility with Leaks of VOC from Onshore Gas Plants. Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, is subject to the requirements of this subpart. The group of all equipment (each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by this subpart) except compressors (defined in § 60.631) within a process unit is an affected facility. A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart.</p> <p>This facility will be constructed after 8/23/2011 and will be subject to Subpart OOOOa.</p>
40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO <sub>2</sub> Emissions	No		<p>This rule applies to natural gas processing plants meeting the applicability criteria of 40 CFR 60.640, including sweetening units followed by a sulfur recovery unit, constructed after January 20, 1984, and before August 23, 2011.</p> <p>This facility will be constructed after 8/23/2011 and will be subject to Subpart OOOOa.</p>
40 CFR Part 60 Subpart III (Quad-I)	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	No		<p>(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.</p> <p>This facility will not be installing CI engines.</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
40 CFR Part 60 Subpart JJJJ (Quad-J)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	GEN1 to GEN8	<p>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. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.</p> <p>As emergency RICE:</p> <p>Subject under §60.4230(a):</p> <p>(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is</p> <p>(iv) On or after January 1, 2009, for emergency engines.</p> <p><b>OR</b></p> <p>(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:</p> <p>(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).</p> <p>§60.4243(d) identifies requirements for emergency RICE.</p> <p>Subject to JJJJ Table 1 standards for emergency engines (g/hp-hr): NO<sub>x</sub> – 2.0, CO – 4.0, and VOC – 1.0.</p>
<p><b>Permit writer additional notes:</b> JJJJ does have emission standards for emergency RICE in Table 1. Further, JJJJ has 3 conditions to meet the definition of “emergency” in JJJJ, and it does not appear that all 3 conditions of the definition are met. Paragraphs (1) and (2) are met, but not (3) there is not a financial arrangement with another entity. Hence, 60.4230 (a)(3)(i)voluntary manufacture after &gt; July 1, 2007 and &gt; 500 hp; or (a)(4)(i) construction after June 12, 2006 and manufacture after &gt; July 1, 2007 and &gt; 500 hp; and Subject to JJJJ Table 1 standards for non-emergency engines (g/hp-hr): NO<sub>x</sub> – 2.0, CO – 4.0, and VOC – 1.0 (actually the emission standards are the same whether emergency or non-emergency if the engine &gt; 500 hp).</p>				
40 CFR Part 60 Subpart KKKK	Standards of Performance for Stationary	Yes	TUR1 to TUR4	Applies to units that have a heat input equal to or greater than 10 MMBtu/hour, high heating value (HHV), and that were

