

13201 NW Freeway, Suite 220 Houston, Texas 77040 T 713.533.8511 F 346.651.1985 www.eosolutions.net

July 26, 2024

FedEx No.: 777613589108

New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite #1 Santa Fe, New Mexico 87505-1816

Re: NSR Permit No. 39-M9 Revision Application DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico Tempo No.: 589-PRN20200002 AIRs No. 35 0250035

Dear Sir/Madam,

On behalf of DCP Operating Company, LP, Environmental Operational Solutions, LLC "EOSolutions" is submitting the enclosed NSR Permit No. 39-M9 revision application to address the following:

- Increase in condensate throughputs in both the site's stabilized and unstabilized condensate tanks. This is from larger volumes of field condensate that will be entering into the gas plant through their inlet gas pipelines. Total throughputs, after increases, are 2,520 barrels per day (bbl/day) stabilized condensate and 3,240 bbl/day unstabilized condensate.
- 2) Increase condensate truck loading throughputs for both the stabilized and unstabilized condensate streams, Units LOAD-STAB and LOAD-UNSTAB.
- 3) Represent emissions from the condensate tanks to the site's main flare, Unit 4A. The stabilized and unstabilized condensate tank vapors are controlled by a VRU (VRU 1 & VRU 2/Unit ID TK-VRU) that returns the gas back to the process. Should the primary and secondary VRUs not function, then the tanks' vapor space, if sees high enough pressure, will vent to the site's flare (Unit 4A).
- 4) Represent two (2) existing produced water tanks (400A and 400B) and their associated loading operation, Unit LOAD-PW.
- 5) Represent one existing VRU that has been used for the PW tanks (TK-PWVRU) and add a secondary/redundant vapor recovery unit (VRU), Unit TK-PWVRU, for the control of emissions from the produced water tanks and associated loading operation.
- 6) Remove TK-VRUTMP.
- 7) Update the turbine serial numbers for Unit IDs 29 and 31.

NSR Permit No. 39-M9 Revision Application DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico Tempo No.: 589-PRN20200002 AIRs No. 35 0250035 July 26, 2024 Page 2 of 2

- 8) Update tank Unit IDs as follows:
  - a. two stabilized condensate tanks 400D and 400E
  - b. seven unstabilized condensate tanks B1 through B5, 400C and 400F.
- 9) Correct typographical error in the regenerator heater (Unit 34) PM<sub>10</sub> and PM<sub>2.5</sub> emissions.
- 10) Delete compressor engines Unit IDs 8 and 9 as these sources have been permanently shut down and are not operable.

There are no physical changes occurring at the plant site apart from the installation of the secondary VRU for the produced water tanks. The processing rate of the plant remains the same, and there is no new processing equipment being added nor are any new emissions sources being installed with this permit revision.

The enclosed NSR permit revision application (original and a copy) includes all the required New Mexico Environment Department's forms and supporting documents along with the required \$500 permit application filing fee. Additionally, the electronic files of the application are provided in required formats in duplicate on two separate CDs.

Thank you in advance for your consideration of this application. We request that EOSolutions be copied on any correspondence regarding this registration, including final action. If you have any questions or comments, please contact me directly at (713) 983-0112 or via email at <u>elena.hofmann@eosolutions.net.</u>

Sincerely,

Elena L. Hofmann President

Enclosures





## Significant Revision (PSD Minor Modification) to NSR Permit 39-M9

DCP Operating Company, LP Linam Ranch Gas Plant Hobbs, Lea County, NM Agency No. 589 AIRS No: 35 0250035

July 2024

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# Section 1 General Facility Information

DCP Operating Company, LP (DCP) owns and operates the Linam Ranch Gas Plant (Linam Ranch GP), a natural gas processing plant, located in Lea County, New Mexico approximately 7 miles west of Hobbs. The plant is currently operating under New Source Review (NSR) Permit 0039-M9 and Title V permit P094-R3. Key operations and processing units at the facility include natural gas compression, a gas sweetening unit, a dehydration unit, and a natural gas liquids extraction unit. Additionally, the acid gas generated during the sweetening is directed to a dedicated acid gas injection well.

DCP is submitting this significant revision (PSD minor modification) permit application (pursuant to 20.2.72.219.D.(1)(a) NMAC) to revise its current Air Quality NSR Permit No. 0039-M9 for Linam Ranch Gas Plant.

The proposed modification consists of the following operational changes and updates to permit representations:

- Increase in condensate throughputs in both the site's stabilized and unstabilized condensate tanks. This is from larger volumes of field condensate that will be entering into the gas plant through their inlet gas pipelines. Total throughputs, after increases, are 2,520 barrels per day (bbl/day) stabilized condensate and 3,240 bbl/day unstabilized condensate.
- 2) Increase condensate truck loading throughputs for both the stabilized and unstabilized condensate streams, Units LOAD-STAB and LOAD-UNSTAB.
- 3) Represent emissions from the condensate tanks to the site's main flare, Unit 4A. The stabilized and unstabilized condensate tank vapors are controlled by a VRU (VRU 1 & VRU 2/Unit ID TK-VRU) that returns the gas back to the process. Should the primary and secondary VRUs not function, then the tanks' vapor space, if sees high enough pressure, will vent to the site's flare (Unit 4A).
- 4) Represent two (2) existing produced water tanks (400A and 400B) and their associated loading operation, Unit LOAD-PW.
- 5) Represent one existing VRU that has been used for the PW tanks (TK-PWVRU) and add a secondary/redundant vapor recovery unit (VRU), Unit TK-PWVRU, for the control of emissions from the produced water tanks and associated loading operation.
- 6) Remove TK-VRUTMP.
- 7) Update the turbine serial numbers for Unit IDs 29 and 31.
- 8) Update tank Unit IDs as follows:
  - a. two stabilized condensate tanks 400D and 400E
  - b. seven unstabilized condensate tanks B1 through B5, 400C and 400F.
- 9) Correct typographical error in the regenerator heater (Unit 34) PM<sub>10</sub> and PM<sub>2.5</sub> emissions.



10) Delete compressor engines Unit IDs 8 and 9 as these sources have been permanently shut down and are not operable.

There are no physical changes occurring at the plant site apart from the installation of the secondary VRU for the produced water tanks. The processing rate of the plant remains the same, and there is no new processing equipment being added nor are any new emissions sources being installed with this permit revision.



	Project Requested	DCF L		ng Comp nch Gas	any, LP Plant	ed in NME	ED Table :	2-E)					
Unit #	Source Description	Ν	O <sub>x</sub>	0	:0	V	oc	S	<b>O</b> <sub>2</sub>	PI	M <sub>10</sub>	PI	M <sub>2.5</sub>
Unit #	Source Description	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Proposed Emissic	ons												
4A	ESD Flare	0.41	1.04	1.41	4.66	1.35	1.29	0.02	0.10				
34	Regenerator Heater	1.67	7.30	1.40	6.13	0.09	0.40	0.01	0.04	0.13	0.55	0.13	0.55
400A	Produced Water Tank					0.04	0.003						
400B	Produced Water Tank					0.04	0.003						
TK-VRU <sup>(1)</sup>	7 Unstabilized and 2 Stabilized Condensate Tanks controlled by common VRU												
TK-PWVRU <sup>(1)</sup>	Vents from 2 Produced Water Tanks												
TK-VRUTMP <sup>(2)</sup>	Two Condensate Tanks controlled by common VRU (Previously listed as TK-39 and 40)												
LOAD-STAB	Stabilized Condensate Truck Loadout					1.39	3.76						
LOAD-PW	Produced Water Truck Loadout					<0.01	<0.01						
LOAD-UNSTAB	Unstabilized Condensate Truck Loadout					<0.01	<0.01						
HAUL	Hauling emissions from condensate loading out of facility									0.20	0.49	0.03	0.08
Current Emission	S												
4A	ESD Flare	0.23	1.00	1.05	4.58	0.17	0.76	0.02	0.10				
34	Regenerator Heater	1.67	7.30	1.40	6.13	0.09	0.40	0.01	0.04	0.13	0.04	0.13	0.04
400A	Produced Water Tank												
400B	Produced Water Tank							_					
TK-VRU	7 Unstabilized and 2 Stabilized Condensate Tanks controlled by common VRU					27.54	6.03						
TK-VRUTMP <sup>(2)</sup>	Two Condensate Tanks controlled by common VRU (Previously listed as TK-39 and 40)					24.56	5.38						
LOAD-STAB	Stabilized Condensate Truck Loadout					0.67	2.95						
LOAD-PW	Produced Water Truck Loadout												
LOAD-UNSTAB	Unstabilized Condensate Truck Loadout					<0.01	<0.01						
HAUL	Hauling emissions from condensate loading out of facility									0.10	0.37	0.01	0.05
	REVISED PROJECT EMISSION TOTALS	2.08	8.34	2.81	10.79	2.92	5.45	0.03	0.14	0.33	1.04	0.16	0.63
	CURRENT PROJECT EMISSION TOTALS	1.90	8.30	2.45	10.71	53.04	15.53	0.03	0.14	0.23	0.42	0.14	0.09
	EMISSIONS INCREASES		0.04		0.08		-10.07		0.00		0.63		0.54
	PSD Significance Level		40		100		40		40		15		10
	Exceeds Thresholds?		No		No		No		No		No		No

(1) Unit IDs TK-VRU and TK-PWVRU operate independently of each other and at the same time.

(2) Unit TK-VRUTMP is being deleted from the permit.

Table 1-2 Site Information DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

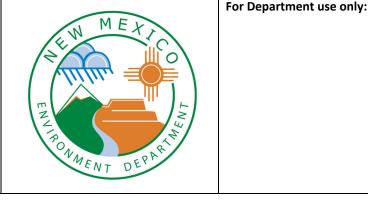
Administrative Information					
Organization Name:	DCP Operating	g Company, LP			
Facility Name:	Linam Rand	ch Gas Plant			
Agency ID (NMED Facility ID):	50	589			
Nearest City/Town:	Но	Hobbs			
	The facility is 7 miles West of Hob				
County:	L	ea			
Elevation (feet):	3,7	710			
Location (UTM Zone 13):	660741 UTM E	3618806 UTM N			
Location (dec deg):	32.695278°N	-103.285278°W			
Permit/NOI/NPR Number:	39-	-M9			

Proposed Facility Input Capacity and Production Rates						
	Hourly:	240.00	bbl/hr			
Oil	Daily:	5,760	bbl/d			
	Annually:	2,102,400	bbl/yr			
	Hourly:	9.44	MMSCF/h			
Natural Gas	Daily:	227	MMSCF/d			
	Annually:	82,694	MMSCF/y			
	Hourly:	0.11	bbl/hr			
Produced Water	Daily:	3	bbl/d			
	Annually:	1,000	bbl/yr			

#### **Mail Application To:**

New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505

Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb



# Universal Air Quality Permit Application

#### Use this application for NOI, NSR, or Title V sources.

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well.

 This application is submitted as (check all that apply):
 Request for a No Permit Required Determination (no fee)

 Updating an application currently under NMED review.
 Include this page and all pages that are being updated (no fee required).

 Construction Status:
 Not Constructed
 Existing Permitted (or NOI) Facility
 Existing Non-permitted (or NOI) Facility

 Minor Source:
 NOI 20.2.73 NMAC
 20.2.72 NMAC application or revision
 20.2.72.300 NMAC Streamline application

 Title V Source:
 Title V (new)
 Title V renewal
 TV minor mod.
 TV significant mod.
 TV Acid Rain:
 New
 Renewal

 PSD Major Source:
 PSD major source (new)
 Minor Modification to a PSD source
 a PSD major modification

#### Acknowledgements:

I acknowledge that a pre-application meeting is available to me upon request. 🔲 Title V Operating, Title IV Acid Rain, and NPR applications have no fees.

S \$500 NSR application Filing Fee enclosed OR □ The full permit fee associated with 10 fee points (required w/ streamline applications).

Check No.: 00944 in the amount of \$500

I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.

I acknowledge there is an annual fee for permits in addition to the permit review fee: <u>www.env.nm.gov/air-quality/permit-fees-</u> <u>2/.</u>

This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full \$500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: <a href="http://www.env.nm.gov/air-quality/small-biz-eap-2/">www.env.nm.gov/air-quality/small-biz-eap-2/</a>.)

**Citation:** Please provide the **low level citation** under which this application is being submitted: **20.2.72.219.D.(1)(a) NMAC** (e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

## Section 1 – Facility Information

Sec	tion 1-A: Company Information	<mark>AI #</mark> if known: 589	<mark>Updating</mark> Permit/NOI #: 39-M9		
1	Facility Name: Artesia Gas Plant	Plant primary SIC Code (4 digits): 1321			
		Plant NAIC code (6 digits): 211130			
а	<ul> <li>Facility Street Address (If no facility street address, provide directions from a prominent landmark): From Hobbs, NM travel</li> <li>7 miles west on Hwy 62/180. Plant is adjacent to highway on the south.</li> </ul>				
2	Plant Operator Company Name: DCP Operating Company, LP	Phone/Fax: 713-735-39	978		
а	Plant Operator Address: 2331 CityWest Blvd., Houston, TX 77042				

b	Plant Operator's New Mexico Corporate ID or Tax ID: 036785						
3	Plant Owner(s) name(s): DCP Operating Company, LP	Phone/F	ax: 713-735-3978				
а	Plant Owner(s) Mailing Address(s): 2331 CityWest Blvd., Houston, T	7042					
4	Bill To (Company): DCP Operating Company, LP	Phone/F	ax: 713-735-3978				
а	Mailing Address: 2331 CityWest Blvd., Houston, TX 77042	E-mail: s	teve.torpey@p66.com				
5	Preparer: Consultant: Elena Hofmann	Phone/F	ax: 713-983-0112/346-651-1985				
а	Mailing Address: 13201 NW Freeway, #220, Houston, TX 77040	E-mail: e	elena.hofmann@eosolutions.net				
6	Plant Operator Contact: Mr. Nick Case	Phone/F	ax: 575-677-5225				
а	Address: 2331 CityWest Blvd., HQ-08N-N860-3, Houston, TX 77042	E-mail: N	Nicholas.l.case@p66.com				
7	Air Permit Contact: Mr. Steven R. Torpey	Title: Se	nior Air Permitting Engineer				
а	E-mail: steve.torpey@p66.com	Phone/F	Phone/Fax: 832-765-3444/832-765-9844				
b	Mailing Address: 2331 CityWest Blvd., HQ-08N-N860-3, Houston, TX	/042					
С	The designated Air permit Contact will receive all official correspond	ce (i.e. letter	s, permits) from the Air Quality Bureau.				
Sec	tion 1-B: Current Facility Status						
1.a	Has this facility already been constructed? 🛛 Yes 🔲 No	1.b If yes to c New Mexico	o If yes to question 1.a, is it currently operating in w Mexico? Xes No				
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? Yes 🖾 No	to a construc	yes to question 1.a, was the existing facility subject a construction permit (20.2.72 NMAC) before bmittal of this application?  Ves  No				
3	Is the facility currently shut down? 🔲 Yes 🖾 No 🛛 If yes, give n	nth and year	of shut down (MM/YY):				
4	Was this facility constructed before 8/31/1972 and continuously ope	ted since 19	72? 🛛 Yes 🔲 No				
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972?						
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☑ Yes □ No	If yes, th	e permit No. is: P094-R3				
7	Has this facility been issued a No Permit Required (NPR)?	If yes, th	e NPR No. is:				
8	Has this facility been issued a Notice of Intent (NOI)? 🔲 Yes 🛛 No	If yes, th	e NOI No. is:				
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC	If yes, th	If yes, the permit No. is: 39-M9				

Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? 10 If yes, the register No. is: 🗌 Yes 🛛 No

## Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)						
а	a Current Hourly: 9.44 MMscf (actual) Daily: 227 MMscf (approximate) Annually: 82,694 MMscf (approximate)						
b	b Proposed Hourly: * Daily: * Annually: *						
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)						
а	a Current Hourly: 9.44 MMscf (actual) Daily: 227 MMscf (approx		Daily: 227 MMscf (approximate)	Annually: 82,694 MMscf (approximate)			
b	Proposed	Hourly: *	Daily: *	Annually: *			

If yes, the permit No. is: 39-M9

🛛 Yes 🗌 No

### Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 32.695278	Longitude	(decimal degrees): -103.285278	}	County: Lea	Elevation (ft): 3,710
2	UTM Zone: 🔲 12 or 🔀 13		Datum: 🗌 NAD 83 🛛	VGS	84	
а	UTM E (in meters, to nearest 10 meters): 660,74	1 mE	UTM N (in meters, to nearest 10 m	eters)	: 3,618,806 mN	
3	Name and zip code of nearest New Mexic	o town: Hob	bs, NM, 88240			
4	Detailed Driving Instructions from nearest on Hwy 62/180. Plant is adjacent to the hi	•		Froi	m Hobbs, NM, tra	vel 7 miles west
5	The facility is 7 miles west of Hobbs, NM 8	88240				
6	Land Status of facility (check one): 🔀 Pri	vate 🔲 Ind	ian/Pueblo 🔲 Government [	В	LM 🔲 Forest Se	rvice 🔲 Military
7	List all municipalities, Indian tribes, and co which the facility is proposed to be constr	ucted or ope	erated: Municipality: Hobbs, NN	1, Co	ounty: Eddy Count	ty
8	<b>20.2.72</b> NMAC applications <b>only</b> : Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see <u>www.env.nm.gov/air-quality/modeling-publications/</u> )?  IN Yes IN NO (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: State: Texas, 13.0 miles.					
9	Name nearest Class I area: Carlsbad Caver	ns National	Park			
10	Shortest distance (in km) from facility bou	ndary to the	boundary of the nearest Class	l are	a (to the nearest 10 r	neters): ~110 Km
11	Distance (meters) from the perimeter of t lands, including mining overburden remov		-	-		
12	Method(s) used to delineate the Restricted Area: Continuous Fencing <b>"Restricted Area"</b> is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.					
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? Yes No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.					
14	Will this facility operate in conjunction with If yes, what is the name and permit numb			rope	erty? 🛛 No	Yes

### Section 1-E: Proposed Operating Schedule (The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.)

1	Facility <b>maximum</b> operating ( $\frac{hours}{day}$ ): 24	( <del>days</del> ( <del>week</del> ): 7	( <del>weeks</del> year): 52	( <u>hours</u> ): 8,760		
2	Facility's maximum daily operating schedule (if less	than 24 hours day )? Start: NA	□AM □PM	End: NA	AM PM	
3	Month and year of anticipated start of construction: NA – no construction is proposed					
4	Month and year of anticipated construction completion: NA – no construction is proposed					
5	Month and year of anticipated startup of new or modified facility: NA – no construction is proposed					
6	Will this facility operate at this site for more than o	one year? 🛛 Yes 🗌 No				

#### Section 1-F: Other Facility Information

1 Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? Yes No If yes, specify: NOV # DCP-0589-2101

а	If yes, NOV date or description of issue: 04/24/2020			NOV Tracking No: DCP-0589-2101	
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? Yes X No				
С	Document Title: NA	Date: NA		nent # (or nd paragraph #):  NA	
d	Provide the required text to be inserted in this permit:				
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? 🛛 Yes 🔲 No				
3	Does this facility require an "Air Toxics" permit under 20.2	.72.400 NMAC & 20.2	2.72.502, 1	Tables A and/or B? 🔲 Yes 🛛 No	
4	Will this facility be a source of federal Hazardous Air Pollut	ants (HAP)? 🔀 Yes	🗌 No		
а	If Yes, what type of source? $\square$ Major ( $\square \ge 10$ tpy of any single HAP OR $\square \ge 25$ tpy of any combination of HAPS) OR $\square$ Minor ( $\square < 10$ tpy of any single HAP AND $\square < 25$ tpy of any combination of HAPS)				
5	Is any unit exempt under 20.2.72.202.B.3 NMAC?   Yes  No				
	If yes, include the name of company providing commercial	electric power to the	e facility: _		
а	Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.				

### Section 1-G: Streamline Application (This section applies to 20.2.72.300 NMAC Streamline applications only)

1	I have filled out Section 18, "Addendum for Streamline Applications."	N/A (This is not a Streamline application.)

### Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications), and/or 20.2.70 NMAC (Title V))

-							
1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Mr. David Jos	Phone: 720-320-5616					
а	R.O. Title: Vice President, Region Ops - Permian	R.O. e-mail: david.m.jost@p66.com					
b	R. O. Address: 2331 CityWest Blvd, Houston, Texas 77042						
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Mr. Scot N	Aillican	Phone: 575-234-6441				
а	A. R.O. Title: Manager, South G&P Region	A. R.O. e-mail: sco	t.a.millican@p66.com				
b	A. R. O. Address: 2331 CityWest Blvd, Houston, Texas 77042						
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): NA						
4	Name of Parent Company ("Parent Company" means the primary permitted wholly or in part.): Phillips 66	name of the organiz	zation that owns the company to be				
а	Address of Parent Company: 2331 CityWest Blvd, Houston, Texas	77042					
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): NA						
6	Telephone numbers & names of the owners' agents and site contained	acts familiar with pla	ant operations: NA				
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: NA						

## Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (**NOI**), a 20.2.70 NMAC (**Title V**), a 20.2.72 NMAC (**NSR** minor source), or 20.2.74 NMAC (**PSD**) application package shall consist of the following:

#### Hard Copy Submittal Requirements:

- One hard copy original signed and notarized application package printed double sided 'head-to-toe' <u>2-hole punched</u> as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use numbered tab separators in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.
- 2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This <u>copy</u> should be printed in book form, 3-hole punched, and <u>must be double sided</u>. Note that this is in addition to the head-to-to 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.
- 3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, two CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

#### Electronic files sent by (check one):

CD/DVD attached to paper application

Secure electronic transfer. Air Permit Contact Name\_\_\_\_\_, Email\_\_\_\_\_ Phone number \_\_\_\_\_

a. If the file transfer service is chosen by the applicant, after receipt of the application, the Bureau will email the applicant with instructions for submitting the electronic files through a secure file transfer service. Submission of the electronic files through the file transfer service needs to be completed within 3 business days after the invitation is received, so the applicant should ensure that the files are ready when sending the hard copy of the application. The applicant will not need a password to complete the transfer. **Do not use the file transfer service for NOIs, any type of GCP, or technical revisions to NSR permits.** 

- 4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.
- 5) If air dispersion modeling is required by the application type, include the NMED Modeling Waiver and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling <u>summary report only</u> should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.
- 6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
  - a. one additional CD copy for US EPA,
  - b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
  - c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

If the application is submitted electronically through the secure file transfer service, these extra CDs do not need to be submitted.

#### Electronic Submittal Requirements [in addition to the required hard copy(ies)]:

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the

text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

- 3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the core permit number (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the section # (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the header information throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

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- Section 11: Source Determination
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# Section 2 Tables

This section contains universal air quality permit application Tables 2-A through 2-P.



#### Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

					Manufact-	Requested	Date of Manufacture <sup>2</sup>	Controlled by Unit #	Source Classi-			RICE Ignition	
Unit Number <sup>1</sup>	Source Description	Make	Model #	Serial #	urer's Rated Capacity <sup>3</sup> (Specify Units)	Permitted Capacity <sup>3</sup> (Specify Units)	Date of Construction/ Reconstruction <sup>2</sup>	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of Equi	ipment, Check One	Type (CI, SI, 4SLB, 4SRB, 2SLB) <sup>4</sup>	Replacing Unit No.
2	Amine Plant Flare	Flare King	N/A	N/A	1.2	1.2	2005	N/A	31000205	X Existing (unchanged)	To be Removed	N/A	N/A
	East				MMBtu/hr	MMBtu/hr	2005	2		New/Additional To Be Modified	Replacement Unit To be Replaced		
4A	ESD Flare	John Zink	N/A	N/A	3.2	3.2	2006	N/A	31000209	<ul> <li>Existing (unchanged) New/Additional</li> </ul>	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	2008	4A		X To Be Modified	To be Replaced		
6	2SLB RICE	Clark	TLA-6	73779	2000 HP	2000 HP	1974 or before	N/A	20200252	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	2SLB	N/A
							1974	6		To Be Modified	To be Replaced		
7	2SLB RICE	Clark	TLA-6	73780	2000 HP	2000 HP	1974 or before	N/A	20200252	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	2SLB	N/A
							1974	7		To Be Modified	To be Replaced		
8	2SLB RICE	Clark	HBA-6	36288	1267 HP	1267 HP	1951	N/A	20200252	<ul> <li>Existing (unchanged) New/Additional</li> </ul>	X To be Removed Replacement Unit	2SLB	N/A
							1954	8		To Be Modified	To be Replaced		
9	2SLB RICE	Clark	HBA-6	736290	1267 HP	1267 HP	1951	N/A	20200252	<ul> <li>Existing (unchanged) New/Additional</li> </ul>	X To be Removed Replacement Unit	2SLB	N/A
							1954	9		To Be Modified	To be Replaced		
10	2SLB RICE	Clark	HBA-6	36289	1267 HP	1267 HP	1951	N/A	20200252	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	2SLB	N/A
							1954	10		To Be Modified	To be Replaced		
11	2SLB RICE	Clark	HBA-6	36303	1267 HP	1267 HP	1951	N/A	20200252	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	2SLB	N/A
							1954	11		To Be Modified	To be Replaced		
28	Turbine	Solar	T-60	TC12227	63.4	63.4	2011	N/A	20200201	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	2012	28		To Be Modified	To be Replaced		
29	Turbine	Solar	T-70	TC95592	77.6	77.6	1995	N/A	20200201	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	1995	29		To Be Modified	To be Replaced		
30	Turbine	Solar	T-70	TC95593	73.95	73.95	1995	N/A	20200201	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	1995	30		To Be Modified	To be Replaced		
31	Turbine	Solar	T-4700	DCC0050	36.8	36.8	1995	N/A	20200201	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	1995	31		To Be Modified	To be Replaced		
32B	Turbine	Solar	T-4000	CM79453	36.2	36.2	1979	N/A	20200201	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	1995	32B		To Be Modified	To be Replaced		
34	Regenerator Heater	Heatec	Heatec	H191-095	15	15	1991	N/A	31000404	<ul> <li>Existing (unchanged) New/Additional</li> </ul>	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	1995	34		X To Be Modified	To be Replaced		
36	Boiler	Rentech/Zinc	N/A	9049307	99	99	2005	N/A	31000404	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	2006	36		To Be Modified	To be Replaced		
37	Boiler	Rentech/Zinc	N/A	9049303	99	99	2012	N/A	31000404	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
					MMBtu/hr	MMBtu/hr	2010	37		To Be Modified	To be Replaced		
FUG	Fugitive Equipment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000306	X Existing (unchanged) New/Additional	To be Removed Replacement Unit	N/A	N/A
	Leak Emissions						N/A	FUG		To Be Modified	To be Replaced		

					Manufact-	Requested	Date of Manufacture <sup>2</sup>	Controlled by Unit #	Source Classi-		RICE Ignition	
Unit Number <sup>1</sup>	Source Description	Make	Model #	Serial #	urer's Rated Capacity <sup>3</sup> (Specify Units)	Permitted Capacity <sup>3</sup> (Specify Units)	Date of Construction/ Reconstruction <sup>2</sup>	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of Equipment, Check One	Type (CI, SI, 4SLB, 4SRB, 2SLB) <sup>4</sup>	
TK-2	Storage Tank -	N/A	N/A	N/A	11.9 bbl	11.9 bbl	1985	N/A	40600061	X Existing (unchanged) To be Removed New/Additional Replacement Un	N/A	N/A
	Gasoline						2005	TK-2		To Be Modified To be Replaced	ıı	
AGI	AGI Flare	Flare King	Flare	N/A	1.2	1.2	2009	N/A	31000209	X Existing (unchanged) To be Removed New/Additional Replacement Un	N/A	N/A
Flare					MMscf/d	MMscf/d	2009	50		To Be Modified To be Replaced	ıı	
AM-10	Amine Unit	N/A	N/A	N/A	225	225	N/A	2, AGI	31000305	5( 5)	N/A	N/A
					MMscf/d	MMscf/d	N/A	2, AGI Flare		New/AdditionalReplacement UnTo Be ModifiedTo be Replaced	it	
DH-10	Glycol Dehydrator	N/A	N/A	N/A	27	27	2012	N/A	31000303	X Existing (unchanged) To be Removed New/Additional Replacement Un	N/A	N/A
					MMscf/d	MMscf/d	41061	4a		To Be Modified To be Replaced	it.	
CT-1	South Cooling	N/A	N/A	N/A	12,800	12,800	Unknown	N/A	38500101	X Existing (unchanged) To be Removed New/Additional Replacement Un	N/A	N/A
	Tower				gpm	gpm		CT-1		To Be Modified To be Replaced		
CT-2	North Cooling	N/A	N/A	N/A	4,090 gpm	4,090 gpm	Unknown	N/A	38500101	X Existing (unchanged) To be Removed New/Additional Replacement Un	N/A	N/A
	Tower				4,070 gpiii	4,000 gpm		CT-2		To Be Modified To be Replaced	it.	
TK- VRU	7 Unstabilized and 2 Stabilized Condensate Tanks	N/A	N/A	N/A	1,500 bbl x	1,500 bbl x	TBD	VRU	40400321	<ul> <li>Existing (unchanged) To be Removed New/Additional Replacement Un</li> </ul>	N/A	N/A
	controlled by common VRU				9	9	1954	TK-VRU		X To Be Modified To be Replaced		
TK- VRUTMP	Two Condensate Tanks controlled by common VRU	N/A	N/A	N/A	1500 bbl x	1500 bbl x	1954	VRU-TMP	40400321	<ul> <li>Existing (unchanged) X To be Removed</li> <li>New/Additional Replacement Unit</li> </ul>	N/A	N/A
	(Previously listed as TK- 39 and 40)				2	2	1996	TK- VRUTMP		□ To Be Modified To be Replaced		
TK- PWVRU	Two Produced Water Tanks	N/A	N/A	N/A	1500 bbl x	1500 bbl x	TBD	VRU	40400321	g(g.)	N/A	N/A
I W VRO	controlled by common VRU				2	2	1954	TK- PWVRU		X New/Additional Replacement Un  To Be Modified To be Replaced	it	
	Stabilized	N/A	N/A	N/A	38,631,600	38,631,600	N/A	VRU	40600243	<ul> <li>Existing (unchanged) To be Removed</li> <li>New/Additional Replacement Un</li> </ul>	N/A	N/A
STAB	Condensate Loading				gal/yr	gal/yr	N/A	TK-VRU		New/AdditionalReplacement UnXTo Be ModifiedTo be Replaced	IL	
LOAD-	Unstabilized	N/A	N/A	N/A	49,669,200	49,669,200	N/A	N/A	40600243		N/A	N/A
UNSTAB	Condensate Loading				gal/yr	gal/yr	N/A	N/A		New/AdditionalReplacement UnXTo Be ModifiedTo be Replaced		
LOAD- PW	Produced Water	N/A	N/A	N/A	42,000	42,000	N/A	VRU	40600243	g(g(	N/A	N/A
<sup>1</sup>	Loading				gal/yr	gal/yr	N/A	TK- PWVRU		X New/Additional Replacement Un To Be Modified To be Replaced	it	

<sup>1</sup> Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provide

<sup>2</sup> Specify dates required to determine regulatory applicability

<sup>3</sup> To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator s

<sup>4</sup> "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark igniti-

#### Table 2-B: Insignificant Activities<sup>1</sup> (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb\_pol.html ), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

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>	For Each Piece of F	quipment, Check Onc
	Source Description	Manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction <sup>2</sup>		quipment, enter one
TK-1	Firewater	Unknown	N/A	9065	Not a source of regulated pollutants	34700	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	bbls	Insignificant Activity Item #1.a	Unknown	To Be Modified	To be Replaced
ГК-2	Firewater	Unknown	N/A	3500	Not a source of regulated pollutants	34700	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	bbls	Insignificant Activity Item #1.a	Unknown	To Be Modified	To be Replaced
TK-3	Firewater	Unknown	N/A	3500	Not a source of regulated pollutants	34700	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	bbls	Insignificant Activity Item #1.a	Unknown	To Be Modified	To be Replaced
TK-4	Stoddard	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
	Detergent		N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
°K-5		Unknown	N/A	225	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
ΎК-6	Detergent	Unknown	N/A	300	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
"К-7	Solvent	Unknown	N/A	300	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
TK-8	Lube Oil	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
°K-9	Ethylene Glycol	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
°K-10	Lube Oil	Unknown	N/A	30	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
°K-11	Methanol	Unknown	N/A	168	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #1.a	Unknown	To Be Modified	To be Replaced
°K-12	Sodium Hypochlorite	Unknown	N/A	479	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
TK-13	Sodium Hypochlorite	Unknown	N/A	479	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
TK-14	Chemtreat BL-4830	Unknown	N/A	500	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #1.a	Unknown	To Be Modified	To be Replaced

Linam Ranch Gas Plant

Application Date: June 2024

Revision #

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>	For Each Piece of Equipment	Check Onc
	Source Description	manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction <sup>2</sup>	For Each Field of Equipment	, enter one
TK-15	93% Sulfuric Acid	Unknown	N/A	7000	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	emoved ment Unit
			N/A	gal	Insignificant Activity Item #1.a	Unknown	To Be Modified To be R	
TK-16	Chemtreat BL-4830	Unknown	N/A	500	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	ment Unit eplaced
TK-17	Chemtreat BL-1258	Unknown	N/A	550	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	emoved ment Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	
TK-18	Lube Oil	Unknown	N/A	55	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	
			N/A	gal	Insignificant Activity Item #1.a	Unknown	To Be Modified To be R	ment Unit eplaced
TK-19	Lube Oil	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	ment Unit eplaced
TK-20	Ethylene Glycol	Unknown	N/A	1128	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-21	BL-4350	Unknown	N/A	500	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-22	BL-1558	Unknown	N/A	500	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-23	Water	Unknown	N/A	500	Not a source of regulated pollutants	Unknown	X Existing (unchanged) To be R	
			N/A	bbls	Insignificant Activity Item #1.a	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-24	Water	Unknown	N/A	500	Not a source of regulated pollutants	Unknown	X Existing (unchanged) To be R	
			N/A	bbls	Insignificant Activity Item #1.a	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-25	Sodium Hydroxide	Unknown	N/A	220	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R New/Additional Replace	
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	ment Unit eplaced
TK-26	Nalco EC15380	Unknown	N/A	479	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be Ro New/Additional Replace	
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	ment Unit eplaced
TK-27	Lube Oil	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-28	Lube Oil	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-29	Nalco 1538A	Unknown	N/A	718	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	bbl	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	ment Unit eplaced
TK-30	Synergy Pertosolv	Unknown	N/A	300	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) To be R	
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified To be R	ment Unit eplaced
TK-31	Lube Oil	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	unknown	X Existing (unchanged) To be R	emoved ment Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	New/AdditionalReplaceTo Be ModifiedTo be Replace	

Linam Ranch Gas Plant

Application Date: June 2024

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>	For Fach Disco of L	quipment, Check Onc
Unit Number	Source Description	Manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction <sup>2</sup>	FOT EACH FIECE OF F	quipment, Check One
TK-32	Synergy Pertosolv	Manufacturer	N/A	525	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
ГК-33	Synergy Pertosolv	Unknown	N/A	525	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	bbl	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-34	Gyptron	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	bbl	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
ГК-35	Gyptron	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	bbl	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-36	Methanol	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	bbl	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-37	Lube Oil	Unknown	N/A	752	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-38	Methanol	Unknown	N/A	1128	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-39	Defoam	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-40	North Amine Tank	Unknown	N/A	5000	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-41	South Amine Tank	Unknown	N/A	5000	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
TK-42	Glycol	Unknown	N/A	1128	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	bbls	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
ГК-43	West Amine Surge Tank	Unknown	N/A	5000	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	bbls	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
ГК-44	East Amine Surge Tank	Unknown	N/A	5000	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	bbls	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
TK-45	Lube Oil	Unknown	N/A	55	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-46	Detergent	Unknown	N/A	300	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
TK-47	Lube Oil	Unknown	N/A	752	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
TK-48	Lube Oil	Unknown	N/A	752	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced

Revision #

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>	For Each Piece of E	quipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction <sup>2</sup>		<b>1 1 1 1</b>
ГК-49	Lube Oil	Unknown	N/A	150	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed Replacement Unit
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	To be Replaced
ГК-50	Clark Lube Oil Drain Tk	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged) New/Additional	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	To Be Modified	Replacement Unit To be Replaced
FK-51	Clark Lube Oil Drain Tk	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-52	Clark Jacket Water Drain Tk	Unknowm	N/A	564	Not a source of regulated pollutants	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-53	Clark Jacket Water Feed Tk	Unknown	N/A	1128	Not a source of regulated pollutants	Unknown	X Existing (unchanged)	To be Removed
	Clark Jacket Water Feed Tk		N/A	gal	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-54	Lube Oil	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-55	Lube Oil	Unknowm	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-56	Firewater Pump Diesel Tk	Unknown	N/A	564	20.2.72.202.B.2.a NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #5	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-57	Water	Unknown	N/A	224	20.2.72.202.B.5 NMAC	Unknown	X Existing (unchanged)	To be Removed
			N/A	gal	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
rk-gBW1	Gunbarrel Water Tank	Lide	Lide	500	Not a source of regulated pollutants	N/A	X Existing (unchanged)	To be Removed
			1 9095	bbl	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
ГК-GBW2	Gunbarrel Water Tank	Lide	Lide	500	Not a source of regulated pollutants	N/A	X Existing (unchanged)	To be Removed
			1 9098	bbl	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
FK-GBW3	Gunbarrel Water Tank	Lide	N/A	500	Not a source of regulated pollutants	N/A	X Existing (unchanged)	To be Removed
			N/A	bbl	Insignificant Activity Item #1.a	Unknown	New/Additional To Be Modified	Replacement Unit To be Replaced
HAUL	Paved and Unpaved Haul Roads (associated with LOAD- STAB	N/A	N/A	8760 (Continuous)	20.2.72.202.B.5 NMAC	N/A	<ul> <li>Existing (unchanged) New/Additional</li> </ul>	To be Removed Replacement Unit
	and LOAD-UNSTAB)		N/A	trips/yr	Insignificant Activity Item #1.a	Unknown	X To Be Modified	To be Replaced

reported, unless specifically requested.

<sup>2</sup> Specify date(s) required to determine regulatory applicability.

#### **Table 2-C: Emissions Control Equipment**

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions.

Control Equipment Unit No.	<b>Control Equipment Description</b>	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) <sup>1</sup>	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
2	Amine Plant Flare East	2005	H2S, VOC	Amine Treating, DH-10	~ 98%	Eng. Judgement
4A	ESD Flare	2008	H2S, VOC	All Units	~ 98%	Eng. Judgement
AGI	Acid Gas Injection (AGI) Well	12/1/2009	H2S, VOC	Amine Treating	100%	Eng. Judgement
AGI Flare	AGI Flare	12/1/2009	H2S, VOC	AGI	~ 98%	Eng. Judgement
TK-VRU	Vapor Recovery Units (VRUs), Primary and Secondary	TBD	VOC	TK-VRU (7 Unstabilized and 2 Stabilized Condensate Tanks	100%	Eng. Judgement
TK-PWVRU	Vapor Recovery Units (VRUs) Primary and Secondary	5/1/2011	VOC	TK-PWVRU (2 Produced Water Tanks)	100%	Eng. Judgement
T' ( 1 )	ol device on a separate line. For each control device, list all e	· · · ·	. 11 11			

#### Table 2-D: Maximum Emissions (under normal operating conditions)

#### This Table was intentionally left blank because it would be identical to Table 2-E.

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Linit No	N	Ox	C	0	V	C	S	Ox	PI	M	PN	110 <sup>1</sup>	PM	2.5 <sup>1</sup>	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
2	0.08	0.37	0.39	1.69	1.35	5.90	0.01	0.04	-	-	-	-	-	-	-	-		
4A	0.23	1.00	1.05	4.58	65.54	58.54	0.02	0.10	-	-	-	-	-	-	-	-		
6	39.29		19.84		3.05		0.01		-	-	0.86		0.86		-	-		
7	39.29	566.08	19.84	283.08	3.05	60.77	0.01	0.12	-	-	0.86	10.01	0.86	10.01	-			
10 or 11	47.49		23.52		6.45		0.01		-	-	0.57	Ĩ	0.57		-			
28	3.47	15.20	3.52	15.42	2.01	8.82	0.91	4.01	-	-	1.33	5.83	1.33	5.83	-	-		
29	11.82	51.78	9.47	41.48	0.33	1.42	0.26	1.16	-	-	0.51	2.24	0.51	2.24	-	-		
30	11.26	49.32	9.02	39.51	0.31	1.36	0.25	1.10	-	-	0.49	2.14	0.49	2.14	-	-		
11	26.03	114.01	4.95	21.60	0.35	1.53	0.13	0.55	-	-	0.24	1.06	0.24	1.06	-	-		
32B	23.72	103.88	4.38	19.19	2.50	10.94	0.12	0.54	-	-	0.24	1.05	0.24	1.05	-	-		
34	1.67	7.30	1.40	6.13	0.09	0.40	0.01	0.04	-	-	0.13	0.55	0.13	0.55	-	-		
36	5.53	24.21	9.29	40.68	0.61	2.66	0.07	0.29	-	-	0.84	3.68	0.84	3.68	-	-		
37	5.53	24.21	9.29	40.68	0.61	2.66	0.07	0.29	-	-	0.84	3.68	0.84	3.68	-	-		
TK-2	-	-	-	-	0.16	0.70	-	-	-	-	-	-	-	-	-	-		
AGI Flare	0.08	0.37	0.39	1.69	1.35	5.90	0.01	0.04	-	-	-	-	-	-	-	-		
AM-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DH-10	-	-	-	-	5.08	22.25	-	-	-	-	-	-	-	-	-	-		
TK-VRU	-	-	-	-	165.54	688.81	-	-	-	-	-	-	-	-	-	-		
TK-PWVRU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
400A	-	-	-	-	0.04	0.00	-	-	-	-	-	-	-	-	-	-		
400B	-	-	-	-	0.04	0.00	-	-	-	-	-	-	-	-	-	-		
CT-1	-	-	-	-	-	-	-	-	-	-	1.92	8.42	0.01	0.03	-	-		
CT-2	-	-	-	-	-	-	-	-	-	-	0.61	2.69	0.00	0.01	-	-		
FUG	-	-	-	-	17.74	77.01	-	-	-	-	-	-	-	-	0.11	0.48		
LOAD-STAB	-	-	-	-	105.57	286.38	-	-	-	-	-	-	-	-	-	-		
LOAD-UNSTAB	-	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-		
LOAD-PW					0.63	0.002												
Totals	215.48	957.743	116.336	515.722	382.4	1236.07	1.88821	8.27035	0	0	9.44216	41.3567	6.91716	30.2972	0.10921	0.47833	0	0

<sup>1</sup>Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but PM is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

#### Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or  $1.41E^4$ ).

Unit No.	N	Ox	С	0	V	DC	SC	)x	P	M1	PM	[10 <sup>1</sup>	PM	2.5 <sup>1</sup>	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
2	0.085	0.37	0.39	1.69	0.027	0.12	0.0083	0.04	-	-	-	-	-	-	-	-	-	-
4A	0.41	1.04	1.41	4.66	1.35	1.29	0.023	0.1	-	-	-	-	-	-	-	-	-	-
6	39.29		19.84		3.05		0.01		-	-	0.86		0.86		-	-	-	-
7	39.29	566.08	19.84	283.08	3.05	60.77	0.01	0.12	-	-	0.86	10.01	0.86	10.01	-	-	-	-
10 or 11	47.49		23.52		6.45		0.007		-	-	0.57		0.57		-	-	-	-
28	3.47	15.2	3.52	15.42	2.01	8.82	0.91	4.01	-	-	1.33	5.83	1.33	5.83	-	-	-	-
29	11.82	51.78	9.47	41.48	0.33	1.42	0.26	1.16	-	-	0.51	2.24	0.51	2.24	-	-	-	-
30	11.26	49.32	9.02	39.51	0.31	1.36	0.25	1.1	-	-	0.49	2.14	0.49	2.14	-	-	-	-
31	26.03	114.01	4.95	21.6	0.35	1.53	0.13	0.55	-	-	0.24	1.06	0.24	1.06	-	-	-	-
32B	23.72	103.88	4.38	19.19	2.5	10.94	0.12	0.54	-	-	0.24	1.05	0.24	1.05	-	-	-	-
34	1.67	7.3	1.4	6.13	0.092	0.4	0.01	0.044	-	-	0.13	0.55	0.13	0.55	-	-	-	-
36	5.53	24.21	9.29	40.68	0.61	2.66	0.066	0.29	-	-	0.84	3.68	0.84	3.68	-	-	-	-
37	5.53	24.21	9.29	40.68	0.61	2.66	0.066	0.29	-	-	0.84	3.68	0.84	3.68	-	-	-	-
TK-2	-	-	-	-	0.16	0.7	-	-	-	-	-	-	-	-	-	-	-	-
AGI Flare	0.085	0.37	0.39	1.69	0.027	0.12	0.0083	0.036	-	-	-	-	-	-	-	-	-	-
AM-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRU <sup>3</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-PWVRU <sup>3</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400A	-	-	-	-	0.04	0.003	-	-	-	-	-	-	-	-	-	-	-	-
400B	-	-	-	-	0.04	0.003	-	-	-	-	-	-	-	-	-	-	-	-
CT-1	-	-	-	-	-	-	-	-	-	-	1.92	8.42	0.0078	0.034	-	-	-	-
CT-2	-	-	-	-	-	-	-	-	-	-	0.61	2.69	0.0025	0.011	-	-	-	-
FUG	-	-	-	-	17.74	77.01	-	-	-	-	-	-	-	-	0.11	0.48	-	-
LOAD-STAB	-	-	-	-	1.39	3.76	-	-	-	-	-	-	-	-	-	-	-	-
LOAD-UNSTAB	-	-	-	-	0.01	0.01	-	-	-	-	-	-	-	-	-	-	-	-
LOAD-PW	-	-	-	-	0.01	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Totals	215.68	957.77	116.71	515.81	40.156	173.586	1.8786	8.28	0	0	9.44	41.35	6.9203	30.285	0.11	0.48	0	0

Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

<sup>2</sup>PM (TSP) not included because the NM TSP standard was repealed on 11/30/2018.

<sup>2</sup>Emissions are not represented as the vents from the two VRU systems are routed back to the process.

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#### Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)

This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scehduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM), including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb\_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

detailed instruc		Ox	C		VO		SO			1 <sup>2,3</sup>	PM	$(10^2)$	PM	$2.5^{2}$	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
SSM Venting	-	-	-	-	5391.12	36.26	-	-	-	-	-	-	-	-	62.59	0.31		
2	14.90	0.51	80.60	3.08	1.60	0.009	7751.00	46.00	-	-	-	-	-	-	84.00	0.48		
AGI Flare	17.90	0.34	96.60	42.30	1.90	0.0008	9301.00	4.06	-	-	-	-	-	-	101.00	0.04		
4A	287.80	3.30	1564.00	19.40	861.80	6.60	2148.00	18.90	-	-	-	-	-	-	23.00	0.20		
Malfunction <sup>4</sup>	287.65	10.00	1565.15	10.00	3029.49	10.00	9301.45	10.00	-	-	-	-	-	-	100.83	10.00		
	220.60	1415	1741.00	74.70	(05) 10	50.05	10200.00	70.04	0	0	0	-	0		270.50	11.07		
Totals	320.60	14.15	1741.20	74.78	6256.42	52.87	19200.00	78.96	0	0	0	0	0	0	270.59	11.04	0	0

<sup>1</sup> For instance, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

<sup>2</sup> Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

<sup>3</sup>PM (TSP) not included because the NM TSP standard was repealed on 11/30/2018.

<sup>4</sup>Hourly emission rate shown for I nformation purpose only; emissions were calculated assuming each activity lasts for 1 hour.

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#### Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

X I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

	Serving Unit		Ox	C	0	V	DC	SO	Ox	P	М	PN	110	PM	12.5	H <sub>2</sub> S or	r Lead
Stack No.	Number(s) from Table 2-A	lb/hr	ton/yr	lb/hr	ton/yr												
	Totals:																

#### Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

Stack	Serving Unit Number(s)	Orientation	Rain Caps	Height Above	Temp.	Flow	Rate	Moisture by	Velocity	Inside
Number	from Table 2-A	(H-Horizontal V=Vertical)	(Yes or No)	Ground (ft)	(F)	(acfs)	(dscfs)	Volume (%)	(ft/sec)	Diameter (ft)
2	2	V	No	222	1832	131	-		65.6	2.00
4A	4A	V	No	175	1832	131	-	-	65.6	2.00
6	6	V	No	74	750	318	-	-	132.3	1.80
7	7	V	No	74	750	318	-	-	132.3	1.80
10	10	V	No	74	650	215.8	-	-	122.1	1.5
11	11	V	No	74	650	215.8	-	-	122.1	1.5
28	28	V	No	35.8	890	1787.4	-	-	154.9	3.8
29	29	V	No	44	858	1964.1	-	-	156.3	4
30	30	V	No	44	826	1916.4	-	-	67.8	6
31	31	V	No	44	817	1300	-	-	103.5	4
32B	32B	V	No	32	817	1307.7	-	-	104.1	4
34	34	V	No	45	600	114.1	-	-	36.3	2
36	36	V	No	50	300	552.2	-	-	50	3.8
37	37	V	No	50	300	552.2	-	-	50	3.8
AGI Flare	AGI Flare	V	No	210	1831.7	15.1	-	-	65.6	2

#### Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)		HAPs	Ben X HA	zene	Tol	uene		oenzene or TAP		enes or TAP		ldehyde or TAP		dehyde or TAP		exane or TAP	-	olein or TAP
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4A	4A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	6	1.36	5.97	0.034	0.15	0.017	0.075	0.0019	0.0084	0.0048	0.021	0.98	4.29	0.14	0.6	0.0079	0.035	0.14	0.6
7	7	1.36	5.97	0.034	0.15	0.017	0.075	0.0019	0.0084	0.0048	0.021	0.98	4.29	0.14	0.6	0.0079	0.035	0.14	0.6
10 or 11	10 or 11	0.91	4	0.023	0.1	0.011	0.05	0.0013	0.0056	0.0032	0.014	0.65	2.87	0.092	0.4	0.0053	0.023	0.092	0.4
28	28	0.17	0.75	0.0008	0.0033	0.0082	0.036	0.002	0.0089	0.0041	0.018	0.15	0.67	0.0025	0.011	-	-	0.00041	0.0018
29	29	0.077	0.34	0.0009	0.0041	0.01	0.044	0.0025	0.011	0.005	0.022	0.055	0.24	0.0031	0.014	-	-	0.0005	0.0022
30	30	0.074	0.32	0.0009	0.0039	0.0096	0.042	0.0024	0.01	0.0047	0.02	0.053	0.23	0.003	0.013	-	-	0.00047	0.0021
31	31	0.037	0.16	0.0004	0.0019	0.0048	0.021	0.0012	0.0052	0.0024	0.01	0.026	0.11	0.0015	0.0064	-	-	0.00024	0.001
32B	32B	0.036	0.16	0.0004	0.0019	0.0047	0.021	0.0012	0.0051	0.0023	0.01	0.026	0.11	0.0014	0.0063	-	-	0.00023	0.001
34	34	0.031	0.14	4E-05	0.00015	5.7E-05	0.00025	-	-	-	-	0.0013	0.0055	-	-	0.03	0.13	-	-
36	36	0.21	0.91	0.0002	0.001	0.00038	0.0016	-	-	-	-	0.0083	0.036	-	-	0.2	0.87	-	-
37	37	0.21	0.91	0.0002	0.001	0.00038	0.0016	-	-	-	-	0.0083	0.036	-	-	0.2	0.87	-	-
TK-2	TK-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-10	AM-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-10	DH-10	0.14	0.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRU	TK-VRU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AGI flare	AGI flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK- PWVRU	TK-PWVRRU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT-1	CT-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
СТ-2	CT-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N/A	LOAD-STAB	0.02	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N/A	LOAD-UNSTAB	0.0002	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N/A	FUG	5.16	22.6	0.013	0.055	0.0064	0.028	0.00027	0.0012	0.0012	0.0052	-	-	-	-	5.14	22.51	-	-
N/A	SSM	71.33	5.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N/A	LOAD-PW	0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	:	81.13	48.26	0.11	0.47	0.09	0.40	0.01	0.06	0.03	0.14	2.94	12.89	0.38	1.65	5.59	24.47	0.37	1.61

### Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

	Fuel Type (low sulfur Diesel,	Fuel Source: purchased commercial,		Speci	fy Units		
Unit No.	ultra low sulfur diesel, Natural Gas, Coal,)	pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
2	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	1.2 Mscf	10.2 MMscf	5 grains/100 scf	-
4A	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	3.2 Mscf	28.0 MMscf	5 grains/100 scf	-
6	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	19.7 Mscf	172.5 MMscf	5 grains/100 scf	-
7	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	19.7 Mscf	172.5 MMscf	5 grains/100 scf	-
10 or 11	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	13.2 Mscf	115.4 MMscf	5 grains/100 scf	-
28	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	64.1 Mscf	561.2 MMscf	5 grains/100 scf	-
29	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	82.7 Mscf	724.2 MMscf	5 grains/100 scf	-
30	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	78.7 Mscf	689.8 MMscf	5 grains/100 scf	-
31	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	40.9 Mscf	358.2 MMscf	5 grains/100 scf	-
32B	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	40.2 Mscf	352.4 MMscf	5 grains/100 scf	-
34	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	16.7 Mscf	146.0 MMscf	5 grains/100 scf	-
36	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	110.6 Mscf	968.5 MMscf	5 grains/100 scf	-
37	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	110.6 Mscf	968.5 MMscf	5 grains/100 scf	-
AGI Flare	Natural Gas	Pipeline Quality Natural Gas	900 Btu/scf	1.2 Mscf	10.2 MMscf	5 grains/100 scf	-

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### Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

					Vapor	Average Stor	age Conditions	Max Storage Conditions		
Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Molecular Weight (lb/lb*mol)	Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)	
TK-2	40600061	Gasoline (fuel)	Mixed hydrocarbons	5.6	62	62	9.34	94	12.45	
B1	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
B2	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
В3	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
B4	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
B5	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
400C	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
400F	40400321	Condensate	Mixed hydrocarbons	5.47	52.74	62	25.96	94	25.96	
400D	40400321	Condensate	Mixed hydrocarbons	5.61	72.5	62	8.67	94	8.67	
400E	40400321	Condensate	Mixed hydrocarbons	5.61	72.5	62	8.67	94	8.67	
400A	40400321	Produced Water	Mixed hydrocarbons and water	5.61	72.5	62	8.67	94	8.67	
400B	40400321	Produced Water	Mixed hydrocarbons and water	5.61	72.5	62	8.67	94	8.67	

### Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored		<b>Roof Type</b> (refer to Table 2-	Cap	acity	Diameter (M)	Vapor Space	Co (from Ta	olor ible VI-C)	Paint Condition (from Table	Annual Throughput	Turn- overs
			LR below)	LR below)	(bbl)	(M <sup>3</sup> )		(M)	Roof	Shell	VI-C)	(gal/yr)	(per year)
TK-2	2005	Gasoline fuel	N/A	N/A	12	2	1.2	0.01	WH	WH	Good	3,000	6.00
B1	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
B2	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
B3	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
B4	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	49,669,200	788.40
B5	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
400C	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
400F	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		
400D	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	38,631,600	613.20
400E	1954	Condensate	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	58,051,000	015.20
400A	1954	Produced Water	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	42,000	0.67
400B	1954	Produced Water	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	12,000	0.07

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Roof Type	Seal Type, V	Velded Tank Seal Type	Seal Type, Riv	Seal Type, Riveted Tank Seal Type				
FX: Fixed Roof	Mechanical Shoe Seal	Liquid-mounted resilient seal	Vapor-mounted resilient seal	Seal Type	WH: White	Good		
IF: Internal Floating Roof	A: Primary only	A: Primary only	A: Primary only	A: Mechanical shoe, primary only	AS: Aluminum (specular)	Poor		
EF: External Floating Roof	B: Shoe-mounted secondary	B: Weather shield	B: Weather shield	B: Shoe-mounted secondary	AD: Aluminum (diffuse)			
P: Pressure	C: Rim-mounted secondary	C: Rim-mounted secondary	C: Rim-mounted secondary	C: Rim-mounted secondary	LG: Light Gray			
					MG: Medium Gray			
Note: $1.00 \text{ bbl} = 0.159 \text{ M}$	$a^{3} = 42.0$ gal				BL: Black			
					OT: Other (specify)			

Table 2-M:         Materials Processed and Produced (Use additional sheets as necessary.)	Table 2-M:	Materials	Processed	and	Produced	(Use additional sheets as necessary.)
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	Materi	al Processed		I	Material Produced		
Description	Chemical Composition	Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)
Natural Gas	Mixed Hydrocarbons	Gas	227 MMscf/day	Natural Gas	Mixed Hydrocarbons	Gas	227 MMscf/day
				Condensate	Mixed Hydrocarbons	Liquid	5,760 bbl/day
				Produced Water	Mixed Hydrocarbons and water	Liquid	3 bbl/day

#### Table 2-N: CEM Equipment

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy

#### Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time

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Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO <sub>2</sub> ton/yr	N <sub>2</sub> O ton/yr	CH <sub>4</sub> ton/yr	SF <sub>6</sub> ton/yr	PFC/HFC ton/yr <sup>2</sup>					Total GHG Mass Basis ton/yr <sup>4</sup>	Total CO <sub>2</sub> e $ton/yr^5$
Unit No.	GWPs <sup>1</sup>	1	298	25	22,800	footnote 3						
2	mass GHG	611.42	0.0012	3.65	-	-					615.07	
2	CO <sub>2</sub> e	611.42	0.36	91.29	-	-						703.07
<b>4</b> A	mass GHG	2,153.59	0.0042	12.86	-	-					2,166.46	
4A	CO <sub>2</sub> e	2,153.59	1.26	321.54	-	-						2,476.40
6	mass GHG	10,369.98	0.02	0.2	-	-					10,370.19	
U	CO <sub>2</sub> e	10,369.98	5.83	4.89	-	-						10,380.69
7	mass GHG	10,369.98	0.02	0.2	-	-					10,370.19	
/	CO <sub>2</sub> e	10,369.98	5.83	4.89	-	-						10,380.69
10 or 11	mass GHG	6,933.34	0.013	0.13	-	-					6,933.49	
10 01 11	CO <sub>2</sub> e	6,933.34	3.9	3.27	-	-						6,940.51
28	mass GHG	33,718.89	0.064	0.64	-	-					33,719.59	
20	CO <sub>2</sub> e	33,718.89	18.95	15.9	-	-						33,753.74
29	mass GHG	43,513.05	0.082	0.82	-	-					43,513.95	
29	CO <sub>2</sub> e	43,513.05	24.46	20.52	-	-						43,558.02
30	mass GHG	41,446.86	0.078	0.78	-	-					41,447.72	
30	CO <sub>2</sub> e	41,446.86	23.3	19.54	-	-						41,489.70
31	mass GHG	21,521.01	0.041	0.41	-	-					21,521.45	
51	CO <sub>2</sub> e	21,521.01	12.1	10.15	-	-						21,543.25
32B	mass GHG	21,174.94	0.04	0.4	-	-					21,175.38	
520	CO <sub>2</sub> e	21,174.94	11.9	9.98	-	-						21,196.83
34	mass GHG	8,771.82	0.017	0.17	-	-					8772	
54	CO <sub>2</sub> e	8,771.82	4.93	4.14	-	-						8,780.89
36	mass GHG	58,186.62	0.11	1.1	-	-					58,187.83	
50	CO <sub>2</sub> e	58,186.62	32.7	27.44	-	-						58,246.76
37	mass GHG	58,186.62	0.11	1.1	-	-					58,187.83	
37	CO <sub>2</sub> e	58,186.62	32.7	27.44	-	-						58,246.76
AGI	mass GHG	611.42	0.0012	3.65	-	-					615.07	
Flare	CO <sub>2</sub> e	611.42	0.36	91.29	-	-						703.07
FUG	mass GHG	-	-	11.67	-	-					11.67	
	CO2e	-	-	291.78	-	-						291.78
SSM	mass GHG	4525.91	0.0001	31.48	-	-					4,557.39	
	CO <sub>2</sub> e	4525.91	0.03	787.05	-	-						5,312.98
Total	mass GHG	322,095.45	0.6017	69.26							322,165.28	
Total	CO <sub>2</sub> e	322,095.45	178.61	1,731.1								324,005.14

GWP (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

<sup>2</sup> For HFCs or PFCs describe the specific HFC or PFC compound and use a separate column for each individual compound.

<sup>3</sup> For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

<sup>4</sup> Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

<sup>5</sup> CO<sub>2</sub>e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

# **Application Summary**

The <u>Application Summary</u> shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be connected with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, debottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

The <u>Process Summary</u> shall include a brief description of the facility and its processes.

<u>Startup, Shutdown, and Maintenance (SSM)</u> routine or predictable emissions: Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app\_form.html) for more detailed instructions on SSM emissions.

DCP Operating Company, LP is submitting this application and accompanying material pursuant to 20.2.72.219.D(1)(a) NMAC to apply for a revision to the existing NSR minor source permit for the Linam Ranch Gas Plant (Linam Ranch). Linam Ranch is a natural gas processing plant and is located 7 miles west of Hobbs, New Mexico in Lea County. The facility removes hydrogen sulfide, water and carbon dioxide from field natural gas and separates natural gas liquids from the field natural gas stream. The facility is currently permitted under NSR permit 39-M9 and Title V permit P094-R3.

The proposed modification consists of the following operational changes and updates to permit representations:

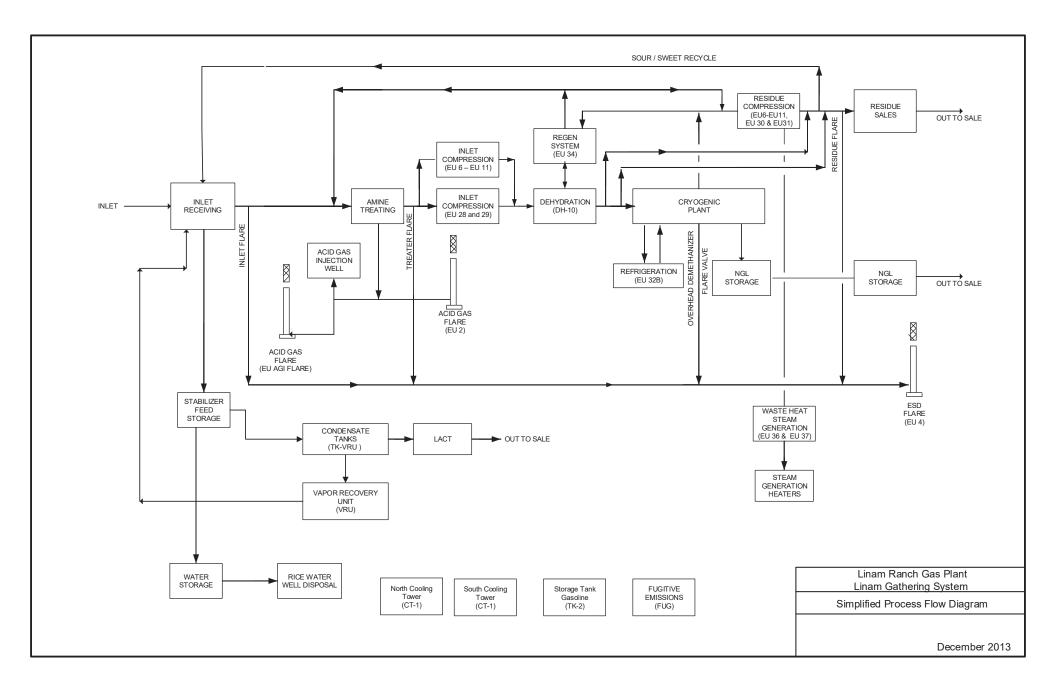
- Increase in condensate throughputs in both the site's stabilized and unstabilized condensate tanks. This is from larger volumes of field condensate that will be entering into the gas plant through their inlet gas pipelines. Total throughputs, after increases, are 2,520 barrels per day (bbl/day) stabilized condensate and 3,240 bbl/day unstabilized condensate.
- 2) Increase condensate truck loading throughputs for both the stabilized and unstabilized condensate streams, Units LOAD-STAB and LOAD-UNSTAB.
- 3) Represent emissions from the condensate tanks to the site's main flare, Unit 4A. The stabilized and unstabilized condensate tank vapors are controlled by a VRU (VRU 1 & VRU 2/Unit ID TK-VRU) that returns the gas back to the process. Should the primary and secondary VRUs not function, then the tanks' vapor space, if sees high enough pressure, will vent to the site's flare (Unit 4A).
- 4) Represent two (2) existing produced water tanks (400A and 400B) and their associated loading operation, Unit LOAD-PW.
- Represent one existing VRU that has been used for the PW tanks (TK-PWVRU) and add a secondary/redundant vapor recovery unit (VRU), Unit TK-PWVRU, for the control of emissions from the produced water tanks and associated loading operation.
- 6) Remove TK-VRUTMP.
- 7) Update the turbine serial numbers for Unit IDs 29 and 31.
- 8) Update tank Unit IDs as follows:
  - a. two stabilized condensate tanks 400D and 400E
  - b. seven unstabilized condensate tanks B1 through B5, 400C and 400F.
- 9) Correct typographical error in the regenerator heater (Unit 34) PM<sub>10</sub> and PM<sub>2.5</sub> emissions.
- 10) Delete compressor engines Unit IDs 8 and 9 as these sources have been permanently shut down and are not operable.

There are no physical changes occurring at the plant site apart from the installation of the secondary VRU for the produced water tanks. The processing rate of the plant remains the same, and there is no new processing equipment being added nor are any new emissions sources being installed with this permit revision.

# **Process Flow Sheet**

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

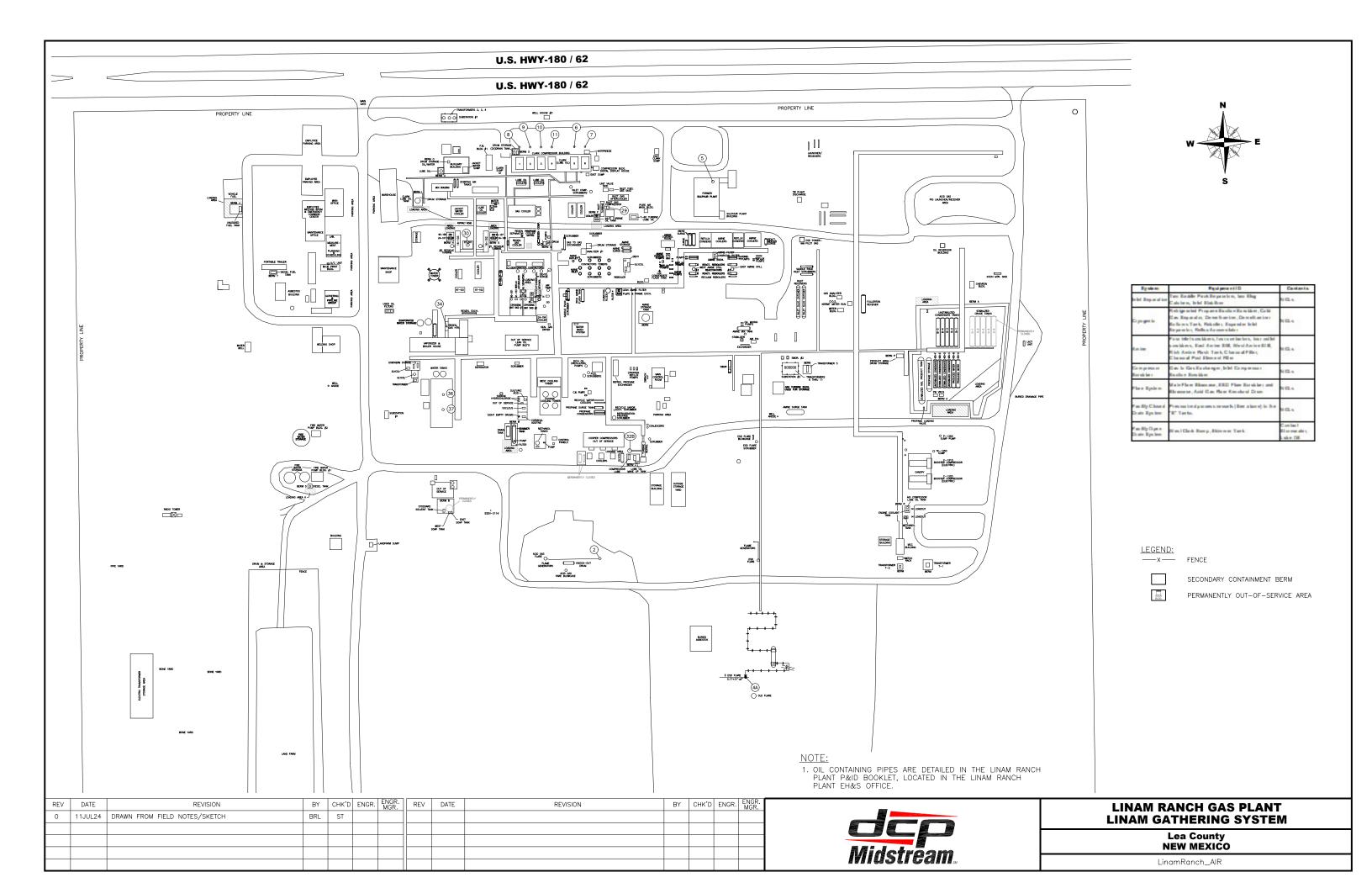
A process flow sheet is included in this section.



# **Plot Plan Drawn to Scale**

A <u>plot plan drawn to scale</u> showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

A plot plan is included in this section.



# **All Calculations**

**Show all calculations** used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

**Tank Flashing Calculations**: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

**SSM Calculations**: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rational for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app\_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

**Glycol Dehydrator Calculations**: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

- 1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
- 2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

#### **Significant Figures:**

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

- (1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;
- (2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**
- (3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
- (4) The final result of the calculation shall be expressed in the units of the standard.

**Control Devices:** In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the

application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

#### Stabilized Condensate Storage Tanks (Units 400D and 400E)

This application seeks to authorize 2,520 bbl/day of stabilized condensate throughput in two pressurized tanks. These tanks are maintained at about 2 to 3 psig and thus there are no working and breathing losses. The dual Vapor Recovery Unit (Unit TK-VRU) operates continuously and captures any flash emissions from the tank vapor space and routes back to the process. VRU downtime of 5% is conservatively assumed even though there is a secondary VRU if the primary VRU is shut down. The emissions during the VRU downtime of 5% are routed to the site's main flare, Unit 4A, should the operating pressure increase to 65 psig. There are no flash emissions from the stabilized condensate tanks. Flash emissions occur only from the unstabilized condensate tanks as detailed below.

#### Unstabilized Condensate Storage Tanks (Units B1 through B5, 400C and 400F)

This application seeks to authorize 3,240 bbl/day of unstabilized condensate throughput in seven pressurized tanks. These tanks are pressurized and maintained at about 50 psig and thus there are no working and breathing losses. The dual Vapor Recovery Unit (Unit TK-VRU) operates continuously and captures any flash emissions from tank vapor space and routes the emissions back to the process. VRU downtime of 5% is conservatively assumed even though there is a secondary VRU if the primary VRU is shut down. The emissions during the VRU downtime of 5% are routed to the site's main flare, Unit 4A should the operating pressure of these tanks increase to 65 psig. Flash emissions have been estimated using the ProMax 6.0 simulation program. Emissions details are provided in Table 6-1.

#### Produced Water Storage Tanks (Units 400A and 400B)

This application seeks to authorize 2.74 bbl/day of produced water throughput in two horizontal tanks. The dual Vapor Recovery Unit (Unit TK-PWVRU) captures the tanks' emissions when the tank operating pressure exceeds the predetermined set pressure and routes the emissions back to the process. VRU downtime of 5% is conservatively assumed even though there is a secondary VRU if the primary VRU is shut down. A water content of 99% is assumed to determine the VOC emission rates from these produced water tanks. Emissions details are provided in Table 6-1.

#### Stabilized Condensate Loading (Unit LOAD-STAB)

This application seeks to authorize 2,520 bbl/day of stabilized condensate loading coming from the stabilized condensate tanks (400D and 400E) and being loaded out from a LACT unit. Emissions associated with this loading are calculated using a stabilized condensate liquid analysis. Loading emissions are vapor balanced back to the stabilized condensate tanks which are controlled by the existing dual vapor recovery unit (Unit TK-VRU). The VRU downtime of 5% that has been assumed on the tanks, routes the vapors to the site's main flare, ESD flare, Unit ID 4A. Tank truck loading emissions are calculated using the EPA's AP-42, Section 5.2.2.1.1 methodology. Emissions details are provided in Table 6-2.

#### Produced Water Loading (Unit LOAD-PW)

This application seeks to authorize 2.74 bbl/day of produced water loading from produced water tanks (400A and 400B). Emissions associated with this loading is calculated using a stabilized condensate liquid analysis. Loading emissions will be controlled by the existing dual vapor recovery unit (Unit TK-PWVRU). A VRU downtime of 5% is assumed. Tank truck loading emissions are calculated using the EPA's AP-42, Section 5.2.2.1.1 methodology. Emissions details are provided in Tables 6-2 and 6-13.

#### Unstabilized Condensate Loading (Unit LOAD-UNSTAB)

This application seeks to authorize 3,240 bbl/day of unstabilized condensate loading from condensate tanks (B1 through B5, 400C and 400F). Unstabilized condensate loading from these tanks will be loaded out using a pressurized truck and can be loaded from two locations. Emissions associated with this loading are calculated based on the vapor escaped during hose disconnects. The only expected emissions from this activity will be from pressurized truck hose disconnects. Emissions details are provided in Table 6-3.

#### **Regenerator Heater (Unit 34)**

The Regenerator Heater (Unit 34) PM10 emissions were incorrectly represented in the previous permit application due to typographical error. These PM10 emissions are correctly represented in this permit revision application. There are no physical or operational changes to this equipment. Emissions details are provided in Table 6-4.

#### ESD Flare (Unit 4A)

Emissions from the stabilized condensate tanks, unstabilized condensate tanks, stabilized condensate loading, and unstabilized condensate loading are routed to site's main flare when the unstabilized condensate tanks operating pressure reaches or exceeds 65 psig. A VRU downtime of 5% is conservatively assumed although VRU downtime is not expected as there is a secondary (backup) VRU in case the primary VRU is down. Uncontrolled emissions are based on the respective vent gas flow rates and the composition of the waste streams routed to the flare. NOx and CO emissions are based on the appropriate TCEQ emission factor that corresponds to the flare design (non-assisted) and heating value of the waste gas stream. VOC emissions are based on a DRE of 98% for all hydrocarbons. Emissions details are provided in Table 6-5.

### Paved and Unpaved Haul Road Emissions (Unit HAUL)

A single haul road with paved and unpaved segments will be used to truck out condensate at this facility. Paved and unpaved haul road emissions were calculated using AP-42 Sections 13.2.1 and 12.2.2, respectively. As the condensate throughput will become a federally enforceable limit, this is an appropriate method to calculate the PTE of the haul road. As the PTE of the haul road will be less than 0.5 tpy, this activity will be exempt pursuant to 20.2.72.202.B(5) NMAC. Emissions details are provided in Tables 6-6 through 6-11.

#### Table 6-1 DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

	Unit # >>	B1	B2	B3	B4	B5	400C	400F	400D	400E	400A	400B
	Source Description >>	Unstabilized Condensate Tank No. 1	Unstabilized Condensate Tank No. 2	Unstabilized Condensate Tank No. 3	Unstabilized Condensate Tank No. 4	Unstabilized Condensate Tank No. 5	Unstabilized Condensate Tank No. 6	Unstabilized Condensate Tank No. 7	Stabilized Condensate Tank No. 1	Stabilized Condensate Tank No. 2	Produced Water Tank No. 1	Produced Water Tank No. 2
	Tank Contents	Condensate	Condensate	Condensate	Produced Water	Produced Water						
	Tank Type	HRT	HRT	HRT	HRT	HRT						
	Tank Capacity (gal)	63,000	63,000	63,000	63,000	63,000	63,000	63,000	63,000	63,000	63,000	63,000
	Annual Throughput (gal/yr)	7,095,600	7,095,600	7,095,600	7,095,600	7,095,600	7,095,600	7,095,600	19,315,800	19,315,800	21,000	21,000
ters	Turnovers per year	113	113	113	113	113	113	113	307	307	0.33	0.33
me	Percent Water (%)										99%	99%
ara	Flash Emissions Expected?	Yes	Yes	Yes	No	No						
ů,	Hours of Flash Emissions (hrs/year)	8760	8760	8760	8760	8760	8760	8760	8760	8760		
an	Is Tank Controlled?	Yes	Yes	Yes	Yes	Yes						
-	Control Method	VRU	VRU	VRU	VRU	VRU						
	Capture Efficiency (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	VRU Runtime (%)	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
	VOC content (vapor wt%)	94.42%	94.42%	94.42%	94.42%	94.42%	94.42%	94.42%	99.76%	99.76%	99.76%	99.76%
	H2S content (vapor wt%)	1.24%	1.24%	1.24%	1.24%	1.24%	94.42%	94.42%	94.42%	94.42%	94.42%	94.42%
	Working/Breathing Losses (AP-42) (1)	B1	B2	B3	B4	B5	400C	400F	400D	400E	400A	400B
	Maximum Hourly Losses (lb/hr)	0.00 lb/hr	0.00 lb/hr	0.00 lb/hr	90.26 lb/hr	90.26 lb/hr						

Maximum Hourly Losses (lb/hr)	0.00	lb/hr	0.00	lb/hr	0.00	lb/hr	90.26	lb/hr	90.26	lb/hr												
Annual Breathing Losses (lb/yr)	0.00	lb/yr	0.00	lb/yr	0.00	lb/yr	10859.98	lb/yr	10859.98	lb/yr												
Annual Working Losses (lb/yr)	0.00	lb/yr	0.00	lb/yr	0.00	lb/yr	151.18	lb/yr	151.18	lb/yr												
Total Annual Losses (tpy)	0.00	tpy	0.00	tpy	0.00	tpy	5.51	tpy	5.51	tpy												
Working/Breathing Emissions (2)	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy												
VOC																			0.04	0.003	0.04	0.00
Flash Emissions (ProMax) (2)	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy												
VOC	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06								
Uncontrolled VOC Emissions	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06	165.54	725.06					0.04	0.003	0.04	0.003

#### EMISSIONS TO FLARE DURING VRU DOWNTIME

Unit #>>	B	1	В	2	E	13	E	34	E	5	40	0C	40	0F	40	0D	40	0E	40	0A	400	JB
Pollutant	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy												
VOC	53.65	36.25	53.65	36.25	53.65	36.25	53.65	36.25	53.65	36.25	53.65	36.25	53.65	36.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### EMISSIONS ROUTED TO VAPOR RECOVERY UNIT (VRU)

Unit #>	· I	31	В	2	E	33	E	34	E	5	40	0C	40	0F	40	0D	40	0E	40	0A	40	0B
Pollutant	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy												
VOC	165.54	688.81	165.54	688.81	165.54	688.81	165.54	688.81	165.54	688.81	165.54	688.81	165.54	688.81	0.00	0.00	0.00	0.00	0.85	0.05	0.85	0.05

Notes:

1. Working and breathing losses from Produced Water Tanks (400A and 400B) are calculated using equations found in AP-42, Chapter 7. Printouts of detailed emission calculations are included with this submittal (Table 6-13). Hourly emission rate calculations are based on the AP-42 working loss equation, maximum pump rate, and 95°F or maximum daily average liquid surface temperature, whichever is greater. 99% water reduction was used in the estimating VOC emissions.