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
	Combustion Turbines			<p>installed after the applicability date of February 18, 2005. This subpart also applies to emissions from any associated heat recovery steam generators (HRSG) and duct burners (§60.4305(a)). HRSG and duct burners regulated under this subpart are exempted from the requirements of Subparts Da, Db, and Dc of this part (§60.4305(b)).</p> <p>TUR1-TUR4 are stationary combustion turbines with a heat input at peak load greater than 10 MMBtu/hr (HHV) and commenced construction after February 18, 2005. The units are subject to NSPS KKKK per §60.4305(a). The HRSG duct burners are also subject to the provisions of NSPS KKKK. HHV for turbines is 970 MMBtu/hr and for HRSG duct burner is 197 MMBtu/hr.</p> <p>NOx emission standards are at §60.4320(a) which refers to Table 1: 15 ppm at 15% O<sub>2</sub> (0.43 lbs/MWh).</p> <p>SO<sub>2</sub> emission standards are at §60.4330(a)(1): 0.90 pounds per megawatt-hour (lb/MWh) gross output; and (a)(2): 0.060 lb SO<sub>2</sub>/MMBtu heat input.</p>
40 CFR Part 60 Subpart OOOO (Quad-O)	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No		<p>The rule applies to “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.</p> <p>If there is a standard or other requirement, then the facility is an “affected facility.” Currently 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).</p> <p>There will not be any affected equipment subject to this rule in this rule’s applicability window, as this facility will</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				be constructed after 9/18/2015.
40 CFR Part 60 Subpart OOOOa (Quad-Oa)	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	FUG, ESTCOMP 1-17, EIACOMP 1-5, CRYO1-3, MOL1-3, AU1-AU3, and GBS1	<p>Applies to well facilities (60.5375a), centrifugal compressors (60.5380a), reciprocating compressors (60.5385a), pneumatic controllers (60.5390a), pneumatic pumps (60.5393a), storage vessels (60.5395a), fugitive emissions from well sites and compressor stations (60.5397a), equipment leaks at natural gas processing plants (60.5400a), and sweetening units at natural gas processing plants (60.5405). Affected facilities also include natural gas compressor stations, production gathering and booster stations, gas and oil well sites, that constructed, modified, or reconstructed after September 18, 2015.</p> <p><u>Equipment subject to OOOOa:</u></p> <p>The reciprocating compressors used for stabilization gas (ESTCOMP1-17) and instrument air (EIACOMP1-5) are subject to the rule at §60.5365a(c).</p> <p>The storage tanks will be constructed after the applicability date of the rule; however, the potential to emit (PTE) will be limited through the permit to less than 6 tpy for each vessel, with the exception of the gunbarrel vessel (GBS1). Tanks IFR1-4 will have floating roofs with PTE limits set at 5.2 tpy. Tanks OTK1-7 and GBS1 will be controlled by the enclosed combustion device (ECD1), and based on the calculations presented each vessel will be less than 6 tpy except for the GBS1. PTE for each of OTK1-6 as controlled by ECD1 will be less than 2 tpy. OTK7 and produced water tanks will be even lower. Hence, these tanks will not be subject per §60.5365a(e). The permit writer maintains a determination for continued review, if needed, regarding whether the GBS1 is subject to OOOOa (see permit writer detailed summary in the box below).</p> <p>The facility will be subject to leak monitoring from fugitive components (FUG) per §60.5365a(f). This applies to</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>the group of all equipment within a process unit. Process units are affected facilities and process units are defined as those that are involved in fraction of and the handling of NGL (defined at §60.5430a). Hence, the cryogenic Units CRYO1-3 and molecular sieves Units MOL1-3 are subject.</p> <p>The sweetening units (AU1-3) are subject per §60.5365a(g)(1), but since they will be below the processing threshold of 2 lt/d of sulfur (§60.5365a(g)(3)) they: “are required to comply with recordkeeping and reporting requirements specified in §60.5423a(c) but are not required to comply with §§60.5405a through 60.5407a and §§60.5410a(g) and 60.5415a(g).”</p> <p><u>Equipment not subject to OOOOa:</u></p> <p>Compressors, other: The electric drive centrifugal compressors for residue gas and regen gas will be exempt from §60.5365a(b) since they all use dry seals. The electric drive screw compressors for the refrigeration gas are exempt from the definition of centrifugal compressor per §60.5430a.</p> <p>Pneumatic controllers: The facility will be using compressed air for pneumatic controllers and not natural gas, so the pneumatic controllers themselves will not be subject at §60.5365a(d).</p>

**Permit Writer Notes on GBS1 (gunbarrel tank, vessel, or separator):** It is the permit writer’s interpretation of NSPS OOOOa that this vessel (GBS1) is subject to this rule. Detailed rationale is explained below. The GBS1 contributes 56% of all emissions being routed to the ECD1 (permit application Section 6 calculations). Oil tanks OTK1 to OTK6 contribute another 37% of all emissions going to the ECD1 (but there are 6 of these tanks, considerably reducing the contribution of each individual vessel and is why these 6 vessels are not subject to the rule). Hence, for the GBS1, despite 98% to 99% percent control efficiency of the GBS1, after controls this vessel still contributes at a minimum, 10.1 tpy PTE VOC emissions to the atmosphere (assuming 99% control, but the worst-case scenario at 98% control, would be 15.6 tpy VOC PTE, due to less control of heavier VOC coming from GBS1).