2. Flash emissions for unstabilized condensate tanks are estimated using the BRE ProMax simulation program. Printouts of the ProMax simulation are included with this submittal.

3. The vent rates to flare are the requested vent rates.

#### Table 6-2 Tank Truck Loading Emissions Stabilized Condensate and Produced Water DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

	Unit # >>	LOAD	-STAB	LOAD-	PW		
	Emission Source Name >>		idensate Truck dout	Produced Water T	ruck Loadout		
	Product	Conde	ensate	Produced	Water		
	Loading Operation		oading (vapor nce)	Submerged loading (normal)			
	Saturation Factor, S (1)		1	0.6			
	Vapor MW (2)	72.50	lb/lb-mol	72.50	lb/lb-mol		
	Maximum Vapor Pressure	8.67	psia	8.67			
	Average Vapor Pressure	8.67	psia	8.67	psia		
sıs	Max Temperature	93.90	°F	93.90	°F		
lete	Average Temperature	61.70	°F	61.70	°F		
Parameters	Short-Term Loading Loss Factor (4)(5)	14.1479	lb/1000 gal	8.4887	lb/1000 gal		
β	Annual Loading Loss Factor (4)(6)	15.0217	lb/1000 gal	9.0130	lb/1000 gal		
-oading	Hourly Throughput	7,560	gal/hr	7,560	gal/hr		
Ľ	Annual Throughput	38,631,600	gal/yr	42,000	gal/yr		
	Controlled to VRU?	Y	es	Yes			
	Controlled By Unit Number:	TK-	VRU	TK-PW\	/RU		
	VRU Downtime (%)	5.0	0%	5.00%	6		
	Capture Efficiency (%)	98	7%	98.7%	6		
	Water Content Reduction (%) (7)	0	%	99%			
	VOC content (vapor wt%)	99.	76%	99.76%			
	HAPs content (vapor wt%)	2.5	7%	2.57%			

Loading Losses	lb/hr	tpy	lb/hr	tpy
Calculated Loading Losses	106.96	290.16	64.17	0.19
Loading Losses (minus water)	106.96	290.16	0.64	0.00
Losses Sent to VRU	105.57	286.38	0.63	0.002
Losses Sent to Flare	5.28	14.32	-	-
Fugitive Losses	1.39	3.77	0.01	0.00
Uncontrolled VOC from VRU	5.27	14.28	0.03	0.00
Uncontrolled VOC from Flare	0.11	0.29	-	-

#### EMISSIONS TO ATMOSPHERE

Unit #>>	LOAD	-STAB	LOAD-PW			
Pollutant	lb/hr	tpy	lb/hr	tpy		
VOC	1.39	3.76	0.01	0.00		
HAPs	0.04	0.10	0.0002	0.0000		

Notes:

1. Saturation factor is from EPA's AP-42, 5th Edition, Section 5.2, Table 5.2-1; for type of loading operation.

2. Molecular weight of vapors was taken from Condensate Liquid Analysis converted to Vapor MW.

3. Vapor pressure was determined using Tanks condensate RVP data. Minimum and maximum vapor pressures are assumed to be same as the tank is under pressure. If RVP is reported below 2.0, the lower limit of 2.0 is used in the calculations.

4. Losses are based on the loading losses equation from EPA's AP-42, Section 2, 5th Edition, June, 2008, Equation 1:

ı -	12.46 * S * P * M
L -	_

where:

= \_\_\_\_\_\_T

ere:

L = Loading Losses, lb/1000 gallons S = Saturation Factor, see Table 5.2-1 in AP-42, Section 5.2.

P = True vapor pressure, psia

M = Molecular weight of vapors, lb/lb-mol

T = Temperature of bulk liquid loaded, R (F + 460)

5. Short-term loading loss factor is calculated based on the worst-case (highest) temperature and vapor pressure.

6. Annual loading loss factor is calculated based on the average temperature and vapor pressure.

7. If the volume of liquids loaded includes a percentage of water, the percentage of water is removed from the overall emissions.

#### Table 6-3 Tank Truck Loading Emissions Unstabilized Condensate Hose Disconnects DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

Emission unit: LOAD-UNSTAB

Source Description: Host disconnect emissions from condensate loading activities (pressurized tank and truck)

#### CONDENSATE LOADING EMISSION INPUTS

Condensate transport truck load	180	bbl/truck	
Condensate transport truck load	7,560	gal/truck	Condensate transport truck load (Bbl/truck) x Conversion factor (gallons/bbl)
Max Condensate Off Load	49,669,200	gal/yr	Engineer Estimate of Condensate Production
Disconnect losses per connector	1.00	cc/event	Conservative Estimate
Disconnect losses per connector	2.6E-04	gallons/event	Disconnect losses per connect (cc/event) / Conversion factor (cc/gallon)
Condensate density	5.47	lb/gal	Unstabilized Condensate Analysis (7/3/2024)
Connectors disconnected per event	4	connectors/hr	Two hoses, one connector at each hose end. Two truck loadout at both skids in one hour.
Transport trucks per year	6570	trucks/yr	Max Condensate Offioaded (gal/yr) / Condensate transport truck load (gal/truck)
Transport trucks per day	18	trucks/day	Max trucks per day
Disconnect events per year	6570	events per year	Equal to number of transport truck trips
Disconnect Events per day	13140	connectors/yr	Equal to number of transport truck trips times two connectors per truck trip
Condensate VOC wt %	94.42%		Unstabilized Condensate Analysis (7/3/2024)
Condensate HAPs wt %	3.42%		Unstabilized Condensate Analysis (7/3/2024)

#### **CONVERSION FACTORS**

Volume Conversion	42	gallons/bbl
Volume Conversion	3875	cc/gallon
Mass Conversion	2000	lb/ton

#### POTENTIAL EMISSIONS

	Potential Emissions							
Pollutant	(lbs/hr) <sup>a</sup>	(tpy) <sup>b</sup>						
VOC	0.0053	8.76E-03						
HAPs	0.0002	3.17E-04						

<sup>a</sup> Potential Hose Disconnect VOC Emissions (lbs/hr) = Disconnect losses per connector (gal/event) x Density (lb/gal) x VOC (Wt. %) x Connectors disconnected per hour

<sup>b</sup> Potential Hose Disconnect VOC Emissions (tpy) = Disconnect losses per connector (gal/event) x Density (lb/gal) x VOC (Wt. %) x Connectors disconnected per year / 2000 (lbs/ton)

## Table 6-4 Heater/Boiler Emissions Calculations DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

	Unit # >>	3	4
	Source Description >>	Regenera	tor Heater
S	Design Heat Duty	15.0	MMBtu/hr
Heater ramete	Combustion Efficiency	10	0%
Heater Parameters	Maximum Firing Rate	15.00	MMBtu/hr
Ра	Annual Operating Hours	8,760	hours
(0	Fuel Type	Natura	al Gas
ters	Fuel LHV	900	Btu/scf
Fuel	Fuel Sulfur Content	0.002	grains/scf
Fuel Parameters	Hourly Fuel Flow Rate	0.017	MMSCF/hr
<u>م</u>	Annual Fuel Flow Rate	146.00	MMSCF/yr
	NO <sub>x</sub>	100.00	lb/MMscf
ion	СО	84.00	lb/MMscf
Emission Factors	VOC	5.50	lb/MMscf
Em	TSP/PM <sub>10</sub> /PM <sub>2.5</sub>	7.60	lb/MMscf
	SO <sub>2</sub>	0.60	lb/MMscf

Unit #>>	3	4
Pollutant	lb/hr	tpy
NO <sub>X</sub>	1.67	7.30
CO	1.40	6.13
VOC	0.092	0.40
PM <sub>10</sub>	0.13	0.55
PM <sub>2.5</sub>	0.13	0.55
SO <sub>2</sub>	0.01	4.38E-02

**Example Calculations:** 

34 NOx lb/hr: 15 MMBtu/hr x 100 lb/MMBtu = 1.67 lb/hr 34 NOx tpy: 1.67 lb/hr x 1 hrs/year x 1 ton/2000 lbs = 7.3 tpy

Notes:

1. Emission factors are from AP-42, Section 1.4, Natural Gas Combustion, dated 7/98, converted to Ib/MMBtu.

#### Table 6-5 ESD Flare Emissions - Unit 4A DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

UNIT >>	4A		
Emission Source Name >>	ESD Flare		
Flare Type	Air or Unassisted	>1000 Btu/scf	
Stack Height	175	ft	
Stack Diameter	2	ft	
Stack Temperature	1832	°F	
Is Flare Used for MSS/Emergency ONLY?	No		
Associated Waste Streams	Storage Tanks	and Loading	
Destruction Efficiency (%)	98%		

struction Efficiency (%)	98%
Event:	UNSTAB Storage Tanks
Is waste stream in ProMax Simulation?	Yes
VRU Downtime	5.00%
Waste Stream Analysis	CONDENSATE
Operation (hrs/year):	438

UNSTAB Storag	e Tanks			U	NSTAB Stor	age Tanks F	low		Efficiency	Controlled	Emissions	BTU/SCF	Net Heat Release		
Component	MW	Vapor Mole %	lb/hr	tpy	scf/hr	MMscf/yr	mol/hr	mol/yr	%	lb/hr	tpy	(LHV)	BTU/scf	BTU/hr	MMBTU/yr
CO <sub>2</sub>	44.01	0.41%	0.25	0.05	2.16	0.001	0.01	2.49	0%	0.25	0.05				
Methane	16.04	0.54%	2.75	0.60	65.10	0.029	0.17	75.14	98%	0.06	0.01	892	5	58,070	25
Ethane	30.07	5.50%	4.48	0.98	56.52	0.025	0.15	65.23	98%	0.09	0.02	2254	124	127,393	56
Propane	44.10	40.21%	13.71	3.00	117.99	0.052	0.31	136.19	98%	0.27	0.06	2371	953	279,754	123
i-Butane	58.12	6.03%	4.68	1.02	30.56	0.013	0.08	35.27	98%	0.09	0.02	2923	176	89,314	39
n-Butane	58.12	26.07%	14.35	3.14	93.67	0.041	0.25	108.11	98%	0.29	0.06	2930	764	274,439	120
i-Pentane	72.15	7.39%	6.06	1.33	31.89	0.014	0.08	36.81	98%	0.12	0.03	3602	266	114,877	50
n-Pentane	72.15	7.80%	6.69	1.46	35.16	0.015	0.09	40.59	98%	0.13	0.03	3609	282	126,908	56
Benzene	78.11	0.36%	0.63	0.14	3.04	0.001	0.01	3.51	98%	0.01	2.74E-03	3591	13	10,907	5
n-Hexane	86.18		2.36	0.52	10.41	0.005	0.03	12.01	98%	0.05	0.01	4403		45,833	20
Other Hexanes	86.18	4.08%	2.11	0.46	9.27	0.004	0.02	10.70	98%	0.04	9.22E-03	4403	180	40,820	18
Toluene	92.14	0.11%	0.27	0.06	1.12	0.000	0.00	1.30	98%	5.46E-03	1.20E-03	4274	5	4,808	2
Other Heptanes	100.20	1.23%	2.22	0.49	8.42	0.004	0.02	9.72	98%	0.04	9.73E-03	5100	63	42,929	19
Ethylbenzene	106.17	0.00%	0.01	0.00	0.05	0.000	0.00	0.06	98%	2.95E-04	6.47E-05	4971	0	262	0
Xylenes	106.16	0.01%	0.03	0.01	0.12	0.000	0.00	0.14	98%	6.97E-04	1.53E-04	4957	1	618	0
Other Octanes	114.23	0.19%	0.51	0.11	1.68	0.001	0.00	1.94	98%	0.01	2.22E-03	5796	11	9,744	4
Nonanes	128.25	0.04%	0.01	0.00	0.04	0.000	0.00	0.04	98%	2.37E-04	5.19E-05	5796	2	203	0
Decanes plus (C10+)	142.29	0.01%	0.00	0.00	0.01	0.000	0.00	0.01	98%	4.09E-05	8.95E-06	5796	1	32	0
	TOTAL	100.00%	61.13	13.39	467.2	0.2	1.23	539.3		lb/hr	tpy		2,846	1,226,910	537
									VOC	1.07	0.23			lb/hr	tpy
									SO2				NOx	0.17	0.04
									H2S				со	0.34	0.07

_	
Event:	STAB LOADING
Is waste stream in ProMax Simulation?	NO
Waste Stream Max Hourly Flow Rate (scfh)	28
Waste Stream Average Hourly Flow Rate (scfh)	28
Waste Stream Analysis	CONDENSATE
Operation (hrs/year):	438

STAB LOAD	ING				STAB LO	ADING Flow			Efficiency	Controlled I	Emissions	BTU/SCF	N	let Heat Releas	se
Component	MW	Vapor Mole %	lb/hr	tpy	scf/hr	MMscf/yr	mol/hr	mol/yr	%	lb/hr	tpy	(LHV)	BTU/scf	BTU/hr	MMBTU/yr
Methane	16.04	1.03%	0.01	0.03	0.29	0.000	0.00	0.33	98%	2.41E-04	6.54E-04	892	9	254	0
Ethane	30.07	0.03%	0.00	0.00	0.01	0.000	0.00	0.01	98%	1.20E-05	3.26E-05	2254	1	17	0
Propane	44.10	0.44%	0.01	0.04	0.12	0.000	0.00	0.14	98%	2.82E-04	7.65E-04	2371	10	288	0
i-Butane	58.12	1.85%	0.08	0.21	0.51	0.000	0.00	0.59	98%	1.57E-03	4.26E-03	2923	54	1,497	1
n-Butane	58.12	22.85%	0.97	2.62	6.31	0.003	0.02	7.29	98%	0.02	0.05	2930	670	18,499	8
i-Pentane	72.15	22.18%	1.17	3.16	6.13	0.003	0.02	7.07	98%	0.02	0.06	3602	799	22,072	10
n-Pentane	72.15	26.77%	1.41	3.81	7.40	0.003	0.02	8.54	98%	0.03	0.08	3609	966	26,692	12
Benzene	78.11	1.66%	0.09	0.26	0.46	0.000	0.00	0.53	98%	1.89E-03	5.12E-03	3591	60	1,646	1
Other Hexanes	86.18	15.96%	1.00	2.72	4.41	0.002	0.01	5.09	98%	0.02	0.05	4403	703	19,414	9
Toluene	92.14	0.54%	0.04	0.10	0.15	0.000	0.00	0.17	98%	7.27E-04	1.97E-03	4274	23	640	0
Other Heptanes	100.20	5.54%	0.40	1.10	1.53	0.001	0.00	1.77	98%	8.08E-03	0.02	5100	282	7,805	3
Ethylbenzene	106.17	0.02%	0.00	0.00	0.01	0.000	0.00	0.01	98%	3.35E-05	9.08E-05	4971	1	30	0
Xylenes	106.16	0.04%	0.00	0.01	0.01	0.000	0.00	0.01	98%	6.83E-05	1.85E-04	4957	2	61	0
Other Octanes	114.23	0.83%	0.07	0.19	0.23	0.000	0.00	0.26	98%	1.38E-03	3.73E-03	5796	48	1,325	1
Nonanes	128.25	0.17%	0.02	0.04	0.05	0.000	0.00	0.05	98%	3.09E-04	8.37E-04	5796	10	265	0
Decanes plus (C10+)	142.29	0.09%	0.01	0.03	0.03	0.000	0.00	0.03	98%	1.89E-04	5.12E-04	5796	5	146	Ō
	TOTAL	100.0%	5.27	14.28	27.6	0.0	0.07	31.9		lb/hr	tpy		3,643	100,649	44
									VOC	0.11	0.29			lb/hr	tpy
									SO2				NOx	0.01	3.04E-03
									H2S				со	0.03	6.07E-03

Emissions Summary					
Pollutant	Pollutant Controlled Emission Ra				
	lb/hr	TPY			
NOx	0.18	0.04			
со	0.37	0.08			
VOC	1.18	0.52			

NMED Modeling Waiver Limit, Ib/hr	NO2	0.189
NMED Modeling waiver Limit, ib/nr	со	16.037
Emissions meet Modeling Waiver?	NO2	YES
Emissions meet wodening walver?	со	YES



138 0.2755 Based on TCEQ's Air Permit Division NSR Emission Calculations guidance document for flares, March 2021

Table 6-6 HAUL Road Emissions - Calculation Inputs DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

## **Calculation Inputs**

### **Stabilized Loading Inputs**

Loads per day	14 per day	Engineer Estimate
Volume per day	105,840 gal/day	Number of Loads *7560 gal/load
volume per day	2,520 bbl/day	gal/day / 42 bbl/gal
Volume per year	38,631,600 gal/yr	gal/day * 365 days/yr
volume per year	919,800 bbl/yr	bbl/day * 365 days/yr

#### **Unstabilized Loading Inputs**

Loads per day	18 per day	Engineer Estimate
Volume per day	136,080 gal/day	gal/yr / 42 bbl/gal
volume per day	3,240 bbl/day	gal/day / 42 gal/bbl
Volume per year	49,669,200 gal/yr	gal/day * 365 days/yr
	1,182,600 bbl/yr	gal/yr / 42 bbl/gal

### Paved Haul Road Inputs - Stabilized Liquid

Round Trip Length	0.23 mi
Trips per day	14 per day
Trips per year	5110 per year

### Paved Haul Road Inputs - Unstabilized Liquid

Round Trip Length	0.66 mi
Trips per day	18 per day
Trips per year	6570 per year

### Unpaved Haul Road Inputs - Stabilized Liquid

Round Trip Length	0.028 mi
Trips per day	14 per day
Trips per year	5110 per year

#### **Unpaved Haul Road Inputs - Unstabilized Liquid**

•	•
Round Trip Length	0.04 mi
Trips per day	18 per day
Trips per year	6570 per year

Table 6-7 HAUL Road Emissions DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

#### **Paved Haul Road Emissions for Stabilized Liquid**

Haul Input Information			
Unit(s):	HAUL		
Description:	Paved	haul road emissions	
li	nput Data		
Empty vehicle weight <sup>1</sup>	16	tons	
Condensate Density <sup>2</sup>	5.61	lb/gal	
Load weight <sup>3</sup>	21.2	tons	
Loaded vehicle <sup>4</sup>	37.2	tons	
Mean vehicle weight <sup>5</sup>	26.60	tons	
Vehicle size	180	bbl	
Vehicle frequency <sup>6</sup>	14	vehicles/day	
Round-trip distance	0.23	mile/trip	
Truck Size	7560	Nominal	
Filling Time	0.5	Nominal	
Loadout Spots	1	Assumed	
Trip frequency <sup>7</sup>	1	trips/hour	
Trip frequency <sup>8</sup>	5110	trips/yr	
Surface silt content9	0.2	g/m <sup>2</sup>	
Annual wet days <sup>10</sup>	70	days/yr	
Vehicle miles traveled <sup>11</sup>	0.23	mile/hr	
Vehicle miles traveled	1161.4	miles/yr	

Emission Factors and Constants				
Parameter PM <sub>10</sub> PM <sub>2.5</sub>				
k, lb/VMT <sup>12</sup>	0.016	0.004		
Hourly EF, lb/VMT <sup>13</sup>	0.09	0.02		
Annual EF, lb/VMT <sup>14</sup>	0.08	0.02		

Particulate Matter Emissions			
PM <sub>10</sub>	PM <sub>2.5</sub>		
0.021	0.005	lb/hr <sup>15</sup>	
0.04	0.011	ton/yr <sup>16</sup>	

<sup>1</sup> Empty vehicle weight includes driver and occupants and full fuel load.

<sup>2</sup> Density is reference from the unstabilized condensate analysis (2/27/2020)

<sup>3</sup> Cargo, transported materials, etc. (Density (lb/gal) \*7560 gal truck/ 2000lb/ton)

<sup>4</sup> Loaded vehicle weight = Empty + Load Size

<sup>5</sup> Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2

<sup>6</sup> Vehicles per day = Loadout volume / Truck size

<sup>7</sup> Trips per hour = Total loadout spots / Loading time

<sup>8</sup> Trips per year = Total throughput (bbl/yr) / Truck size (bbl)

<sup>9</sup> Assumed silt content for paved roads

<sup>10</sup> Per NMED Guidance

<sup>11</sup> VMT/hr = Vehicle Miles Traveled per hour= Trips per hour \* Segment Length

<sup>12</sup> Table 13.2.1-1

<sup>13</sup> AP-42 13.2.1, Equation 1

<sup>14</sup> AP-42 13.2.1, Equation 2

<sup>15</sup> lb/hr = Hourly EF (lb/VMT) \* VMT (mile/hr)

<sup>16</sup> ton/yr = Annual EF (lb/VMT) \* VMT (mile/hr) \* Hours of operation (hr/yr)

Table 6-8 HAUL Road Emissions DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

#### Paved Haul Road Emissions for Unstabilized Liquid

Haul Input Information		
Unit(s):	HAUL	
Description:	Paved haul road emissions	

Input Data		
Empty vehicle weight <sup>1</sup>	16	tons
Condensate Density <sup>2</sup>	5.47	lb/gal
Load weight <sup>3</sup>	20.7	tons
Loaded vehicle <sup>4</sup>	36.7	tons
Mean vehicle weight <sup>5</sup>	26.34	tons
Vehicle size	180	bbl
Vehicle frequency <sup>6</sup>	18	vehicles/day
Round-trip distance	0.66	mile/trip
Truck Size	7560	Nominal
Filling Time	0.5	Nominal
Loadout Spots	2	Assumed
Trip frequency <sup>7</sup>	2	trips/hour
Trip frequency <sup>8</sup>	6570	trips/yr
Surface silt content9	0.2	g/m <sup>2</sup>
Annual wet days <sup>10</sup>	70	days/yr
Vehicle miles traveled <sup>11</sup>	0.66	mile/hr
Vehicle miles traveled	4355.1	miles/yr

Emission Factors and Constants				
Parameter PM <sub>10</sub> PM <sub>2.5</sub>				
k, lb/VMT <sup>12</sup>	0.016	0.004		
Hourly EF, lb/VMT <sup>13</sup>	0.09	0.02		
Annual EF, lb/VMT <sup>14</sup>	0.08	0.02		

Particulate Matter Emissions			
PM <sub>10</sub>	PM <sub>2.5</sub>		
0.062	0.015	lb/hr <sup>15</sup>	
0.16	0.041	ton/yr <sup>16</sup>	

<sup>1</sup> Empty vehicle weight includes driver and occupants and full fuel load.

- <sup>2</sup> Density is reference from the unstabilized condensate analysis (2/27/2020)
- <sup>3</sup> Cargo, transported materials, etc. (Density (lb/gal) \*7560 gal truck/ 2000lb/ton)
- <sup>4</sup> Loaded vehicle weight = Empty + Load Size
- <sup>5</sup> Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
- <sup>6</sup> Vehicles per day = Loadout volume / Truck size
- <sup>7</sup> Trips per hour = Total loadout spots / Loading time
- <sup>8</sup> Trips per year = Total throughput (bbl/yr) / Truck size (bbl)
- <sup>9</sup> Assumed silt content for paved roads
- <sup>10</sup> Per NMED Guidance
- <sup>11</sup> VMT/hr = Vehicle Miles Traveled per hour= Trips per hour \* Segment Length
- <sup>12</sup> Table 13.2.1-1
- <sup>13</sup> AP-42 13.2.1, Equation 1
- <sup>14</sup> AP-42 13.2.1, Equation 2
- <sup>15</sup> lb/hr = Hourly EF (lb/VMT) \* VMT (mile/hr)
- <sup>16</sup> ton/yr = Annual EF (lb/VMT) \* VMT (mile/hr) \* Hours of operation (hr/yr)

Table 6-9 **HAUL Road Emissions DCP Operating Company, LP** Linam Ranch Gas Plant Lea County, New Mexico

Filling Time:

Oil Loadout Spots

Surface silt content<sup>8</sup>

Vehicle miles traveled<sup>10</sup>

Annual wet days<sup>9</sup>

Trip frequency<sup>6</sup>

Trip frequency<sup>7</sup>

#### **Unpaved Haul Road Emissions for Stabilized Liquid**

Haul I	Haul Input Information			
Unit(s):		HAUL		
Description:	Unpaved I	naul road emissions		
	Input Data			
Empty vehicle weight <sup>1</sup>	16	tons		
Load weight <sup>2</sup>	21.2	tons		
Loaded vehicle <sup>3</sup>	37.2	tons		
Mean vehicle weight <sup>4</sup>	26.60	tons		
Condensate Throughput	2520	bbl/day		
Loadout volume	919,800	bbl/yr		
Vehicle size	180	bbl		
Vehicle frequency <sup>5</sup>	14	vehicles/day		
Round-trip distance	0.028	mile/trip		
Truck Size:	7560	Nominal		

0.75

1

1.0

5110

4.8

70

0.03

Nominal

Assumed

trips/hour

trips/yr

days/yr

mile/hr

%

Vehicle miles traveled	145.2	miles/yr
Emission Factor	rs and Cons	tants
Parameter	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>
k, lb/VMT <sup>11</sup>	1.5	0.15
a, lb/VMT <sup>11</sup>	0.90	0.90
b, lb/VMT <sup>11</sup>	0.45	0.45
Hourly EF, lb/VMT <sup>12</sup>	1.76	0.18
Annual EF, lb/VMT <sup>13</sup>	1.42	0.14

Emission Calculations for Particulate Matter			
PM <sub>10</sub>	PM <sub>2.5</sub>		
0.05	0.005	lb/hr <sup>14</sup>	
0.10	0.010	ton/yr <sup>15</sup>	

<sup>1</sup> Empty vehicle weight includes driver and occupants and full fuel load.