Gun barrel tanks: for separation of oils, water, and gases, use gravitational force, at atmospheric pressure, and have vents for gas release (hence making them potential emissions sources), unless the gas is controlled and sent to a combustion device or some other control device. They are used for short term storage of oils/liquids, as the

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
<p>liquids and gases pass through the vessel and become separated. The oil and gas industry themselves variously refers to them as tanks, vessels, or separators (gun barrel separator is a storage vessel).</p> <p>§60.5430a:  <i>Storage vessel</i> means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support.....For the purposes of this subpart, the following are not considered storage vessels:</p> <p>(2) Process vessels such as surge control vessels, bottoms receivers or knockout vessels.</p> <p>Another observation on storage vessel definition:  A storage vessel <b>“accumulates”</b> crude oil, condensate, intermediate hydrocarbons liquids, or produced water. Accumulate is a very key word. There <b>is no time period requirement that is defined or identified, all a storage vessel has to do is accumulate, for some period of time, crude oil, condensate, water, etc., this means a flow through vessel, such as a gunbarrel, meets the qualifications for a storage vessel.</b></p> <p>Hence, the applicant/permittee would have to very specifically state or define/classify that the gunbarrel at this facility is functioning as a process vessel, in order to not be subject to OOOOa. (Another note: a gunbarrel vessel located at a well affected facility per §60.5365a(a) would be subject to OOOOa.)</p>				
40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No		<p>§60.5508 This subpart establishes emission standards and compliance schedules for the control of greenhouse gas (GHG) emissions from a steam generating unit, IGCC, or a stationary combustion turbine that commences construction after January 8, 2014 or commences modification or reconstruction after June 18, 2014. An affected steam generating unit, IGCC, or stationary combustion turbine shall, for the purposes of this subpart, be referred to as an affected EGU.</p> <p>The rule is not applicable to the turbines at this facility because they will not meet all of the applicability criteria at §60.5509(a). Power will not be sold to a utility distribution system per §60.5509(a)(2).</p>
40 CFR 60 Subpart UUUUa	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No		<p>This rule applies to States with affected units as defined under Subpart TTTT (see above) and sets guidelines for State Implementation Plans (§60.5700a purpose, §60.5710a applicability, and §60.5805a definitions).</p> <p>There are no units subject to TTTT in this permit action and the rule is not applicable to this permit action.</p>
NESHAP Subpart A	General Provisions	No	See sources	Applies if any other subpart applies and no subparts apply.