- <sup>2</sup> Cargo, transported materials, etc. (Density (lb/gal) \*7560 gal truck/ 2000lb/ton)
- <sup>3</sup> Loaded vehicle weight = Empty + Load Size
- <sup>4</sup> Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
- <sup>5</sup> Vehicles per day = Loadout volume / Truck size
- <sup>6</sup> Trips per hour = Total loadout spots / Loading time
- <sup>7</sup> Trips per year = Total throughput (bbl/yr) / Truck size (bbl)
- <sup>8</sup> AP-42 Table 13.2.2-1
- <sup>9</sup> Per NMED Guidance
- <sup>10</sup> VMT/hr = Vehicle Miles Traveled per hour= Trips per hour \* Segment Length
- <sup>11</sup> Table 13.2.2-2, Industrial Roads
- <sup>12</sup> AP-42 13.2.2, Equation 1a
- <sup>13</sup> AP-42 13.2.2, Equation 2
- <sup>14</sup> lb/hr = Hourly EF (lb/VMT) \* VMT (mile/hr)
- <sup>15</sup> ton/yr = Annual EF (lb/VMT) \* VMT (mile/hr) \* Hours of operation (hr/yr)

Table 6-10 HAUL Road Emissions DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

#### **Unpaved Haul Road Emissions for Unstabilized Liquid**

Haul	Haul Input Information					
Unit(s):	HAUL					
Description:	Unpaved h	aul road emissions				
	Input Data	-				
Empty vehicle weight <sup>1</sup>	16	tons				
Load weight <sup>2</sup>	20.7	tons				
Loaded vehicle <sup>3</sup>	36.7	tons				
Mean vehicle weight <sup>4</sup>	26.34	tons				
Condensate Throughput	3240	bbl/day				
Loadout volume	1,182,600	bbl/yr				
Vehicle size	180	bbl				
Vehicle frequency <sup>5</sup>	14	vehicles/day				
Round-trip distance	0.038	mile/trip				
Truck Size:	7560	Nominal				
Filling Time:	0.75	Nominal				
Oil Loadout Spots	1	Assumed				
Trip frequency <sup>6</sup>	2.0	trips/hour				
Trip frequency <sup>7</sup>	6570	trips/yr				
Surface silt content <sup>8</sup>	4.8	%				
Annual wet days <sup>9</sup>	70	days/yr				
Vehicle miles traveled <sup>10</sup>	0.04	mile/hr				
Vehicle miles traveled	248.9	miles/yr				

Emission Factors and Constants					
Parameter	PM <sub>10</sub>	PM <sub>2.5</sub>			
k, lb/VMT <sup>11</sup>	1.5	0.15			
a, lb/VMT <sup>11</sup>	0.90	0.90			
b, lb/VMT <sup>11</sup>	0.45	0.45			
Hourly EF, lb/VMT <sup>12</sup>	1.75	0.17			
Annual EF, lb/VMT <sup>13</sup>	1.41	0.14			

Emission Calculations for Particulate Matter					
PM <sub>10</sub>	PM <sub>2.5</sub>				
0.07	0.007	lb/hr <sup>14</sup>			
0.18	0.018	ton/yr15			

<sup>1</sup> Empty vehicle weight includes driver and occupants and full fuel load.

<sup>2</sup> Cargo, transported materials, etc. (Density (lb/gal) \*7560 gal truck/ 2000lb/ton)

<sup>3</sup> Loaded vehicle weight = Empty + Load Size

<sup>4</sup> Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2

<sup>5</sup> Vehicles per day = Loadout volume / Truck size

<sup>6</sup> Trips per hour = Total loadout spots / Loading time

<sup>7</sup> Trips per year = Total throughput (bbl/yr) / Truck size (bbl)

<sup>8</sup> AP-42 Table 13.2.2-1

<sup>9</sup> Per NMED Guidance

<sup>10</sup> VMT/hr = Vehicle Miles Traveled per hour= Trips per hour \* Segment Length

<sup>11</sup> Table 13.2.2-2, Industrial Roads

<sup>12</sup> AP-42 13.2.2, Equation 1a

<sup>13</sup> AP-42 13.2.2, Equation 2

<sup>14</sup> lb/hr = Hourly EF (lb/VMT) \* VMT (mile/hr)

<sup>15</sup> ton/yr = Annual EF (lb/VMT) \* VMT (mile/hr) \* Hours of operation (hr/yr)

## Table 6-11 HAUL Road Emissions Changes DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

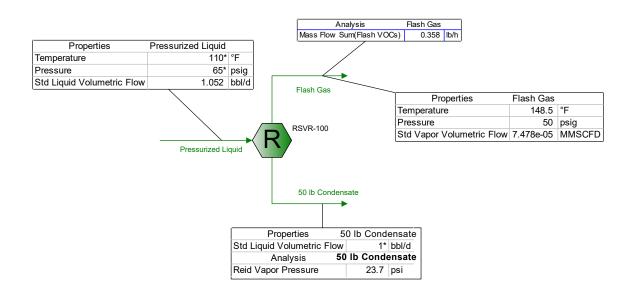
Proposed				
Emissions	s PM10 PM2.5		2.5	
Source	lb/hr	TPY	lb/hr	TPY
Paved Haul Road Emissions	0.083	0.208	0.021	0.052
Unpaved Haul Road Emissions	0.116	0.279	0.012	0.028
Total	0.199	0.487	0.032	0.080

Existing				
Emissions	Emissions PM10 PM2.5		2.5	
Source	lb/hr	TPY	lb/hr	TPY
Paved Haul Road Emissions	0.023	0.083	0.006	0.021
Unpaved Haul Road Emissions	0.081	0.288	0.008	0.029
Total	0.105	0.371	0.014	0.050

Changes (1)				
Emissions	PN	110	PM2.5	
Source	lb/hr	TPY	lb/hr	TPY
Paved Haul Road Emissions	0.060	0.125	0.015	0.031
Unpaved Haul Road Emissions	0.035	-0.009	0.003	-0.001
Total Emi Changes	0.09	0.12	0.02	0.03

(1) PM10 and PM2.5 emission increases are exempted from air dispersion modeling.

### DCP Operating Company, LP Linam Ranch Gas Plant Unstabilized Condensate 65 psig flare valve



Composition         Status:         Security         Science         Science           Phase:         FOB Block:         -         -         -           To Block:         -         -         -         -           Mase:         Foxilion         %         %         %           Mole Fraction         %         %         %         %           Mitogen         0         0         0         0         0           Carbon Dioxide         0.461728         0.0478807         0.0193836         115152         0.271370           Methane         12.0940         1.73946         1.02325         3.06134         3.06357           Propane         25.2475         6.89517         5.63145         -         -           Butane         0         0         0         0         0           -Pentane         7.52446         12.2982         12.62697         -           Velopentane         0         0         0         0         0           Hexane         2.22743         9.24815         9.73159         -           Hethylopotopentane         0         0         0         0         0         0         0					
Phase:         From Block:         -         -         -           Kole Fraction         5         5         5         5           Kole Fraction         0         0         0         0         0           Vilrogen         0         0         0.0173836'         55         55           Carbon Dioxide         0.417364         0.02730'         0.1173646         1.02325'           Propane         25.2475         6.89517         5.63145'           Butane         0.63329         3.28746         3.05835'           Peltrane         6.82437         8.96444         9.11233'           Pentane         7.52446         12.2982         12.6269'           Opclopentane         0         0         0'''           Victoprotane         0         0''''         0'''''           Methylopentane         1.17393         4.97867         5.24173''           Senzene         0.849871         2.27441         2.87964''         1.8374''           Vietorane         0         0'''''         0''''''         0'''''''           Vietorane         0.359731         9.33881         9.97847''           Styphene         0.00266574         0.801560	Process Streams		Flash Gas	Pressurized Liquid	Sales Oil
Phase:         From Block:         -         -           Nole Fraction         No.         No.         No.           Nilogen         0         0         0         0           Stabon Dioxide         0.41728         0.0478807         0.0193385           Melthane         13.9303         1.15132         0.271370           Ethane         12.0940         1.73546         1.023257           Propane         25.2475         6.89517         5.63145           Butane         0.63529         3.28748         3.008637           Peltrane         6.82437         8.96404         9.11233           -Pentane         7.52446         12.2982         12.6269           Cyclopentane         0         0         0         0           -Hexane         0         0         0         0           Pentane         1.17333         4.97967         5.24173           Benzene         0.84971         2.27441         2.87941         2.87944           Velocipantane         0         0         0         0         0           Syclopentane         0.01721         2.68269         0.33681         9.97847           Syclopentane	Composition	Status:	Solved		Solved
To Block         -         -         -           Ode Fraction         0         0         0         0         0         0           Carbon Dioxide         0.461728         0.0478807         0.0193836         0					
Mole Fraction         %         %         %           Vitrogen         0         0         0         0           Carbon Dioxide         0.461728         0.0478807         0.0193835           Methane         13.9303         1.15132         0.0271370           Disane         12.0940         1.73646         1.022357           Propane         25.2475         6.689517         5.63145           Butane         16.35289         3.28748         3.068357           P-Butane         6.82437         8.96494         9.112337           P-Pentane         7.52446         12.2392         12.126269           Oyclopentane         0         0         0         0           Hexane         0         0         0         0         0           Hexane         0.849871         2.73441         2.87795         5.241733           Senzene         0.649871         2.73441         2.87795         5.241733           Senzene         0.649871         2.73441         2.87955           Optokane         0         0         0         0           Hethyloxone         0.0240721         2.66229         2.85411           Votane					
Nirogen         0         0         0         0         0         0           Carbon Dioxide         0.461728         0.0478807         0.0198385           Ethane         12.0940         1.73846         1.02325           Oropane         25.2475         6.89517         5.631459           Butane         6.53829         3.28748         3.09833           Pentane         2.02426         13.4501         12.9962           Pentane         2.02426         13.4501         12.9962           Outopentane         0         0         0         0           Velopentane         0         0         0         0         0           Hexane         2.22743         9.24815         9.73159         4.97967         5.24173           Senzene         0.649871         2.73441         2.87795         5.24173           Syciobexane         0         0         0         0         0           Velopicyclobexane         0<	Mole Fraction	TO BIOCK.	%	%	%
Carbon Dioxide         0.461728         0.0478807         0.019386'           Wethane         13.9303         1.15132         0.271370'           Ehane         12.0940         1.73646         1.02325'           Popane         25.2475         6.689517         5.63145'           Butane         6.53829         3.28748         3.06335'           P-Britane         20.0426         13.4501         11.29962'           P-Pentane         7.52446         12.2982         12.6269'           Octopentane         0         0         0''''''''''''''''''''''''''''''''''''					
Ehane         12.0940         1.73646         1.73245           Propane         25.2475         6.80517         5.63145           Foltane         6.53829         3.28748         3.06363           F-Dutane         20.0426         13.4501         11.29962           P-Pentane         6.82437         8.96494         9.11233           P-Pentane         0         0         0         0           Vyclopentane         0         0         0         0         0           Hexane         0.837358         3.00229         3.15137         1.47344         1.287941         2.87743           Methyloptane         0.17393         4.97967         5.24173         5.24173           Benzene         0.649871         2.73441         2.87745         9.97847           Vyclopkarae         0         0         0         0         0           Voltane         0.240721         2.88241         9.26861         9.315857           Vyclopkokarae         0.001522         0.485322         2.85411         9.25257           Voltane         0.00750822         0.485322         0.187657         1.87050           Vitopen         0.00112860         0.310529         0.	Carbon Dioxide		0.461728	0.0478807	0.0193836*
Popane         25.2475         6.638129         3.28748         3.06363           -Butane         20.0426         13.4501         12.9862           -Pentane         6.82437         8.96494         9.11233           -Pentane         0         0         0           Vectopentane         0         0         0         0           -Hexane         0.837358         3.00229         3.15137           -Hexane         2.22743         9.24815         9.73159           Wethyloyclopentane         1.17393         4.97967         5.24172           Senzene         0.649871         2.73441         9.24815         9.73159           Wethyloyclopentane         0         0         0         0         0           -Methylopentane         0.649871         2.73441         9.24874         3.49767         5.24175           Syclohexane         0	Methane		13.9303	1.15132	0.271370*
Butane         6.5329         3.28748         3.06535           Pentane         20.0426         13.4501         12.9982           Pentane         6.82437         8.96494         9.11233           Pentane         0         0         0           Cyclopentane         0         0         0           Hexane         0         0         0         0           Hexane         2.22743         9.24815         9.73159           Senzene         0.649871         2.73441         2.87795           Cyclohexane         0         0         0         0           Methylocyclohexane         0         0         0         0           Olkense         0.240721         2.68229         2.85041           Poluene         0.240721         2.68229         2.85041           Poluene         0.240721         2.68229         2.85041           Poluene         0.0266574         0.801560         0.854919           Poluene         0.001622         0.485325         0.8168219           Poluene         0.0016327         0.1177606         0.19755           Nonane         0.00266574         0.8001860         0.854919	Ethane		12.0940	1.73646	1.02325*
-butane         20.0426         13.4501         12.9662           -Pentane         6.82437         8.96494         9.11233           -Pentane         0         0         0           Syclopentane         0         0         0         0           Hexane         0         0         0         0           Methylpentane         2.22743         9.244915         9.73159           Methylpentane         2.27733         9.244915         9.73159           Methylpcolopentane         1.17393         4.97667         5.24173           Spectone         0.649871         2.73441         2.87795           Syclohexane         0         0         0         0           Abethylhexane         0         0         0         0           Foluene         0.240721         2.68281         9.97447           Ehylbenzene         0.0112980         0.310929         0.315627           -Norane         0.00750822         0.485352         0.518256           -Decane         0.00114627         0.177060         0         0           -Detarbo         0.000750822         0.485352         0.0187557         0.003226574         0.000323563*	Propane				
Pentane         6.82437         9.96443         9.112337           >Pentane         7.52446         12.2982         12.62697           >Vertexane         0         0         0           Hexane         0         0         0           Methylpontane         2.22743         9.24815         9.731537           Jenzane         0.837358         3.00229         3.15137           Jenzane         0.849871         2.73441         2.87795           Vethylcyclopentane         1.17393         4.97667         5.24173           Jenzane         0         0         0         0           Vethylcyclopentane         0         0         0         0         0           Vethylcyclopentane         1.80107         18.3874         19.52857         Vethylcyclopentane         0.00750822         0.485319         9.97847           Toluene         0.2266574         0.801560         0.854919         NORTARE         0.0011627         0.179606         0.189755           Nylene         0.000750822         0.445525         0.01172606         0.189755         NORTARE         0.00027290         0.00027290         0.00027290         0.00027290         0.000227290         0.000227290         0.000227290	i-Butane				
Pentane         7.52446         12.2982         12.6269           Cyclopentane         0         0         0           -Hexane         0         0         0           3Methylpentane         0.837358         3.00229         3.15137*           Hetxane         2.22743         9.244815         9.73159*           Methylpcyclopentane         1.17393         4.97667         5.24173*           Senzene         0.649871         2.73441         2.87795*           Vyclohexane         0         0         0         0           Velthylhexane         0         0         0         0           Vyclohexane         0         0         0         0         0           Velthyloxylobexane         0         0.240721         2.68229         2.85041*           Vyclone         0.240721         2.68229         0.31562*         0.51826*           Vyclone         0.00116627         0.48552         0.51826*         0.31929         0.31562*           Vyclone         0.00114627         0.0014728         0.00032363*         0.0012200*         0.00221300         0.0012200*           Victopen         0         0         0         0         0					
Cyclopentane         0         0         0           Hexane         0         0         0           Ablethylpentane         0.837358         3.00229         3.15137           h-Hexane         2.22743         9.24815         9.73159           bethylycylopentane         1.17393         4.97967         5.24173*           Benzene         0.649871         2.73441         2.87967           Cyclopertane         0         0         0         0           2-Methylhexane         0<					
-Hexane         0         0         0         0           3-Methylpentane         0.837358         3.00229         3.15137           -Hexane         2.22743         9.24815         9.73159           Methylcyclopentane         1.17393         4.97967         5.24173           Senzene         0.649871         2.73441         2.87795           Cyclohexane         0         0         0         0           Alethylhexane         0         0         0         0           Alethylhexane         0         0         0         0         0           Foluene         0.240721         2.86231         9.935881         9.97847           Ehylbenzene         0.0112960         0.310929         0.331662           T-Volane         0.00750822         0.485352         0.618256           T-Decane         0.00116627         0.177606         0.19756           T-Decane         0.00114372         0.00146728         0.000325637           T-Decane         0.000146755         0.014728         0.00352686           Protane         0.000146555         0.014728         0.00352686           Protane         0.000146555         0.014784         0.00352867 <td></td> <td></td> <td></td> <td></td> <td></td>					
3-Methylpentane         0.837358         3.0022         3.15137           1-Hexane         2.22743         9.24815         9.73159           Wethylcyclopentane         1.17333         4.97967         5.24173*           Benzene         0.649871         2.73441         2.87795*           Syclohexane         0         0         0         0           2-Methylhexane         0         0         0         0         0           3-Methylpexane         0.240721         2.68229         2.85041*         0.24571         9.35881         9.97847*           Foluene         0.240721         2.68229         0.316929         0.315652         0.518256         0.518256           Notane         0.0026574         0.801560         0.189755*         0.00116627         0.17666         0.189755*           Notane         0.0011627         0.177666         0.189755*         0.00114372         0.0044758         0.00323683*           -Decane         0.0011627         0.0146728         0.00053638*         0.0014522         0.1036286*           -Detane         0.00056300         0.0114222         0.0036286*         0.006744         0.006744           -Butane         0.00056300         0.014525         0			-		-
h-Hexane         2.22743         9.24815         9.73159           Methyloyclopentane         1.17393         4.97967         5.24173           Benzene         0.649871         2.73441         2.73441         2.73421           Velthylexane         0         0         0         0           Methylhexane         0         0         0         0           Methylexohexane         0         0         0         0           Methylexohexane         0         0.240721         2.68229         2.55041           Methylexohexane         0.012980         0.310521         0.3315627           Methylexohexane         0.01266574         0.801560         0.8549197           →Kylene         0.000750822         0.485352         0.176068         0.182767           →Kylene         0.000750822         0.485352         0.17608         0.197557           →Corane         0.000114372         0.00146728         0.000323663*           →Decane         0.000227290         0.0067444         0.0067444           Butane         0.00164555         0.0114322         0.0164525           →Pentane         0.00056300         0.0114222         0.00375477           →Pentane <td< td=""><td></td><td></td><td>-</td><td>v</td><td>-</td></td<>			-	v	-
Methyloyclopentane         1.17393         4.97967         5.24173           Benzene         0.649871         2.77341         2.87795           Senzene         0         0         0         0           2-Methylhexane         0         0         0         0           3-Methylhexane         0         0         0         0           3-Methylhexane         0.240721         2.88229         2.85041           1-Cotane         0.3305731         9.35881         9.97847           T-Otane         0.00750822         0.485352         0.518256           N-Nanane         0.00750822         0.485352         0.112980         0.331562*           N-Nanane         0.000116627         0.177506         0.119755         1.87756           Nitrogen         0         0         0         0         0           Scarbon Dioxide         3.79092-05         6.102082-05         2.31117E-055         4.97647           Vitrogen         0.00027290         0.0087344         0.00067434         0.00122005*           Corban Dioxide         3.79092-05         6.102082-05         0.00122005*           Scarbon Dioxide         0.00067434         0.0016455         0.00174747         0.0016454	n-Hexane				
Banzene         0.649871         2.73441         2.87795           Cyclohexane         0         0         0         0           Adettyhlexane         0         0         0         0           Methylhexane         0         0         0         0           Heptane         1.80107         18.3874         19.5295           Methylcyclohexane         0.240721         2.85229         2.85041*           -Octane         0.359731         9.35881         9.97847*           Thylenezne         0.00112980         0.310929         0.331562*           m-Xylene         0.00116627         0.177806         0.18255*           Holar Flow         1bmol/h         1bmol/h         1bmol/h         1bmol/h           Vitogen         0         0         0         0         0           Carbon Dioxide         3.79092-05         6.12028-05         2.31117E-05*           Wethane         0.00039249         0.00214372         0.0014325         0.0012005*           Prentane         0.000536812         0.0041452         0.0018255         0.0114152         0.0018649*           -Butane         0.0005617780         0.0156732         0.0156732         0.0156735      >					
Cyclohexane         0         0         0         0           2-Methylhexane         0         0         0         0           N-Heptane         1.80107         18.374         19.5295'           Methylhexane         0         0         0         0           Toluene         0.240721         2.68229         2.85041'           N-Octane         0.0559731         9.35881         9.97847'           Enlylbenzene         0.00116627         0.8881         9.97847'           T-Nonane         0.00266574         0.801560         0.884919'           N-Nonane         0.00750822         0.485352         0.518256'           N-Decane         0.00116627         0.177806         0.189755'           Oathon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05'           Methane         0.00016525         0.0114372         0.0041874         0.0012005'           Partane         0.000056812         0.0041874         0.0012626'         Partane           -Pentane         0.000560300         0.0116222         0.01035626'           -Pentane         0.000560300         0.0116252         0.01085626'           -Pentane         0.00060300         0.0116732	Benzene				
3-Methylhexane         0         0         0           h-Heptane         1.80107         18.8874         19.5295           Fulpene         0.240721         2.68229         2.85041           h-Octane         0.359731         9.35881         9.97847           Ehylbenzene         0.0112980         0.310929         0.331562*           m-Xylene         0.00750822         0.485352         0.518256*           h-Nonane         0.00716627         0.177606         0.189755*           Hobech         0.00116627         0.177606         0.889159*           Vitrogen         0         0         0         0           Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Methane         0.0000536812         0.004146728         0.000212005*           Propane         0.0000536812         0.00414672         0.00365284*           -Butane         0.000536812         0.0144672         0.00365284*           -Pertane         0.000560300         0.0114252         0.010649*           -Pertane         0.00017780         0.0156732         0.0156732           -Pertane         0.000147873         0.0234484         0.000156732           Pertane <td>Cyclohexane</td> <td></td> <td>0</td> <td>0</td> <td></td>	Cyclohexane		0	0	
h-Heptane         1.80107         18.3874         19.5295           Wethylcyclohexane         0         0         0         0         0           Toluene         0.240721         2.68229         2.85041*           h-Octane         0.359731         9.35881         9.97847*           Ethylbenzene         0.0112980         0.311822         0.331862*           h-Nonane         0.00750822         0.485352         0.518256*           h-Decane         0.00116627         0.177806         0.189755*           Molar Flow         Ibmol/h         Ibmol/h         Ibmol/h         0.00750822         0.00323563*           Vethane         0.00116627         0.177806         0.189755*         0.00323563*         0.00323563*           Ethane         0.00144722         0.00467874         0.000233563*         0.00021300         0.0114252         0.000823563*           Pranae         0.000560300         0.0114252         0.01086286*         0.00061786         0.00056320         0.00164555         0.0114131         0.015634*           Pentane         0.000617780         0.0156732         0.0108628*         0.00037292         0.00384628         0.00024986*           Pentane         0.000182879         0.0117861	2-Methylhexane		0	0	-
Methylcyclohexane         0	3-Methylhexane		-	-	-
Toluene         0.240721         2.68229         2.85041           h-Octane         0.359731         9.35881         9.97847           Ethylbenzene         0.0112980         0.310929         0.331562"           m-Xylene         0.0266574         0.801560         0.854919"           h-Nonane         0.00750822         0.485352         0.518256"           h-Decane         0.00116627         0.177606         0.189755"           Molar Flow         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Vitrogen         0         0         0         0"0"           Carbon Dioxide         3.79022E-05         6.10208675         2.3117E-05"           Methane         0.00014372         0.00146728         0.00021300         0.0122005"           Propane         0.00207290         0.00878744         0.00671454"           Butane         0.000560300         0.0114252         0.016649"           -Pentane         0.000560300         0.0114252         0.016649"           -Pentane         0.00017780         0.0163622         0.0037574"           -Hexane         0         0         0         0           Sanczne         0.000147783         0.0234335	-				
h-Octane         0.359731         9.35881         9.97847*           Ethylbenzene         0.0112980         0.310929         0.331562           m-Xylene         0.00750822         0.485352         0.518256*           h-Decane         0.00116627         0.177606         0.189755*           Holar Flow         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Vitrogen         0         0         0         0           Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Wethane         0.00014372         0.000146728         0.000323563*           Ethane         0.00027290         0.00878744         0.000565286*           Propane         0.00014655         0.0171413         0.0156528*           Pentane         0.00056300         0.01141252         0.0108649*           -Pentane         0.000617780         0.0156732         0.015054*           -Pentane         0.00014825*         0.0117413         0.015054*           Cyclopentane         0         0         0         0         0           Hexane         0.000182879         0.0117661         0.011603*         0.0024988*           Betrane         0.000147873			-		-
Ethylbenzene         0.0112980         0.310929         0.331562*           n-Xylene         0.0266574         0.801560         0.854419*           n-Nonane         0.00750822         0.485352         0.518256*           n-Decane         0.00116627         0.177606         0.189755*           Molar Flow         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Nitrogen         0         0         0*         0*           Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Methane         0.00014372         0.000146728         0.000223563*           Propane         0.000027290         0.00878744         0.00671454*           -Butane         0.0000536812         0.00418967         0.00365286*           -Pentane         0.000630300         0.0114252         0.0108649*           -Pentane         0.000617780         0.0156732         0.0150554*           Cyclopentane         0         0         0         0           -Hexane         0.0001482879         0.0117861         0.00243483         0.00243483           Benzene         5.33563E-05         0.00348483         0.00243484*         0.00244884*         0.00243484*         0.00242					
n-Xylene         0.0266574         0.801560         0.854919*           h-Nonane         0.00750822         0.485352         0.518256*           holar Flow         bmoth         bmoth         bmoth           Nitrogen         0         0         0************************************	-				
h-Nonane         0.00750822         0.485352         0.518256*           h-Decane         0.00116627         0.177606         0.189755*           Molar Flow         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Nitrogen         0         0         0         0         0           Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Wethane         0.00114372         0.004746728         0.00032363*           Ethane         0.00027290         0.00878744         0.00674154*           Popane         0.000536812         0.00418967         0.00365286*           n-Butane         0.0006050300         0.0117413         0.0156732         0.0160554*           P-Pentane         0.000617780         0.0156732         0.0150554*           Cyclopentane         0         0         0         0         0**           -Hexane         0	5				
n-becane         0.00116627         0.177606         0.189755*           Molar Flow         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Nitrogen         0         0         0*         0*           Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Methane         0.00114372         0.0046728         0.000323563*           Ethane         0.00027290         0.00878744         0.000122005*           Propane         0.000566312         0.00878744         0.00154255           Butane         0.000560300         0.0114132         0.0108698*           -Pentane         0.000560300         0.0114252         0.0108698*           -Pentane         0.000617780         0.0156732         0.015654*           Cyclopentane         0         0         0         0           -Hexane         0.0001780         0.0117861         0.0116033*           Methylpcyclopentane         9.6330E-05         0.00348426         0.00624988*           Benene         5.33568E-05         0.00348433         0.00343147*           -Hexane         0         0         0         0           -Heytane         0         0         0					
Notest         Ibmol/h         Ibmol/h         Ibmol/h         Ibmol/h           Nitrogen         0	n-Decane				
Carbon Dioxide         3.79092E-05         6.10208E-05         2.31117E-05*           Methane         0.00114372         0.00146728         0.000325583           Ethane         0.000992449         0.0027200         0.00474544           Popane         0.000207290         0.0047844         0.0067145454           Butane         0.000536812         0.00184957         0.00365286*          Butane         0.000617780         0.0156732         0.0156495           -Pentane         0.000617780         0.0156732         0.0105554*           Cyclopentane         0         0         0         0*           -Hexane         0.000182879         0.0117861         0.0116033*           Senzene         5.33563E-05         0.00348483         0.00343147*           Cyclopentane         9.63830E-05         0.00348483         0.00343147*           Cyclopexane         0         0         0*         0*           Amethylpexane         0         0         0*         0*           -Hexane         0         0         0*         0*         0*           -Hexane         0         0         0         0*         0*         0*           Senzene         5.33563E-05<	Molar Flow		lbmol/h	lbmol/h	lbmol/h
Methane         0.00114372         0.00146728         0.000323563*           Ethane         0.00092949         0.00221300         0.00122005*           Propane         0.000536812         0.00878744         0.00671454*           Butane         0.00164555         0.0171413         0.01649867           -Butane         0.00164555         0.0171413         0.0154958*           -Pentane         0.000617780         0.0114252         0.010869*           -Pentane         0         0         0         0           -Hexane         0         0         0         0         0           -Hexane         0         0.00182879         0.0117861         0.0116033*           Methylpentane         6.87495E-05         0.00348262         0.0024988*           Benzene         0         0         0         0           Zycklopexane         0         0         0         0           2-Methylhexane         0         0         0         0         0           2-Methylhexane         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <td>Nitrogen</td> <td></td> <td>0</td> <td>0</td> <td>۵*</td>	Nitrogen		0	0	۵*
Ethane         0.000992949         0.00221300         0.00122005*           Propane         0.00207290         0.00878744         0.00671454*           Butane         0.000586812         0.00418967         0.00365286*           n-Butane         0.00164555         0.0171413         0.0154958*           Pentane         0.000560300         0.0114252         0.0188497           n-Pentane         0.000617780         0.0156732         0.0150554*           Cyclopentane         0         0         0         0*           -Hexane         0         0         0         0*           -Hexane         0.000182879         0.0117861         0.0116033*           Methylpentane         9.63830E-05         0.0084826         0.0024988*           Bearene         5.33563E-05         0.00348483         0.0034147*           Cyclohexane         0         0         0         0*           -Hetylhexane         0         0         0         0*           -Hetylnexane         0         0         0*         0*           -Hetylpexane         0         0         0*         0*           -Hetylnexane         0         0         0*         0*			v	0	0
Dropane         0.00207290         0.00878744         0.00671454*           -Butane         0.000536812         0.00418967         0.00362286*           -Butane         0.00164555         0.0171413         0.0154958*           -Pentane         0.000560300         0.0114252         0.0108649*           -Pentane         0.000617780         0.0156732         0.010854*           Cyclopentane         0         0         0         0*           -Hexane         0         0         0         0*           -Hexane         0.000182879         0.0117861         0.01062498*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           Methylpcxlopentane         0         0         0*           Senzene         0         0         0*         0*           Cyclohexane         0         0         0*         0*           -Hetptane         0.000147873         0.0234335         0.0234385         0.0234335         0.0234385*         0.0234335         0.0232856*           Methylhexane         0         0         0         0         0*         0*         0*         0*	Carbon Dioxide		-		-
Butane         0.000536812         0.00418967         0.00365286*           n-Butane         0.00164555         0.0171413         0.0154958*           -Pentane         0.000560300         0.0114252         0.018649*           n-Pentane         0.000617780         0.0156732         0.0150554*           Cyclopentane         0         0         0         0           -Hexane         0         0         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0         0           -Methylhexane         0         0         0         0           -Netptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0         0           -Netptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0         0           Nocotane         2.95349E-05         0.0119272<	Methane		3.79092E-05 0.00114372	6.10208E-05 0.00146728	2.31117E-05* 0.000323563*
h-Butane         0.00164555         0.0171413         0.0154958*           -Pentane         0.000560300         0.0114252         0.0108649*           -Pentane         0.000617780         0.0156732         0.0105054*           Cyclopentane         0         0         0*           -Hexane         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylpcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           -Methylhexane         0         0         0*           -Netpatne         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*           -Netpatne         0.000147873         0.00341839         0.00339863*           -Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.0001935*           n-Nonane         6.16447E-07<	Methane Ethane		3.79092E-05 0.00114372 0.000992949	6.10208E-05 0.00146728 0.00221300	2.31117E-05* 0.000323563* 0.00122005*
Pentane         0.000560300         0.0114252         0.0108649*           h-Pentane         0.000617780         0.0156732         0.0150554*           Cyclopentane         0         0         0*           -Hexane         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           h-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00348483         0.0024988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*           1-Heptane         0.000147873         0.0234355         0.0232856*           Nethylcyclohexane         0         0         0*         0*           1-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259 <t< td=""><td>Methane Ethane Propane</td><td></td><td>3.79092E-05 0.00114372 0.000992949 0.00207290</td><td>6.10208E-05 0.00146728 0.00221300 0.00878744</td><td>2.31117E-05* 0.000323563* 0.00122005* 0.00671454*</td></t<>	Methane Ethane Propane		3.79092E-05 0.00114372 0.000992949 0.00207290	6.10208E-05 0.00146728 0.00221300 0.00878744	2.31117E-05* 0.000323563* 0.00122005* 0.00671454*
n-Pentane         0.000617780         0.0156732         0.0150534*           Cyclopentane         0         0         0*           -Hexane         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylpexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylpexane         0         0         0*           3-Methylpexane         0         0         0*           7-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*         *           Toluene         1.97639E-05         0.0119272         0.0118976*           -Notane         2.18865E-06         0.00102153         0.000026251* </td <td>Methane Ethane Propane i-Butane</td> <td></td> <td>3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812</td> <td>6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967</td> <td>2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286*</td>	Methane Ethane Propane i-Butane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286*
Cyclopentane         0         0         0*           -Hexane         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0         0*           2-Methylhexane         0         0         0         0*           3-Methylhexane         0         0         0*         0*           1-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*         0*           1-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000398639         0.00001933*	Methane Ethane Propane i-Butane n-Butane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958*
Hexane         0         0         0*           3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0         0*           3-Methylhexane         0         0         0*         0*           1-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*         0*           1-Octane         1.97639E-05         0.00341839         0.00339863*         0.000147873         0.000396259         0.000395331*           n-Nonane         9.27600E-07         0.000396259         0.000395331*         0* <td< td=""><td>Methane Ethane Propane i-Butane n-Butane i-Pentane</td><td></td><td>3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300</td><td>6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252</td><td>2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649*</td></td<>	Methane Ethane Propane i-Butane n-Butane i-Pentane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649*
3-Methylpentane         6.87495E-05         0.00382622         0.00375747*           n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylhexane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*         0**           3-Methylhexane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0**         0**           Toluene         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           n-Nonane         6.16447E-07         0.000618549         0.00017935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         % </td <td>Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane</td> <td></td> <td>3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780</td> <td>6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732</td> <td>2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649* 0.0150554*</td>	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649* 0.0150554*
n-Hexane         0.000182879         0.0117861         0.0116033*           Methylcyclopentane         9.63830E-05         0.00634626         0.00624988*           Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*           3-Methylhexane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*           3-Methylhexane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*         0*           7-Uetane         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           n-Xylene         9.27600E-07         0.000396259         0.000395331*           n-Xylene         6.16447E-07         0.000617933*         0.000226347         0.000226251*           Mass Fraction         %         %         %         %         %           Witrogen         0         0         0         0	Methane Ethane Propane i-Butane n-Butane i-Pentane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649* 0.0150554* 0*
Benzene         5.33563E-05         0.00348483         0.00343147*           Cyclohexane         0         0         0         0           2-Methylhexane         0         0         0         0           3-Methylhexane         0         0         0         0           0-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0         0           Toluene         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           n-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0         0           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0108649* 0.0150554* 0* 0*
Cyclohexane         0         0         0*           2-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*           0-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*           1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           n-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0.00382622	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0* 0* 0.00375747*
2-Methylhexane         0         0         0*           3-Methylhexane         0         0         0*         0         0*           h-Heptane         0.000147873         0.0234335         0.0232856*         0         0         0*           Methylcyclohexane         0         0         0         0*         0*         0*           Toluene         1.97639E-05         0.00341839         0.00339863*         0.00339863*         0.00119272         0.0118976*           5         0.0119272         0.0118976*         2.95349E-05         0.0119272         0.0118976*           5         0.27600E-07         0.000396259         0.000395331*         0.75385E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*         0.000226251*           Mass Fraction         %         %         %         %         %           Nitrogen         0         0         0*         0*         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*         %           Methane         4.50239         0.232726         0.0534749*         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0.00382622 0.0117861 0.00634626	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0* 0.00375747* 0.0116033* 0.00624988*
3-Methylhexane         0         0         0*           n-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*           Toluene         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           n-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0.00382622 0.0117861 0.00634626 0.00348483	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147*
h-Heptane         0.000147873         0.0234335         0.0232856*           Methylcyclohexane         0         0         0*           Toluene         1.97639E-05         0.00341839         0.00339863*           h-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           m-Xylene         2.18865E-06         0.00102153         0.00101935*           h-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0.00382622 0.0117861 0.00634626 0.00348483 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0*
Methylcyclohexane         0         0         0*           Toluene         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           m-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0.00382622 0.0117861 0.00634626 0.00348483 0 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0*
Toluene         1.97639E-05         0.00341839         0.00339863*           n-Octane         2.95349E-05         0.0119272         0.0118976*           Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           n-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0.00382622 0.0117861 0.00634626 0.00348483 0 0 0 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0*
n-Octane       2.95349E-05       0.0119272       0.0118976*         Ethylbenzene       9.27600E-07       0.000396259       0.000395331*         n-Xylene       2.18865E-06       0.00102153       0.00101935*         n-Nonane       6.16447E-07       0.000618549       0.000226251*         Mass Fraction       %       %       %         Nitrogen       0       0       0*         Carbon Dioxide       0.409396       0.0265512       0.0104785*         Methane       4.50239       0.232726       0.0534749*         Ethane       7.32653       0.657901       0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0 0 0 0.000147873	$\begin{array}{c} 6.10208 \hbox{E-} 05 \\ 0.00146728 \\ 0.00221300 \\ 0.00878744 \\ 0.00418967 \\ 0.0171413 \\ 0.0114252 \\ 0.0156732 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0* 0.0232856*
Ethylbenzene         9.27600E-07         0.000396259         0.000395331*           m-Xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000617933*           n-Decane         9.57538E-08         0.000226347         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0 0 0.000147873 0	$\begin{array}{c} 6.10208 E-05\\ 0.00146728\\ 0.00221300\\ 0.00878744\\ 0.00418967\\ 0.0171413\\ 0.0114252\\ 0.0156732\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.0232856* 0*
xylene         2.18865E-06         0.00102153         0.00101935*           n-Nonane         6.16447E-07         0.000618549         0.000617933*           n-Decane         9.57538E-08         0.000226347         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0 0.000147873 0 1.97639E-05	$\begin{array}{c} 6.10208 E-05\\ 0.00146728\\ 0.00221300\\ 0.00878744\\ 0.00418967\\ 0.0171413\\ 0.0114252\\ 0.0156732\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0.0232856* 0* 0.00339863*
h-Nonane         6.16447E-07         0.000618549         0.000617933*           h-Decane         9.57538E-08         0.000226347         0.000226251*           Mass Fraction         %         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0 0.000147873 0 1.97639E-05 2.95349E-05	$\begin{array}{c} 6.10208 E-05\\ 0.00146728\\ 0.00221300\\ 0.00878744\\ 0.00418967\\ 0.0171413\\ 0.0114252\\ 0.0156732\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.0232856* 0* 0.00339863* 0.0118976*
Mass Fraction         %         %           Nitrogen         0         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 5.33563E-05 0 0 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0 0.00382622 0.0117861 0.00634626 0.00348483 0 0 0 0.0234335 0 0.0234335 0 0.00341839 0.0119272 0.000396259	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.0232856* 0* 0.00339863* 0.0118976* 0.000395331*
Nitrogen         0         0*           Carbon Dioxide         0.409396         0.0265512         0.0104785*           Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07 2.18865E-06	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0.0156732 0.00382622 0.0117861 0.00634626 0.00348483 0 0 0.0234335 0 0.0234335 0 0.00341839 0.0119272 0.000396259 0.00102153	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.0232856* 0* 0.00339863* 0.0118976* 0.000395331* 0.00101935*
Carbon Dioxide0.4093960.02655120.0104785*Methane4.502390.2327260.0534749*Ethane7.326530.6579010.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 5.33563E-05 0 0 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07 2.18865E-06 6.16447E-07	$\begin{array}{c} 6.10208 E-05\\ 0.00146728\\ 0.00221300\\ 0.00878744\\ 0.00418967\\ 0.0171413\\ 0.0114252\\ 0.0156732\\ 0.0156732\\ 0.0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0$	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.00101935* 0.000617933*
Methane         4.50239         0.232726         0.0534749*           Ethane         7.32653         0.657901         0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 5.33563E-05 0 0 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08	$\begin{array}{c} 6.10208 E-05\\ 0.00146728\\ 0.00221300\\ 0.00878744\\ 0.00418967\\ 0.0171413\\ 0.0114252\\ 0.0156732\\ 0.0156732\\ 0.0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0$	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0* 0.0150554* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.0001935* 0.000617933* 0.000226251*
Ethane 7.32653 0.657901 0.377936*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Fraction		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 0 0 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0 0.00382622 0.0117861 0.00634626 0.00348483 0 0 0.00348483 0 0 0.0234335 0 0 0.0234335 0 0 0.00341839 0.0119272 0.000396259 0.00102153 0.000618549 0.000226347	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0.0150554* 0.0150554* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.000617933* 0.000226251*
	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Fraction		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 6.87495E-05 0.000182879 9.63830E-05 5.33563E-05 5.33563E-05 5.33563E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08 %	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0 0 0 0 0 0 0 0 0 0 0 0 0	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0.0150554* 0.0150554* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.0001935* 0.000226251* %
Propane 22.4298 3.83105 3.05023*	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane 3-Methylpexane 2-Methylpexane toluene n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane <b>Mass Fraction</b> Nitrogen Carbon Dioxide Methane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 0.000147780 9.63830E-05 5.33563E-05 0.000147873 0 1.97639E-05 2.95349E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08 % 0 0.409396 4.50239	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0.0156732 0.0156732 0.0117861 0.00634626 0.00348483 0 0 0.00344843 0 0 0.0234335 0 0 0.0234335 0 0 0.00341839 0.0119272 0.000396259 0.00102153 0.00012153 0.000618549 0.00026347 % 0 0 0.0265512 0.232726	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0.0150554* 0.0150554* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.0001935* 0.000617933* 0.000226251* %
	Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane Cyclopentane i-Hexane 3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane 3-Methylhexane 3-Methylpexane 3-Methylpexane 1-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane <b>Mass Fraction</b> Nitrogen Carbon Dioxide Methane Ethane		3.79092E-05 0.00114372 0.000992949 0.00207290 0.000536812 0.00164555 0.000560300 0.000617780 0 0 0.000147780 0 0.000182879 9.63830E-05 5.33563E-05 5.33563E-05 5.33563E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08 % 0 0.409396 4.50239 7.32653	6.10208E-05 0.00146728 0.00221300 0.00878744 0.00418967 0.0171413 0.0114252 0.0156732 0.0156732 0.0156732 0.0117861 0.00634626 0.00348483 0 0 0.00344843 0 0 0.00344835 0 0 0.0234335 0 0 0.00341839 0.0119272 0.000396259 0.00102153 0.00012153 0.000618549 0.00026347 % 0 0 0.023512 0.232726 0.657901	2.31117E-05* 0.000323563* 0.00122005* 0.00671454* 0.00365286* 0.0154958* 0.0150554* 0.0150554* 0.0150554* 0.00375747* 0.0116033* 0.00624988* 0.00343147* 0* 0* 0.00339863* 0.0118976* 0.000395331* 0.0001935* 0.0001935* 0.000226251* %