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
(40 CFR 61)			subject to a Subpart in 40 CFR 61	
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies and Subparts DDDDD, HH, YYYY, and ZZZZ apply.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	OTK1 to OTK7, PWTK1 to PWTK2, GBS1	<p>In accordance with the definition of a major source as defined in 40 CFR 63.761, this facility qualifies as a MAJOR Source of HAPs. The types of sources/equipment potentially subject for major sources are identified at §63.760(b)(1) and include 4 source categories: 1) glycol dehydrators, 2) storage vessels with the potential for flash emissions, 3) fugitives (group of all equipment in VHAP service at natural gas processing plants), and 4) compressors in VHAP service at natural gas processing plants.</p> <p>The following applicability determinations have been made by the permit writer for this facility:</p> <p>Glycol dehydrators: There will not be any glycol dehydrators as this facility.</p> <p>Storage vessels (standards at §63.766): Vessels OTK1 to OTK7, PWTK1 to PWTK2, as well as GBS1 will be using a closed vent system connected to an enclosed combustion device (ECD1) to comply with §63.766(b). Hence, these units are subject and will meet the control conditions specified in §63.771(c) or combination of controls specified in §63.771(d). Storage vessels IFR1 to IFR4, which have floating roofs, will not be subject to HH as they meet requirements of NSPS Kb as specified at §63.766(d).</p> <p>Fugitives and compressors are subject to NSPS OOOOa and will meet OOOOa requirements, hence MACT HH will not</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				apply per §63.769(b).
40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities	No		<p>This subpart applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas <u>prior</u> 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.</p> <p>This facility does not meet the definitions of transmission and storage for distribution to a local distribution company or to a final end user (§63.1271).</p>
40 CFR 63 Subpart ZZZZ (Quad-Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes, initial notification as new units	GEN1 to GEN8	<p>A facility is subject to this subpart if they own or operate a 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.</p> <p>This facility will have eight (8) RICE emergency generators each with capacity of 3448 hp. All 8 engines will be 4-stroke lean-burn (4SLB) units. Although these are called emergency RICE by the applicant, they do not meet the definition of “emergency stationary RICE” in the rule. These 8 units do meet the definition of “limited use stationary RICE” at §63.6675 by not operating more than 100 hrs/yr.</p> <p>The 8 RICE will be defined as “new” stationary RICE per §63.6590(a)(2)(i) and as limited use RICE per §63.6590(b)(1)(ii) they will not be subject to ZZZZ except for the requirement for initial notification per §63.6645(f).</p>
40 CFR 63 Subpart DDDDD (5-Ds)	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	Yes	SHTR1-12, RHTR1-3, CHTR1-3	Facility 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 §63.2 or §63.761 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>§63.7491.</p> <p>The facility is a major source of HAP.</p> <p>Per §63.7500(e) and §63.7540, Units SHTR1-12, RHTR1-3, and CHTR1-3 heaters/boilers are designed to burn gas 1 fuels and must comply with work practice standards in Table 3.</p>
40 CFR 63 Subpart CCCCC (6-Cs)	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities	No		<p>§ 63.11111 Am I subject to the requirements in this subpart?</p> <p>(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.</p> <p>This facility is not planning to have a gasoline dispensing facility (GDF). It is also not an area source.</p>
40 CFR 63 Subpart JJJJJ (6-Js)	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	No		<p>A facility is subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.</p> <p>This facility is not an area source per §63.11193 and the heaters/boilers will burn natural gas and further not subject per §63.11195(e). Hence, this rule does not apply.</p>
40 CFR 63 Subpart YYYY	National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (Turbine MACT)	Yes	TUR1-4	<p>This rule applies to turbines operated at major sources of HAP per §63.6080 and §63.6085.</p> <p>a) Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>generating system.</p> <p>Per §63.6100 emissions and operating limitations are in Tables 1 and 2. Per Table 1: “limit the concentration of formaldehyde to 91 ppbvd or less at 15-percent O<sub>2</sub>, except during turbine startup. Per Table 2: “maintain the 4-hour rolling average of the catalyst inlet temperature within the range suggested by the catalyst manufacturer.”</p> <p>The turbines are subject to Subpart YYYYY per §63.6085. The permittee shall meet the formaldehyde emissions according to this rule and the permittee has provided HAP and VOC emissions calculations for the Cogeneration Turbines in Section 6 of the application.</p>
40 CFR 64	Compliance Assurance Monitoring (CAM)	Yes	TUR1-4, AU1-3, OTK1-6, OTK7, GBS1, ECD1, and TO1-3	<p>CAM applies to units that are equipped with a control device and the uncontrolled (pre-controlled) emissions for each unit are above the Title V major source thresholds (40 CFR 64.2(a)).</p> <p>For this facility the following units will be subject to CAM: turbines (TUR1-4) and these units will have catalytic reduction; amine units (AU1-3) controlled by the thermal oxidizers (TO1-3); oil storage tanks (OTK1-6) controlled by the enclosed combustion device (ECD1); slop oil tank (OTK7) controlled by ECD1; and gunbarrel separator (GBS1) controlled by ECD1.</p> <p>CAM is implemented under the Title V (TV) program and will be addressed in the future when the permittee applies for their TV permit. A CAM Plan with permit conditions will be written at that time.</p>
40 CFR 68	Chemical Accident Prevention	No		<p>Applies to 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.</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				The applicant has stated that this facility will not store more than a threshold quantity of a regulated substance in a process, as determined under §68.115 Threshold determination and §68.130.
40 CFR 72	Title IV – Acid Rain	No		(a) Each of the following units shall be an affected unit, and any source that includes such a unit shall be an affected source, subject to the requirements of the Acid Rain Program: (1) A unit listed in table 1 of §73.10(a) of this chapter.(2) A unit that is listed in table 2 or 3 of §73.10 of this chapter and any other existing utility unit, except a unit under paragraph (b) of this section.  This facility will not generate commercial electric power.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No		40 CFR 82 may apply if you:  <b>(40 CFR 82.1 and 82.100)</b> produce, transform, destroy, import or export a controlled substance or import or export a controlled product;  <b>(40 CFR 82.30)</b> if you perform service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner;  <b>(82.150)</b> if you service, maintain, or repair appliances, dispose of appliances, refrigerant reclaimers, <b>if you are an owner or operator of an appliance</b> , if you are a manufacturer of appliances or of recycling and recovery equipment, if you are an approved recycling and recovery equipment testing organization, and/or if you sell or offer for sell or purchase class I or class I refrigerants.  The applicant has stated that this rule will not apply per 40 CFR 82.1(a) as the facility will not service, maintain or repair class I or class II appliances.