i-Butane	7.65626	2.40758	2.18723*
n-Butane	23.4696	9.85021	9.27844*
i-Pentane	9.91978	8.14991	9.27844 8.07561*
n-Pentane	10.9374	11.1801	11.1903*
Cyclopentane	0	0	0*
i-Hexane	0	0	0*
3-Methylpentane	1.45380	3.25996	3.33579*
n-Hexane	3.86722	10.0419	10.3011*
Methylcyclopentane	1.99047	5.28057	5.41869*
Benzene	1.02271	2.69127	2.76132*
Cyclohexane	0	2.03127	2.70132
2-Methylhexane	0	0	0*
3-Methylhexane	0	0	0*
n-Heptane	3.63594	23.2152	24.0372*
Methylcyclohexane	0	23.2132	24.0372
Toluene	0.446854	3.11403	3.22600*
n-Octane	0.827871	13.4701	14.0009*
Ethylbenzene	0.0241654	0.415929	0.432377*
m-Xylene	0.0241654	1.07224	1.11487*
n-Nonane	0.0194009	0.784347	0.816462*
n-Decane	0.00334316	0.784347	0.331634*
Mass Flow	1b/h	lb/h	1b/h
Nitrogen	0	0	0*
Carbon Dioxide	0.00166836	0.00268550	0.00101713*
Methane	0.0183481	0.0235388	0.00519075*
Ethane	0.0298570	0.0665428	0.0366858*
Propane	0.0230370	0.387488	0.296082*
i-Butane	0.0312007	0.243513	0.212312*
n-Butane	0.0956432	0.996291	0.900648*
i-Pentane	0.0404250	0.824315	0.783890*
n-Pentane	0.0404200		
Cyclopentane	0.0445721		
oyolopolitallo	0.0445721	1.13080	1.08623*
i-Hexane	0	1.13080 0	1.08623* 0*
i-Hexane 3-Methylpentane	0 0	1.13080 0 0	1.08623* 0* 0*
3-Methylpentane	0 0 0.00592451	1.13080 0 0 0.329726	1.08623* 0* 0* 0.323801*
3-Methylpentane n-Hexane	0 0 0.00592451 0.0157596	1.13080 0 0.329726 1.01568	1.08623* 0* 0* 0.323801* 0.999916*
3-Methylpentane n-Hexane Methylcyclopentane	0 0 0.00592451 0.0157596 0.00811155	1.13080 0 0.329726 1.01568 0.534098	1.08623* 0* 0* 0.323801* 0.999916* 0.525987*
3-Methylpentane n-Hexane Methylcyclopentane Benzene	0 0.00592451 0.0157596 0.00811155 0.00416776	1.13080 0 0.329726 1.01568 0.534098 0.272206	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0	1.13080 0 0.329726 1.01568 0.534098 0.272206 0	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane	0 0.00592451 0.0157596 0.00811155 0.00416776 0 0	1.13080 0 0.329726 1.01568 0.534098 0.272206 0 0	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0	1.13080 0 0.329726 1.01568 0.534098 0.272206 0 0 0	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0 0.0148171	1.13080 0 0.329726 1.01568 0.534098 0.272206 0 0 0 0 2.34808	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 0* 2.33326*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0 0.0148171 0	1.13080 0 0.329726 1.01568 0.534098 0.272206 0 0 0 0 2.34808 0	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 2.33326* 0*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0.0148171 0 0.00182101	1.13080 0 0.329726 1.01568 0.534098 0.272206 0 0 0 2.34808 0 0.314965	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 2.33326* 0* 0* 0* 0*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0.0148171 0 0.00182101 0.00337373	$\begin{array}{c} 1.13080\\ & 0\\ \\ 0\\ 0.329726\\ 1.01568\\ 0.534098\\ 0.272206\\ & 0\\ 0\\ 0\\ 2.34808\\ & 0\\ 0.314965\\ 1.36242\end{array}$	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 2.33326* 0* 0.313144* 1.35905*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0.0148171 0 0.00182101 0.00337373 9.84787E-05	$\begin{array}{c} 1.13080\\ & 0\\ & 0\\ 0.329726\\ 1.01568\\ 0.534098\\ 0.272206\\ & 0\\ 0\\ 0\\ 2.34808\\ & 0\\ 0.314965\\ 1.36242\\ 0.0420688 \end{array}$	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 2.33326* 0* 0.313144* 1.35905* 0.0419703*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0.0148171 0 0.00182101 0.00337373 9.84787E-05 0.000232358	$\begin{array}{c} 1.13080\\ & 0\\ & 0\\ 0.329726\\ 1.01568\\ 0.534098\\ 0.272206\\ & 0\\ 0\\ 0\\ 0\\ 2.34808\\ & 0\\ 0\\ 0.314965\\ 1.36242\\ 0.0420688\\ 0.108451 \end{array}$	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 2.33326* 0* 0.313144* 1.35905* 0.0419703* 0.108219*
3-Methylpentane n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene	0 0 0.00592451 0.0157596 0.00811155 0.00416776 0 0 0 0 0.0148171 0 0.00182101 0.00337373 9.84787E-05	$\begin{array}{c} 1.13080\\ & 0\\ & 0\\ 0.329726\\ 1.01568\\ 0.534098\\ 0.272206\\ & 0\\ 0\\ 0\\ 2.34808\\ & 0\\ 0.314965\\ 1.36242\\ 0.0420688\\ \end{array}$	1.08623* 0* 0.323801* 0.999916* 0.525987* 0.268039* 0* 0* 0* 2.33326* 0* 0.313144* 1.35905* 0.0419703*

Process Streams		Flash Gas	Pressurized Liquid	Sales Oil
Properties	Status:	Solved	Solved	Solved
Phase: Total	From Block:			
	To Block:			
Property	Units			
Temperature	°F	148.488	110*	97*
Pressure	psig	50	65*	50*
Mole Fraction Vapor	%	100	0.00478681	0
Mole Fraction Light Liquid	%	0	99.9952	100
Mole Fraction Heavy Liquid	%	0	0	0
Phase Mole Fraction	%	100	100	100
Molecular Weight	lb/lbmol	49.6352	79.3640	81.4111
Mass Density	lb/ft^3	0.525825	39.8585	40.7175
Molar Flow	lbmol/h	0.00821029	0.127443	0.119233
Mass Flow	lb/h	0.407519	10.1144	9.70689

Vapor Volumetric Flow	ft^3/h	0.775009	0.253758	0.238396	
Liquid Volumetric Flow	gpm	0.0966245	0.0316373	0.0297221	
Std Vapor Volumetric Flow	MMSCFD	7.47762E-05	0.00116071	0.00108593	
Std Liquid Volumetric Flow	sgpm	0.00151670	0.0306834	0.0291667*	
Compressibility	•	0.935719	0.0259568	0.0216530	
Specific Gravity		1.71377		0.652851	
API Gravity				78.7938	
Enthalpy	Btu/h	-392.823	-9122.57	-8732.76	
Mass Enthalpy	Btu/lb	-963.938	-901.938	-899.646	
Mass Cp	Btu/(lb*°F)	0.455662	0.550025	0.537203	
Ideal Gas CpCv Ratio		1.09925	1.06646	1.06617	
Dynamic Viscosity	cP	0.00928215		0.261987	
Kinematic Viscosity	cSt	1.10201		0.401678	
Thermal Conductivity	Btu/(h*ft*°F)	0.0132954		0.0656556	
Surface Tension	lbf/ft			0.00108644?	
Net Ideal Gas Heating Value	Btu/ft^3	2570.93	4029.75	4130.20	
Net Liquid Heating Value	Btu/lb	19508.7	19120.2	19103.9	
Gross Ideal Gas Heating Value	Btu/ft^3	2788.91	4344.00	4451.08	
Gross Liquid Heating Value	Btu/lb	21175.6	20623.0	20599.8	