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:**  
Table as presented by the applicant in Section 2 of the application, Table 2-B.

**NSR Exempt Equipment** (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 <sup>2</sup>
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction <sup>2</sup>
LOV1	Turbine Lube Oil Vent	Mitsubishi	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
LOV2	Turbine Lube Oil Vent	Mitsubishi	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
LOV3	Turbine Lube Oil Vent	Mitsubishi	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
LOV4	Turbine Lube Oil Vent	Mitsubishi	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
TK5001	Thermal Fluid Surge Tank (Nitrogen and Trace VOC)	TBD	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
TK5002	Thermal Fluid Surge Tank (Nitrogen and Trace VOC)	TBD	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
40A	1000 bbl Demin Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
40B	1000 bbl Raw Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
78A	1000 bbl Raw Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
78B	1000 bbl Raw Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
77	1000 bbl Firefighting Foam Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
70	100 bbl Lube Oil Tank	TBD	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
71	100 bbl Lube Oil Tank	TBD	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD
72	100 bbl Lube Oil Tank	TBD	N/A	N/A	20.2.72.202.B.5	TBD
			N/A	N/A	Units with PTE < 0.5 tpy	TBD

41	Amine Makeup Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
39	Utility Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
40	Water Makeup Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
41	Utility Water Tank	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
EREGCOMP1 - EREGCOMP3	Electric Regen Gas Compressors	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
EREFCOMP1 - EREFCOMP3	Electric Refrigeration Gas Compressors	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
*ESTCOMP1 - *ESTCOMP17	Electric Oil/Condensate Stabilizer Gas Compressors	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
ERESCOMP1 - ERESCOMP5	Electric Residue Gas Compressors	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD
*EIACOMP1 - *EIACOMP5	Electric Instrument Air Compressors	TBD	N/A	N/A	Not a source of regulated emissions	TBD
			N/A	N/A		TBD

**\*Permit writer note:** ESTCOMP1 to ESTCOMP17 (oil/condensate stabilizer compressors) and EIACOMP1 to EIACOMP5 (electric instrument air compressors) are all reciprocating compressors subject to NSPS OOOOa (see regulatory section above). Hence, although they may meet the definition of exempt equipment under 20.2.72 NMAC, a federal rule applies, and these units would not be exempt under 20.2.74 NMAC (or under Title V, 20.2.70 NMAC). The other compressors listed in the table above are either dry seal centrifugal compressors or screw compressors that are not subject to NSPS OOOOa.

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

Note: As a fully new facility and new permit all conditions are new. Permit conditions follow standard NMED-AQB monitoring protocol language, with any additional language, requirements, and monitoring to address operations for this particular facility. As a PSD permitting action there are also specific conditions and requirements for PSD actions.

A.

#### 15.0 **For Title V action: Cross Reference Table between NSR Permit PSD-8245 and TV Permit (no TV permit at this time, one will be required in the future). NSR permit conditions cross referenced to the TV permit are federally enforceable conditions, and therefore brought forward into the TV permit:**

This section is not applicable at present as this facility does not yet have a TV permit.

**16.0 Permit specialist's notes to other NSR or Title V permitting staff concerning certain equipment or particular language in permit conditions.**

- A. The Husky Gas Plant includes 4 CoGen turbines rated at 120 MW each and each controlled with SCR (selective catalytic reduction). The SCR process uses ammonia (NH<sub>3</sub>) injection for NO<sub>x</sub> control. The ammonia emissions will be 278 tpy. That amount is only 3 tpy less than the entire Hobbs Generating Station (which emits 281 tpy ammonia). Due to the amount of ammonia emissions projected for the Husky facility, AQB added ammonia emission limits and testing as was done previously for the Hobbs Generating Station NSR and Title V permits.
- B. Opacity and no visible emissions, 20.2.61 NMAC, Condition A206.A: For combustion units implementing 98-99% destruction rate efficiency (DRE) to calculate emissions for pollutants such as VOCs, HAPs, and H<sub>2</sub>S. The “no visible emissions” requirement for the flares (FL1 to FL3), the thermal oxidizers (TO1 to TO3), and the enclosed combustion device (ECD1) is to demonstrate compliance with the VOC, HAP, and H<sub>2</sub>S destruction efficiencies of 98-99% or more that was used in emissions calculations.