	Flash Gas	Pressurized Liquid	Sales Oil
Status:	Solved	Solved	Solved
From Block:		_	
To Block:		<u></u>	
	%	%	
	0	0	
	0.461728	0.781468	
	13.9303	44.5956	
	12.0940	13.3449	
	25.2475	18.1335	
	6.53829	3.56707	
	20.0426	10.4620	
	6.82437	3.08111	
	7.52446	3.30933	
	0	0	
	0	0	
	0.837358	0.342016	
	2.22743	0.853135	
	1.17393	0.467287	
	0	0	
	0	0	
	1 80107	0 601951	
	-		
	lbmol/h	lbmol/h	
	0	0	
	3.79092E-05	4.76732E-08	
	0.00114372	2.72054E-06	
	0.000992949	8.14101E-07	
	0.00207290	1.10623E-06	
	0.000536812	2.17608E-07	
	0.00164555	6.38229E-07	
	0.000560300	1.87962E-07	
	0.000617780	2.01884E-07	
	0	0	
	-	0	
	0	U	
	From Block:	Status:         Solved           From Block:            To Block:            To Block:            %         0           0.461728         13.9303           12.0940         25.2475           6.53829         20.0426           6.82437         7.52446           0         0           0         0           0.837358         2.22743           1.17393         0.649871           0         0           0         0           0         0           0         0           0.00112980         0.0266574           0.00112980         0.0266574           0.00116627         0           0.00114372         0.00099249           0.000536812         0.00164555           0.000536812         0.00164555           0.000536300         0.00056300	Status:         Solved         Solved           From Block:         -         -           To Block:         -         -           %         %         %           0         0         0           0.461728         0.781468           13.9303         44.5956           12.0940         13.3449           25.2475         18.1335           6.53829         3.56707           20.0426         10.4620           0         0           6.53829         3.08111           7.52446         3.03933           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           1.17393         0.467287           0.649871         0.252973           0         0         0           0         0         0           0.0112980         0.00361270           0.02

n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Fraction	0.000182879 9.63830E-05 5.33563E-05 0 0 0 0.000147873 0 1.97639E-05 9.27600E-07 2.18865E-06 6.16447E-07 9.57538E-08	5.20452E-08 2.85067E-08 1.54325E-08 0 0 3.67218E-08 0 5.13240E-09 6.65530E-09 2.20391E-10 5.21022E-10 1.24304E-10 1.74991E-11
Nitrogen	0	0
Carbon Dioxide	0.409396	0.990738
Methane	4.50239	20.6094
Ethane	7.32653	11.5594
Propane	22.4298	23.0344
i-Butane	7.65626	5.97248
n-Butane	23.4696	17.5169
i-Pentane	9.91978	6.40379
n-Pentane	10.9374	6.87812
Cyclopentane	0	0
i-Hexane 3-Methylpentane	0 1.45380	0 0.849045
n-Hexane	3.86722	2.11788
Methylcyclopentane	1.99047	1.13289
Benzene	1.02271	0.569236
Cyclohexane	0	0
2-Methylhexane	0	0
3-Methylhexane	0	0
n-Heptane	3.63594	1.73755
Methylcyclohexane	0	0
Toluene	0.446854	0.223306
n-Octane	0.827871	0.358988
Ethylbenzene	0.0241654	0.0110488
m-Xylene	0.0570177	0.0261201
n-Nonane n-Decane	0.0194009	0.00752829
Mass Flow	0.00334316 lb/h	0.00117572 lb/h
Nitrogen	0	0
Carbon Dioxide	0.00166836	2.09807E-06
Methane	0.0183481	4.36442E-05
Ethane	0.0298570	2.44792E-05
Propane	0.0914057	4.87797E-05
i-Butane	0.0312007	1.26479E-05
n-Butane	0.0956432	3.70953E-05
i-Pentane	0.0404250	1.35612E-05
n-Pentane	0.0445721	1.45657E-05
Cyclopentane i-Hexane	0	0 0
3-Methylpentane	0.00592451	1.79801E-06
n-Hexane	0.0157596	4.48501E-06
Methylcyclopentane	0.00811155	2.39911E-06
Benzene	0.00416776	1.20546E-06
Cyclohexane	0	0
2-Methylhexane	0	0
3-Methylhexane	0	0
n-Heptane	0.0148171	3.67960E-06
Methylcyclohexane	0	0
Toluene	0.00182101	4.72892E-07
n-Octane	0.00337373	7.60225E-07
Ethylbenzene	9.84787E-05	2.33978E-08
m-Xylene n Nonano	0.000232358	5.53143E-08
m-xyiene n-Nonane	0.000232358 7.90624E-05	5.53143E-08 1.59426E-08

n-Decane

1.36240E-05

2.48980E-09

Process Streams		Flash Gas	Pressurized Liquid	Sales Oil
Properties	Status:	Solved	Solved	Solved
Phase: Vapor	From Block:			
	To Block:			
Property	Units			
Temperature	°F	148.488	110	
Pressure	psig	50	65	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Phase Mole Fraction	%	100	0.00478681	
Molecular Weight	lb/lbmol	49.6352	34.7135	
Mass Density	lb/ft^3	0.525825	0.474377	
Molar Flow	lbmol/h	0.00821029	6.10047E-06	
Mass Flow	lb/h	0.407519	0.000211769	
Vapor Volumetric Flow	ft^3/h	0.775009	0.000446414	
Liquid Volumetric Flow	gpm	0.0966245	5.56568E-05	
Std Vapor Volumetric Flow	MMSCFD	7.47762E-05	5.55607E-08	
Std Liquid Volumetric Flow	sgpm	0.00151670	9.29217E-07	
Compressibility		0.935719	0.953947	
Specific Gravity		1.71377	1.19857	
API Gravity				
Enthalpy	Btu/h	-392.823	-0.254211	
Mass Enthalpy	Btu/lb	-963.938	-1200.42	
Mass Cp	Btu/(lb*°F)	0.455662	0.454709	
Ideal Gas CpCv Ratio		1.09925	1.14870	
Dynamic Viscosity	cP	0.00928215	0.00986430	
Kinematic Viscosity	cSt	1.10201	1.29814	
Thermal Conductivity	Btu/(h*ft*°F)	0.0132954	0.0149783	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	2570.93	1822.75	
Net Liquid Heating Value	Btu/lb	19508.7	19803.3	
Gross Ideal Gas Heating Value	Btu/ft^3	2788.91	1987.88	
Gross Liquid Heating Value	Btu/lb	21175.6	21608.9	

Process Streams		Flash Gas	Pressurized Liquid	Sales Oil
Composition	Status:	Solved	Solved	Solved
Phase: Nonspecific Liquid	From Block:			
	To Block:			
Mole Fraction			%	%
Nitrogen			0	0
Carbon Dioxide			0.0478456	0.0193836
Methane			1.14924	0.271370
Ethane			1.73590	1.02325
Propane			6.89464	5.63145
i-Butane			3.28746	3.06363
n-Butane			13.4503	12.9962
i-Pentane			8.96522	9.11233
n-Pentane			12.2986	12.6269
Cyclopentane			0	0
i-Hexane			0	0
3-Methylpentane			3.00242	3.15137
n-Hexane			9.24855	9.73159
Methylcyclopentane			4.97989	5.24173
Benzene			2.73453	2.87795
Cyclohexane			0	0
2-Methylhexane			0	0
3-Methylhexane			0	0
n-Heptane			18.3882	19.5295
Methylcyclohexane			0	0

Toluene	0.00011	0 0 0 0 1 4
	2.68241	2.85041
n-Octane	9.35925	9.97847
Ethylbenzene	0.310944	0.331562
m-Xylene	0.801598	0.854919
n-Nonane	0.485376	0.518256
n-Decane	0.177614	0.189755
Molar Flow	lbmol/h	lbmol/h
Nitrogen	0	0
Carbon Dioxide	6.09731E-05	2.31117E-05
Methane	0.00146456	0.000323563
Ethane	0.00221219	0.00122005
Propane	0.00878633	0.00671454
i-Butane	0.00418945	0.00365286
n-Butane	0.0171407	0.0154958
i-Pentane	0.0114250	0.0108649
n-Pentane	0.0156730	0.0150554
Cyclopentane	0.0100700	0.0100004
i-Hexane	0	0
3-Methylpentane	0.00382620	0.00375747
n-Hexane Methylayelenentene	0.0117861	0.0116033
Methylcyclopentane Bonzono	0.00634623	0.00624988
Benzene	0.00348481	0.00343147
Cyclohexane	0	0
2-Methylhexane	0	0
3-Methylhexane	0	0
n-Heptane	0.0234334	0.0232856
Methylcyclohexane	0	0
Toluene	0.00341839	0.00339863
n-Octane	0.0119272	0.0118976
Ethylbenzene	0.000396258	0.000395331
m-Xylene	0.00102153	0.00101935
n-Nonane	0.000618549	0.000617933
n-Decane	0.000226347	0.000226251
Mass Fraction	%	%
Nitrogen	0	0
Carbon Dioxide	0.0265310	0.0104785
Methane	0.232299	0.0534749
Ethane	0.657673	0.377936
Propane	3.83064	3.05023
i-Butane	2.40751	2.18723
n-Butane	9.85005	9.27844
i-Pentane	8.14995	8.07561
n-Pentane	11.1802	11.1903
Cyclopentane	0	0
i-Hexane	0	0
	11	-
3-Methylpentane	-	.1.1.1.1 / U■
3-Methylpentane n-Hexane	3.26001	3.33579 10.3011
n-Hexane	3.26001 10.0420	10.3011
n-Hexane Methylcyclopentane	3.26001 10.0420 5.28065	10.3011 5.41869
n-Hexane Methylcyclopentane Benzene	3.26001 10.0420 5.28065 2.69132	10.3011 5.41869 2.76132
n-Hexane Methylcyclopentane Benzene Cyclohexane	3.26001 10.0420 5.28065 2.69132 0	10.3011 5.41869 2.76132 0
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane	3.26001 10.0420 5.28065 2.69132 0 0	10.3011 5.41869 2.76132 0 0
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane	3.26001 10.0420 5.28065 2.69132 0 0 0	10.3011 5.41869 2.76132 0 0 0
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156	10.3011 5.41869 2.76132 0 0 24.0372
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0	10.3011 5.41869 2.76132 0 0 24.0372 0
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0 3.11409	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0 3.11409 13.4704	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487 0.816462
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364 0.318414	$\begin{array}{c} 10.3011\\ 5.41869\\ 2.76132\\ 0\\ 0\\ 24.0372\\ 0\\ 3.22600\\ 14.0009\\ 0.432377\\ 1.11487\\ 0.816462\\ 0.331634 \end{array}$
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Flow Nitrogen	3.26001 10.0420 5.28065 2.69132 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364 0.318414 <b>Ib/h</b>	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487 0.816462 0.331634 Ib/h
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Flow Nitrogen Carbon Dioxide	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364 0.318414 <b>Ib/h</b> 0 0 0.00268340	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487 0.816462 0.331634 Ib/h 0 0.00101713
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Flow Nitrogen Carbon Dioxide Methane	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364 0.318414 <b>Ib/h</b> 0 0 0.00268340 0.0234952	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487 0.816462 0.331634 <b>Ib/h</b> 0 0.00101713 0.00519075
n-Hexane Methylcyclopentane Benzene Cyclohexane 2-Methylhexane 3-Methylhexane n-Heptane Methylcyclohexane Toluene n-Octane Ethylbenzene m-Xylene n-Nonane n-Decane Mass Flow Nitrogen Carbon Dioxide	3.26001 10.0420 5.28065 2.69132 0 0 0 23.2156 0 3.11409 13.4704 0.415938 1.07227 0.784364 0.318414 <b>Ib/h</b> 0 0 0.00268340	10.3011 5.41869 2.76132 0 0 24.0372 0 3.22600 14.0009 0.432377 1.11487 0.816462 0.331634 Ib/h 0 0.00101713

n-Butane	0.996254	0.900648
i-Pentane	0.824302	0.783890
n-Pentane	1.13079	1.08623
Cyclopentane	0	0
i-Hexane	0	0
3-Methylpentane	0.329724	0.323801
n-Hexane	1.01567	0.999916
Methylcyclopentane	0.534096	0.525987
Benzene	0.272205	0.268039
Cyclohexane	0	0
2-Methylhexane	0	0
3-Methylhexane	0	0
n-Heptane	2.34808	2.33326
Methylcyclohexane	0	0
Toluene	0.314965	0.313144
n-Octane	1.36242	1.35905
Ethylbenzene	0.0420688	0.0419703
m-Xylene	0.108451	0.108219
n-Nonane	0.0793321	0.0792530
n-Decane	0.0322050	0.0321914

Process Streams		Flash Gas	Pressurized Liquid	Sales Oil
Properties	Status:	Solved	Solved	Solved
Phase: Nonspecific Liquid	From Block:			
	To Block:	<u> </u>		
Property	Units			
Temperature	°F		110	97
Pressure	psig		65	50
Mole Fraction Vapor	%		0	(
Mole Fraction Light Liquid	%		100	100
Mole Fraction Heavy Liquid	%		0	(
Phase Mole Fraction	%		99.9952	100
Molecular Weight	lb/lbmol		79.3661	81.4111
Mass Density	lb/ft^3		39.9280	40.717
Molar Flow	lbmol/h		0.127437	0.119233
Mass Flow	lb/h		10.1142	9.70689
Vapor Volumetric Flow	ft^3/h		0.253311	0.238396
Liquid Volumetric Flow	gpm		0.0315816	0.0297222
Std Vapor Volumetric Flow	MMSCFD		0.00116065	0.00108593
Std Liquid Volumetric Flow	sgpm		0.0306824	0.0291667
Compressibility			0.0259124	0.0216530
Specific Gravity			0.640192	0.65285
API Gravity			80.3496	78.7938
Enthalpy	Btu/h		-9122.32	-8732.76
Mass Enthalpy	Btu/lb		-901.932	-899.646
Mass Cp	Btu/(lb*°F)		0.550027	0.537203
Ideal Gas CpCv Ratio			1.06646	1.06617
Dynamic Viscosity	cP		0.234978	0.261987
Kinematic Viscosity	cSt		0.367392	0.401678
Thermal Conductivity	Btu/(h*ft*°F)		0.0637951	0.0656556
Surface Tension	lbf/ft		0.00101721?	0.001086443
Net Ideal Gas Heating Value	Btu/ft^3		4029.86	4130.20
Net Liquid Heating Value	Btu/lb		19120.2	19103.9
Gross Ideal Gas Heating Value	Btu/ft^3		4344.11	4451.08
Gross Liquid Heating Value	Btu/lb		20623.0	20599.8

## Table 6-13 Fixed Roof Storage Tank Emissions (Tank 400A & 400B) DCP Operating Company, LP Linam Ranch GP Lea County, New Mexico

Parameter	Symbol	Units	Value
FIN			400A & 400B
Liquid Service			Produced Water
Liquid Classification			Petroleum
Tank Type			HRT
Throughput	Q	gal/year	21,000
Tank Height	H <sub>s</sub>	ft	75.0
Maximum Liquid Height	HL	ft	10.0
Diameter	D	ft	12.0
Effective Diameter	De	ft	33.85
Effective Height	He	in in	9.42
Tank Liquid Volume	V <sub>LX</sub>	ft <sup>3</sup>	8,482
Tank Liquid Volume	T <sub>CG</sub>	gal	63,456
Turnovers	N	gui	0.33
Maximum Fill Rate	Q <sub>MAX</sub>	gal/hr	7,560
Roof Type		gai,m	0
Roof Height	H <sub>R</sub>	ft	0.0
Roof Slope	S <sub>R</sub>	ft/ft	0.0625
Tank Color/Shade	~ĸ	iun	White
Shell Paint Condition			New
Paint Solar Absorptance	α		0.17
Liquid Molecular Weight	M	lb/lbmole	91.75
Vapor Molecular Weight	M <sub>V</sub>	lb/lbmole	72.50
Reid Vapor Pressure	RVP	psia	7.54
Slope	SI	°F/vol %	3.0
Tank Insulation	01	1,101,10	None
C-C Vapor Pressure Constant A	А	-	11.81
C-C Vapor Pressure Constant B	В	°R	5445.73
Antoine's vp Constant A	A	-	0440.10
Antoine's vp Constant B	В	°C	
Antoine's vp Constant D	C	°C	
Roof Outage	H <sub>RO</sub>	ft	0.82
Vapor Space Outage	H <sub>VO</sub>	ft	16.93
Turnover Factor	K <sub>N</sub>		1.00
Working Loss Product Factor	K <sub>P</sub>		1.00
Breather Vent Pressure Setting	P <sub>BP</sub>	psig	0.03
Breather Vent Vacuum Setting	P <sub>VP</sub>	psig	-0.03
Breather Vent Vacuum Setting	ΔΡ <sub>Β</sub>	psig	0.06
Vapor Space Volume	V <sub>V</sub>	ft <sup>3</sup>	15,233

Uncontrolled	T

Uncontrolled Tank Emissions Summary														
								FIN	Max Temp (°F)	Max vp (psia)	Hourly (lb/hr)	Annual Breathing (lb/yr)	Annual Working (lb/yr)	Total Annual (tpy)
								400A & 400B	95.00	7.33	90.26	10,859.98	151.18	5.51
Parameter	Symbol	Units		I	I	I	I	Emission C			I	I	1	1
Month			January	February	March	April	May	June	July	August	September	October	November	December
Days per month			31	28	31	30	31	30	31	31	30	31	30	31
Throughput	Q	gal/month	1,784	1,611	1,784	1,726	1,784	1,726	1,784	1,784	1,726	1,784	1,726	1,784
Daily Total Solar Insolation Factor		Btu/ft <sup>2</sup> -day	1,013	1,323	1,744	2,125	2,301	2,434	2,302	2,085	1,822	1,452	1,127	939
Atmospheric Pressure	P <sub>A</sub>	psia	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88
Daily Max Ambient Temperature	T <sub>AX</sub>	۴F	55.6	61.3	68.4	77.0	86.1	93.7	93.9	91.9	86.0	76.0	64.0	55.3
Daily Min Ambient Temperature	T <sub>AN</sub>	۴F	27.8	32.5	38.5	46.1	56.4	64.5	68.5	67.0	59.5	47.9	35.2	27.7
Daily Ambient Temp. Change	$\Delta T_A$	°R	27.8	28.8	29.9	30.9	29.7	29.2	25.4	24.9	26.5	28.1	28.8	27.6
Daily Ave Ambient Temperature	T <sub>AA</sub>	°R	501.37	506.57	513.12	521.22	530.92	538.77	540.87	539.12	532.42	521.62	509.27	501.17
Liquid Bulk Temperature	Τ <sub>b</sub>	°R	501.89	507.24	514.01	522.30	532.09	540.01	542.04	540.18	533.35	522.36	509.84	501.65
Daily Ave. Liquid Surface Temp.	T <sub>LA</sub>	°R	502.54	508.10	515.14	523.68	533.58	541.58	543.53	541.53	534.53	523.30	510.57	502.26
Daily Max Ave Liquid Surface Temp.	$T_{LX}$	°R	508.27	514.26	521.85	530.89	540.73	548.76	549.93	547.66	540.71	529.45	516.57	507.88
Daily Min Ave Liquid Surface Temp.	$T_{LN}$	°R	496.81	501.93	508.42	516.46	526.43	534.40	537.13	535.40	528.34	517.15	504.57	496.63
Daily Vapor Temperature Range	$\Delta T_V$	°R	22.90	24.66	26.86	28.86	28.61	28.72	25.61	24.52	24.74	24.61	23.99	22.51
Ave True Vapor Pressure @ T <sub>LA</sub>	P <sub>VA</sub>	psia @ T <sub>LA</sub>	2.649	2.982	3.452	4.102	4.975	5.785	5.997	5.779	5.065	4.071	3.141	2.632
Max True Vapor Pressure @ $T_{LX}$	P <sub>VX</sub>	psia @ T <sub>LX</sub>	2.992	3.391	3.955	4.724	5.694	6.598	6.739	6.467	5.692	4.594	3.555	2.968
Min True Vapor Pressure @ T <sub>LN</sub>	P <sub>VN</sub>	psia @ T <sub>LN</sub>	2.338	2.614	3.002	3.547	4.331	5.054	5.322	5.150	4.496	3.597	2.767	2.328
Daily Vapor Pressure Range	ΔPv	psia	0.6549	0.7766	0.9529	1.1770	1.3633	1.5441	1.4168	1.3169	1.1958	0.9972	0.7881	0.6404
Vapor Space Expansion Factor	K <sub>E</sub>		0.1037	0.1209	0.1468	0.1823	0.2185	0.2622	0.2442	0.2223	0.1916	0.1534	0.1217	0.1015
Vented Vapor Saturation Factor	Ks		0.2962	0.2721	0.2441	0.2137	0.1831	0.1616	0.1568	0.1617	0.1804	0.2150	0.2620	0.2975
Vent Setting Correction Factor	K <sub>B</sub>		0.997	0.997	0.997	0.997	0.996	0.996	0.996	0.996	0.996	0.997	0.997	0.997
Vapor Temperature	Τ <sub>V</sub>	°R	503.075	508.797	516.055	524.796	534.793	542.866	544.744	542.629	535.486	524.064	511.167	502.750
Vapor Density	Wv	lb/ft <sup>3</sup>	0.0356	0.0396	0.0452	0.0528	0.0628	0.0720	0.0744	0.0720	0.0639	0.0525	0.0415	0.0354
Storage Tank Emission Results														
Standing Losses	Ls	lb/month	516.05	555.73	764.98	940.33	1,187.07	1,393.73	1,344.63	1,221.32	1,009.58	817.33	605.02	504.23
Working Losses	Lw	lb/month	8.48	8.50	10.74	12.14	14.93	16.54	17.65	17.08	14.69	12.47	9.55	8.41
Subtotal Monthly Losses	LT	lb/month	524.53	564.23	775.72	952.47	1,202.00	1,410.27	1,362.28	1,238.40	1,024.27	829.79	614.57	512.63
Annual Emission Rate		tpy	5.51											
Max Hourly Vapor Pressure	P <sub>VXH</sub>	psia	7.333											
Max Vapor Temperature	Τ <sub>V</sub>	°R	554.67											
Max Vapor Density	W <sub>VX</sub>	lb/ft <sup>3</sup>	0.089				1							1
Max. Hourly Emission Rate	Lw	lb/hr	90.26				1	1						1

Notes:

1. Annual emission rate calculations based on AP-42, Section 7.

2. Hourly emission rate calculations based on 95°F or maximum daily average liquid surface temperature, whichever is greater.

# Section 6.a

# **Green House Gas Emissions**

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

**Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC)** applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

## **Calculating GHG Emissions:**

**1.** Calculate the ton per year (tpy) GHG mass emissions and GHG CO<sub>2</sub>e emissions from your facility.

**2.** GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO<sub>2</sub>e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 <u>Mandatory Greenhouse Gas Reporting</u>.

3. Emissions from routine or predictable start up, shut down, and maintenance must be included.

**4.** Report GHG mass and GHG  $CO_2e$  emissions in Table 2-P of this application. Emissions are reported in <u>short</u> tons per year and represent each emission unit's Potential to Emit (PTE).

**5.** All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO2e emissions for each unit in Table 2-P.

**6.** For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

### Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at http://www.epa.gov/ttn/chief/ap42/index.html
- EPA's Internet emission factor database WebFIRE at http://cfpub.epa.gov/webfire/

• 40 CFR 98 <u>Mandatory Green House Gas Reporting</u> except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.

• API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.

• Sources listed on EPA's NSR Resources for Estimating GHG Emissions at http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases:

### **Global Warming Potentials (GWP):**

Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of  $CO_2$  over a specified time period.

"Greenhouse gas" for the purpose of air permit regulations is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. (20.2.70.7 NMAC, 20.2.74.7 NMAC). You may also find GHGs defined in 40 CFR 86.1818-12(a).

#### Metric to Short Ton Conversion:

Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 <u>Mandatory Greenhouse Reporting</u> requires metric tons.

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

Green House Gas (GHG) emissions are included in Table 2-P in Form UA2. There are no changes to the existing GHG emissions.

# **Information Used to Determine Emissions**

#### Information Used to Determine Emissions shall include the following:

- □ If manufacturer data are used, include specifications for emissions units <u>and</u> control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
- □ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
- If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
- □ If an older version of AP-42 is used, include a complete copy of the section.
- □ If an EPA document or other material is referenced, include a complete copy.
- □ Fuel specifications sheet.
- □ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

#### Produced Water Storage Tank Emissions (Unit IDs 400A and 400B)

- AP-42, Chapter 7
- Stabilized liquids analysis

#### Unstabilized Condensate Storage Tank Emissions (Unit IDs B1 through B5, 400C and 400F)

- ProMax 6.0
- Unstabilized liquids analysis

#### Stabilized Condensate and Produced Water Loading (Unit IDs LOAD-STAB and LOAD-PW)

- AP-42 Section 5.2.2.1.1
- Stabilized liquids analysis

#### Unstabilized Condensate Loading (Unit LOAD-USTAB)

- Hose disconnect volumes
- Unstabilized liquids analysis

#### ESD Flare Emissions (Unit ID 4A)

- NOx and CO emission factors from TCEQ
- Flare VOC DRE of 98%
- Stabilized and unstabilized liquids analyses

#### Haul Roads (Unit HAUL)

- AP-42 Section 13.2.1
- AP-42 Section 13.2.2

## Table 7-1 Liquid Analyses DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

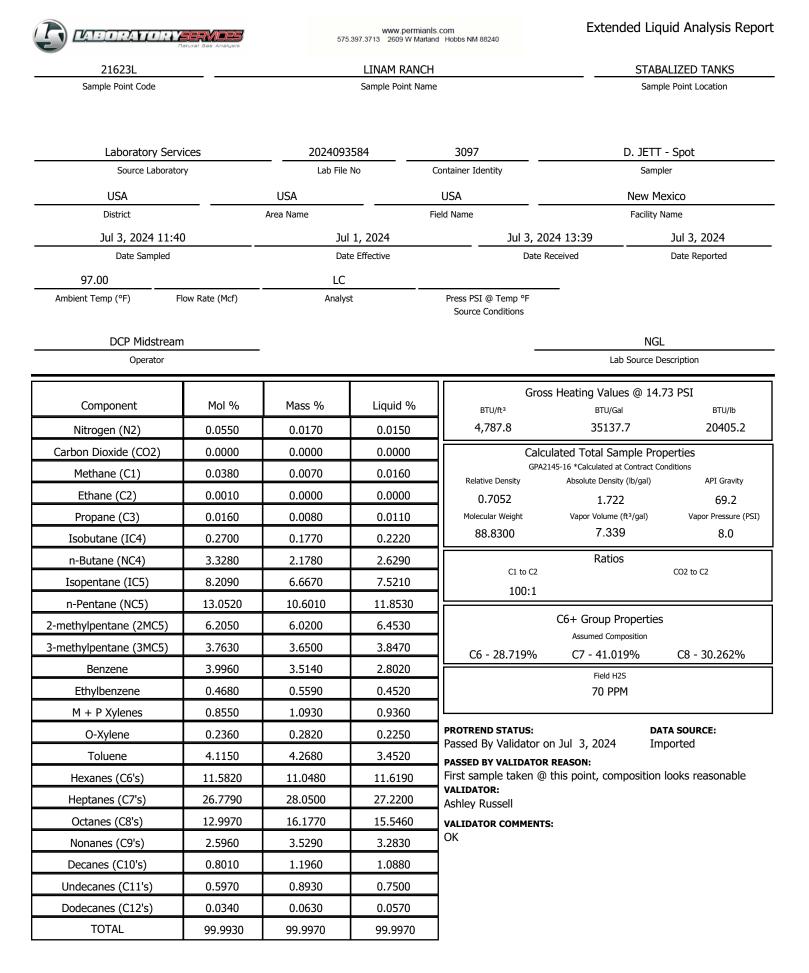
Condensate Analysis				
Analysis Identifier/Name	Linam Ranch Unstabilized Tank			
Site sample is taken from	Linam Ranch GP			
Is sample site-specific or representative?	Site-specific			
Sample temperature and pressure	97 °F, 50 psig			
Name of who analyzed the sample	Laboratory Services			
Date of sample	7/3/2024			

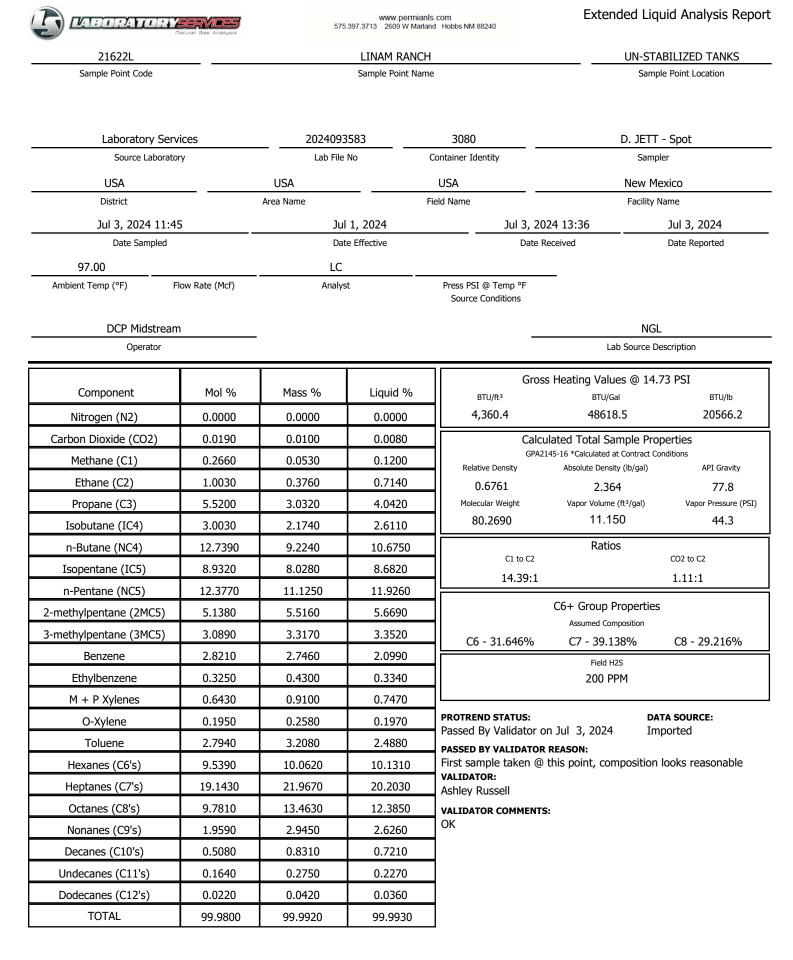
Component	Liquid (wt%)	Liquid VOC Fraction (wt%)	Vapor (wt%)	Vapor VOC Fraction (wt%)
Nitrogen	0.00%		0.00%	
CO <sub>2</sub>	0.01%		0.67%	
H <sub>2</sub> S	0.00%		0.00%	
Methane	0.05%		0.61%	
Ethane	0.38%		4.30%	
Propane	3.05%	3.06%	34.70%	36.75%
i-Butane	2.19%	2.20%	6.22%	6.58%
n-Butane	9.28%	9.32%	26.37%	27.93%
i-Pentane	8.08%	8.11%	9.03%	9.56%
n-Pentane	11.19%	11.24%	9.50%	10.06%
Benzene	2.76%	2.77%	0.47%	0.50%
n-Hexane	10.30%	10.35%	2.74%	2.91%
Other Hexanes	8.75%	8.79%	2.72%	2.88%
Toluene	3.23%	3.24%	0.18%	0.19%
Other Heptanes	24.04%	24.14%	2.06%	2.18%
Ethylbenzene	0.43%	0.43%	0.01%	0.01%
Xylenes	1.11%	1.12%	0.02%	0.02%
Other Octanes	14.00%	14.06%	0.37%	0.39%
Nonanes	0.82%	0.82%	0.02%	0.02%
Decanes plus (C10+)	0.33%	0.33%	0.01%	0.01%
Total:	100%	100%	100%	100%
VOC content of total sample	99.56%		94.42%	
HAPs content of total sample	17.84%		3.42%	
VOC content of hydrocarbon fraction only	99.57%		95.06%	
HAPs content of hydrocarbon fraction only	17.84%		3.44%	

## Table 7-2 Liquid Analyses DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico

Condensate Analysis				
Analysis Identifier/Name	Linam Ranch Stabilized Tank			
Site sample is taken from	Linam Ranch GP			
Is sample site-specific or representative?	Site-specific			
Sample temperature and pressure	97 °F, 3 psig			
Name of who analyzed the sample	Laboratory Services			
Date of sample	7/3/2024			

Component	Liquid (wt%)	Liquid VOC Fraction (wt%)	Vapor (wt%)	Vapor VOC Fraction (wt%)
Nitrogen	0.02%		0.00%	
CO <sub>2</sub>	0.00%		0.00%	
H <sub>2</sub> S	0.00%		0.00%	
Methane	0.01%		0.23%	
Ethane	0.00%		0.01%	
Propane	0.01%	0.01%	0.27%	0.27%
i-Butane	0.17%	0.17%	1.49%	1.49%
n-Butane	2.11%	2.11%	18.32%	18.36%
i-Pentane	6.46%	6.46%	22.07%	22.13%
n-Pentane	10.26%	10.27%	26.64%	26.70%
Benzene	3.40%	3.40%	1.79%	1.79%
n-Hexane	0.00%	0.00%	0.00%	0.00%
Other Hexanes	20.24%	20.25%	18.97%	19.02%
Toluene	4.13%	4.13%	0.69%	0.69%
Other Heptanes	29.25%	29.26%	7.66%	7.67%
Ethylbenzene	0.54%	0.54%	0.03%	0.03%
Xylenes	1.26%	1.26%	0.06%	0.06%
Other Octanes	16.18%	16.19%	1.30%	1.31%
Nonanes	3.63%	3.63%	0.29%	0.29%
Decanes plus (C10+)	2.32%	2.32%	0.18%	0.18%
Total:	100%	100%	100%	100%
VOC content of total sample	99.98%		99.76%	
HAPs content of total sample	9.34%		2.57%	
VOC content of hydrocarbon fraction only	99.99%		99.76%	
HAPs content of hydrocarbon fraction only	9.34%		2.57%	





## 5.2 Transportation And Marketing Of Petroleum Liquids<sup>1-3</sup>

#### 5.2.1 General

The transportation and marketing of petroleum liquids involve many distinct operations, each of which represents a potential source of evaporation loss. Crude oil is transported from production operations to a refinery by tankers, barges, rail tank cars, tank trucks, and pipelines. Refined petroleum products are conveyed to fuel marketing terminals and petrochemical industries by these same modes. From the fuel marketing terminals, the fuels are delivered by tank trucks to service stations, commercial accounts, and local bulk storage plants. The final destination for gasoline is usually a motor vehicle gasoline tank. Similar distribution paths exist for fuel oils and other petroleum products. A general depiction of these activities is shown in Figure 5.2-1.

#### 5.2.2 Emissions And Controls

Evaporative emissions from the transportation and marketing of petroleum liquids may be considered, by storage equipment and mode of transportation used, in four categories:

- 1. Rail tank cars, tank trucks, and marine vessels: loading, transit, and ballasting losses.
- 2. Service stations: bulk fuel drop losses and underground tank breathing losses.
- 3. Motor vehicle tanks: refueling losses.
- 4. Large storage tanks: breathing, working, and standing storage losses. (See Chapter 7, "Liquid Storage Tanks".)

Evaporative and exhaust emissions are also associated with motor vehicle operation, and these topics are discussed in AP-42 *Volume II: Mobile Sources*.

#### 5.2.2.1 Rail Tank Cars, Tank Trucks, And Marine Vessels -

Emissions from these sources are from loading losses, ballasting losses, and transit losses.

#### 5.2.2.1.1 Loading Losses -

Loading losses are the primary source of evaporative emissions from rail tank car, tank truck, and marine vessel operations. Loading losses occur as organic vapors in "empty" cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. These vapors are a composite of (1) vapors formed in the empty tank by evaporation of residual product from previous loads, (2) vapors transferred to the tank in vapor balance systems as product is being unloaded, and (3) vapors generated in the tank as the new product is being loaded. The quantity of evaporative losses from loading operations is, therefore, a function of the following parameters:

- Physical and chemical characteristics of the previous cargo;
- Method of unloading the previous cargo;
- Operations to transport the empty carrier to a loading terminal;
- Method of loading the new cargo; and
- Physical and chemical characteristics of the new cargo.

The principal methods of cargo carrier loading are illustrated in Figure 5.2-2, Figure 5.2-3, and Figure 5.2-4. In the splash loading method, the fill pipe dispensing the cargo is lowered only part way into the cargo tank. Significant turbulence and vapor/liquid contact occur during the splash

loading operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

The recent loading history of a cargo carrier is just as important a factor in loading losses as the method of loading. If the carrier has carried a nonvolatile liquid such as fuel oil, or has just been cleaned, it will contain vapor-free air. If it has just carried gasoline and has not been vented, the air in the carrier tank will contain volatile organic vapors, which will be expelled during the loading operation along with newly generated vapors.

Cargo carriers are sometimes designated to transport only one product, and in such cases are practicing "dedicated service". Dedicated gasoline cargo tanks return to a loading terminal containing air fully or partially saturated with vapor from the previous load. Cargo tanks may also be "switch loaded" with various products, so that a nonvolatile product being loaded may expel the vapors remaining from a previous load of a volatile product such as gasoline. These circumstances vary with the type of cargo tank and with the ownership of the carrier, the petroleum liquids being transported, geographic location, and season of the year.

One control measure for vapors displaced during liquid loading is called "vapor balance service", in which the cargo tank retrieves the vapors displaced during product unloading at bulk plants or service stations and transports the vapors back to the loading terminal. Figure 5.2-5 shows a tank truck in vapor balance service filling a service station underground tank and taking on displaced gasoline vapors for return to the terminal. A cargo tank returning to a bulk terminal in vapor balance service normally is saturated with organic vapors, and the presence of these vapors at the start of submerged loading of the tanker truck results in greater loading losses than encountered during nonvapor balance, or "normal", service. Vapor balance service is usually not practiced with marine vessels, although some vessels practice emission control by means of vapor transfer within their own cargo tanks during ballasting operations, discussed below.

Emissions from loading petroleum liquid can be estimated (with a probable error of  $\pm 30$  percent)<sup>4</sup> using the following expression:

$$L_{L} = 12.46 \frac{SPM}{T}$$
(1)

where:

 $L_{L}$  = loading loss, pounds per 1000 gallons (lb/10<sup>3</sup> gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Figure 7.1-5, Figure 7.1-6, and Table 7.1-2)

- M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Table 7.1-2)
- T = temperature of bulk liquid loaded,  ${}^{\circ}\hat{R}$  ( ${}^{\circ}\hat{F}$  + 460)

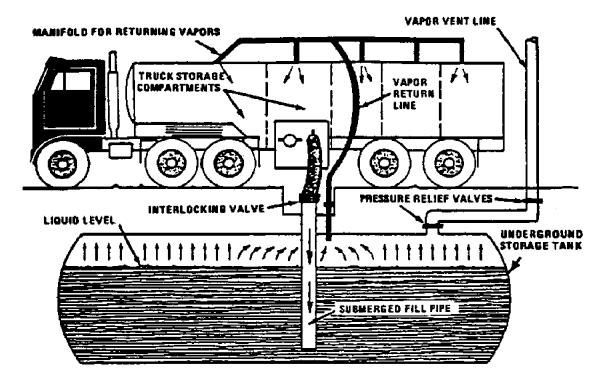


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

Table 5.2-1.	SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID
	LOADING LOSSES

Cargo Carrier	Mode Of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00
Marine vessels <sup>a</sup>	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

<sup>a</sup> For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-

2. For marine loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

### 13.2.2 Unpaved Roads

### 13.2.2.1 General

When a vehicle travels an unpaved road, the force of the wheels on the road surface causes pulverization of surface material. Particles are lifted and dropped from the rolling wheels, and the road surface is exposed to strong air currents in turbulent shear with the surface. The turbulent wake behind the vehicle continues to act on the road surface after the vehicle has passed.

The particulate emission factors presented in the previous draft version of this section of AP-42, dated October 2001, implicitly included the emissions from vehicles in the form of exhaust, brake wear, and tire wear as well as resuspended road surface material<sup>25</sup>. EPA included these sources in the emission factor equation for unpaved public roads (equation 1b in this section) since the field testing data used to develop the equation included both the direct emissions from vehicles and emissions from resuspension of road dust.

This version of the unpaved public road emission factor equation only estimates particulate emissions from resuspended road surface material <sup>23, 26</sup>. The particulate emissions from vehicle exhaust, brake wear, and tire wear are now estimated separately using EPA's MOBILE6.2 <sup>24</sup>. This approach eliminates the possibility of double counting emissions. Double counting results when employing the previous version of the emission factor equation in this section and MOBILE6.2 to estimate particulate emissions from vehicle traffic on unpaved public roads. It also incorporates the decrease in exhaust emissions that has occurred since the unpaved public road emission factor equation includes estimates of emissions from exhaust, brake wear, and tire wear based on emission rates for vehicles in the 1980 calendar year fleet. The amount of PM released from vehicle exhaust has decreased since 1980 due to lower new vehicle emission standards and changes in fuel characteristics.

### 13.2.2.2 Emissions Calculation And Correction Parameters<sup>1-6</sup>

The quantity of dust emissions from a given segment of unpaved road varies linearly with the volume of traffic. Field investigations also have shown that emissions depend on source parameters that characterize the condition of a particular road and the associated vehicle traffic. Characterization of these source parameters allow for "correction" of emission estimates to specific road and traffic conditions present on public and industrial roadways.

Dust emissions from unpaved roads have been found to vary directly with the fraction of silt (particles smaller than 75 micrometers  $[\mu m]$  in diameter) in the road surface materials.<sup>1</sup> The silt fraction is determined by measuring the proportion of loose dry surface dust that passes a 200-mesh screen, using the ASTM-C-136 method. A summary of this method is contained in Appendix C of AP-42. Table 13.2.2-1 summarizes measured silt values for industrial unpaved roads. Table 13.2.2-2 summarizes measured silt values for public unpaved roads. It should be noted that the ranges of silt content vary over two orders of magnitude. Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.

Since the silt content of a rural dirt road will vary with geographic location, it should be measured for use in projecting emissions. As a conservative approximation, the silt content of the parent soil in the area can be used. Tests, however, show that road silt content is normally lower than in the surrounding parent soil, because the fines are continually removed by the vehicle traffic, leaving a higher percentage of coarse particles.

Other variables are important in addition to the silt content of the road surface material. For example, at industrial sites, where haul trucks and other heavy equipment are common, emissions are highly correlated with vehicle weight. On the other hand, there is far less variability in the weights of cars and pickup trucks that commonly travel publicly accessible unpaved roads throughout the United States. For those roads, the moisture content of the road surface material may be more dominant in determining differences in emission levels between, for example a hot, desert environment and a cool, moist location.

The PM-10 and TSP emission factors presented below are the outcomes from stepwise linear regressions of field emission test results of vehicles traveling over unpaved surfaces. Due to a limited amount of information available for PM-2.5, the expression for that particle size range has been scaled against the result for PM-10. Consequently, the quality rating for the PM-2.5 factor is lower than that for the PM-10 expression.

	Road Use Or	Plant	No. Of	Silt Conte	ent (%)
Industry	Surface Material	Sites	Samples	Range	Mean
Copper smelting	Plant road	1	3	16 - 19	17
Iron and steel production	Plant road	19	135	0.2 - 19	6.0
Sand and gravel processing	Plant road	1	3	4.1 - 6.0	4.8
	Material storage area	1	1	-	7.1
Stone quarrying and processing	Plant road	2	10	2.4 - 16	10
	Haul road to/from pit	4	20	5.0-15	8.3
Taconite mining and processing	Service road	1	8	2.4 - 7.1	4.3
	Haul road to/from pit	1	12	3.9 - 9.7	5.8
Western surface coal mining	Haul road to/from pit	3	21	2.8 - 18	8.4
	Plant road	2	2	4.9 - 5.3	5.1
	Scraper route	3	10	7.2 - 25	17
	Haul road (freshly graded)	2	5	18 - 29	24
Construction sites	Scraper routes	7	20	0.56-23	8.5
Lumber sawmills	Log yards	2	2	4.8-12	8.4
Municipal solid waste landfills	Disposal routes	4	20	2.2 - 21	6.4
References 1,5-15.					

# Table 13.2.2-1. TYPICAL SILT CONTENT VALUES OF SURFACE MATERIAL<br/>ON INDUSTRIAL UNPAVED ROADS<sup>a</sup>

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k (s/12)^{a} (W/3)^{b}$$
(1a)

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k (s/12)^{a} (S/30)^{d}}{(M/0.5)^{c}} - C$$
(1b)

where k, a, b, c and d are empirical constants (Reference 6) given below and

- E = size-specific emission factor (lb/VMT)
- s = surface material silt content (%)
- W = mean vehicle weight (tons)
- M = surface material moisture content (%)
- S = mean vehicle speed (mph)
- C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

The source characteristics s, W and M are referred to as correction parameters for adjusting the emission estimates to local conditions. The metric conversion from lb/VMT to grams (g) per vehicle kilometer traveled (VKT) is as follows:

### 1 lb/VMT = 281.9 g/VKT

The constants for Equations 1a and 1b based on the stated aerodynamic particle sizes are shown in Tables 13.2.2-2 and 13.2.2-4. The PM-2.5 particle size multipliers (k-factors) are taken from Reference 27.

	Industria	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
Constant	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*	
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0	
а	0.9	0.9	0.7	1	1	1	
b	0.45	0.45	0.45	-	-	-	
с	-	-	-	0.2	0.2	0.3	
d	-	-	-	0.5	0.5	0.3	
Quality Rating	В	В	В	В	В	В	

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

\*Assumed equivalent to total suspended particulate matter (TSP)

"-" = not used in the emission factor equation

Table 13.2.2-2 also contains the quality ratings for the various size-specific versions of Equation 1a and 1b. The equation retains the assigned quality rating, if applied within the ranges of source conditions, shown in Table 13.2.2-3, that were tested in developing the equation:

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

			Vehicle ight		Vehicle eed	Mean	Surface Moisture
Emission Factor	Surface Silt Content, %	Mg	ton	km/hr	mph	No. of Wheels	Content, %
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17ª	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

<sup>a</sup> See discussion in text.

As noted earlier, the models presented as Equations 1a and 1b were developed from tests of traffic on unpaved surfaces. Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall or watering, because of traffic-enhanced natural evaporation. (Factors influencing how fast a road dries are discussed in Section 13.2.2.3, below.) The quality ratings given above pertain to the mid-range of the measured source conditions for the equation. A higher mean vehicle weight and a higher than normal traffic rate may be justified when performing a worst-case analysis of emissions from unpaved roads.

The emission factors for the exhaust, brake wear and tire wear of a 1980's vehicle fleet (C) was obtained from EPA's MOBILE6.2 model <sup>23</sup>. The emission factor also varies with aerodynamic size range

Particle Size Range <sup>a</sup>	C, Emission Factor for Exhaust, Brake Wear and Tire Wear <sup>b</sup> lb/VMT
PM <sub>2.5</sub>	0.00036
$PM_{10}$	0.00047
$PM_{30}^{c}$	0.00047

# Table 13.2.2-4. EMISSION FACTOR FOR 1980'S VEHICLE FLEETEXHAUST, BRAKE WEAR AND TIRE WEAR

- <sup>a</sup> Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.
- <sup>b</sup> Units shown are pounds per vehicle mile traveled (lb/VMT).
- <sup>c</sup> PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

It is important to note that the vehicle-related source conditions refer to the average weight, speed, and number of wheels for all vehicles traveling the road. For example, if 98 percent of traffic on the road are 2-ton cars and trucks while the remaining 2 percent consists of 20-ton trucks, then the mean weight is 2.4 tons. More specifically, Equations 1a and 1b are *not* intended to be used to calculate a separate emission factor for each vehicle class within a mix of traffic on a given unpaved road. That is, in the example, one should *not* determine one factor for the 2-ton vehicles and a second factor for the 20-ton trucks. Instead, only one emission factor should be calculated that represents the "fleet" average of 2.4 tons for all vehicles traveling the road.

Moreover, to retain the quality ratings when addressing a group of unpaved roads, it is necessary that reliable correction parameter values be determined for the road in question. The field and laboratory procedures for determining road surface silt and moisture contents are given in AP-42 Appendices C.1 and C.2. Vehicle-related parameters should be developed by recording visual observations of traffic. In some cases, vehicle parameters for industrial unpaved roads can be determined by reviewing maintenance records or other information sources at the facility.

In the event that site-specific values for correction parameters cannot be obtained, then default values may be used. In the absence of site-specific silt content information, an appropriate mean value from Table 13.2.2-1 may be used as a default value, but the quality rating of the equation is reduced by two letters. Because of significant differences found between different types of road surfaces and between different areas of the country, use of the default moisture content value of 0.5 percent in Equation 1b is discouraged. The quality rating should be downgraded two letters when the default moisture content value is used. (It is assumed that readers addressing industrial roads have access to the information needed to develop average vehicle information in Equation 1a for their facility.)

The effect of routine watering to control emissions from unpaved roads is discussed below in Section 13.2.2.3, "Controls". However, all roads are subject to some natural mitigation because of rainfall and other precipitation. The Equation 1a and 1b emission factors can be extrapolated to annual

average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual average emissions are inversely proportional to the number of days with measurable (more than 0.254 mm [0.01 inch]) precipitation:

$$E_{ext} = E [(365 - P)/365]$$
 (2)

where:

 $E_{ext}$  = annual size-specific emission factor extrapolated for natural mitigation, lb/VMT

E = emission factor from Equation 1a or 1b

P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation (see

below)

Figure 13.2.2-1 gives the geographical distribution for the mean annual number of "wet" days for the United States.

Equation 2 provides an estimate that accounts for precipitation on an annual average basis for the purpose of inventorying emissions. It should be noted that Equation 2 does not account for differences in the temporal distributions of the rain events, the quantity of rain during any event, or the potential for the rain to evaporate from the road surface. In the event that a finer temporal and spatial resolution is desired for inventories of public unpaved roads, estimates can be based on a more complex set of assumptions. These assumptions include:

1. The moisture content of the road surface material is increased in proportion to the quantity of water added;

2. The moisture content of the road surface material is reduced in proportion to the Class A pan evaporation rate;

3. The moisture content of the road surface material is reduced in proportion to the traffic volume; and

4. The moisture content of the road surface material varies between the extremes observed in the area. The CHIEF Web site (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) has a file which contains a spreadsheet program for calculating emission factors which are temporally and spatially resolved. Information required for use of the spreadsheet program includes monthly Class A pan evaporation values, hourly meteorological data for precipitation, humidity and snow cover, vehicle traffic information, and road surface material information.

It is emphasized that the simple assumption underlying Equation 2 and the more complex set of assumptions underlying the use of the procedure which produces a finer temporal and spatial resolution have not been verified in any rigorous manner. For this reason, the quality ratings for either approach should be downgraded one letter from the rating that would be applied to Equation 1.

### 13.2.2.3 Controls<sup>18-22</sup>

A wide variety of options exist to control emissions from unpaved roads. Options fall into the following three groupings:

1. <u>Vehicle restrictions</u> that limit the speed, weight or number of vehicles on the road;

2. <u>Surface improvement</u>, by measures such as (a) paving or (b) adding gravel or slag to a dirt road; and

3. Surface treatment, such as watering or treatment with chemical dust suppressants.

Available control options span broad ranges in terms of cost, efficiency, and applicability. For example, traffic controls provide moderate emission reductions (often at little cost) but are difficult to enforce. Although paving is highly effective, its high initial cost is often prohibitive. Furthermore, paving is not feasible for industrial roads subject to very heavy vehicles and/or spillage of material in transport. Watering and chemical suppressants, on the other hand, are potentially applicable to most industrial roads at moderate to low costs. However, these require frequent reapplication to maintain an acceptable level of control. Chemical suppressants are generally more cost-effective than water but not in cases of temporary roads (which are common at mines, landfills, and construction sites). In summary, then, one needs to consider not only the type and volume of traffic on the road but also how long the road will be in service when developing control plans.

<u>Vehicle restrictions</u>. These measures seek to limit the amount and type of traffic present on the road or to lower the mean vehicle speed. For example, many industrial plants have restricted employees from driving on plant property and have instead instituted bussing programs. This eliminates emissions due to employees traveling to/from their worksites. Although the heavier average vehicle weight of the busses increases the base emission factor, the decrease in vehicle-miles-traveled results in a lower overall emission rate.

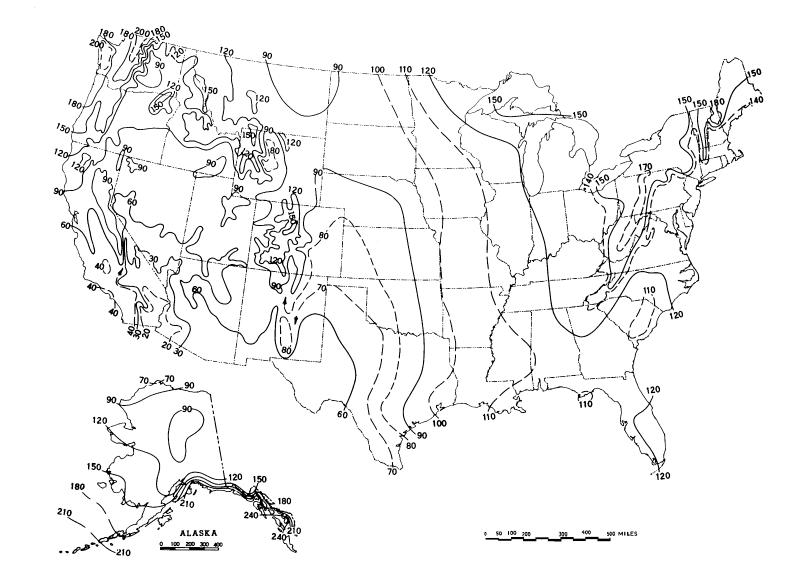


Figure 13.2.2-1. Mean number of days with 0.01 inch or more of precipitation in United States.

### 13.2.1 Paved Roads

### 13.2.1.1 General

Particulate emissions occur whenever vehicles travel over a paved surface such as a road or parking lot. Particulate emissions from paved roads are due to direct emissions from vehicles in the form of exhaust, brake wear and tire wear emissions and resuspension of loose material on the road surface. In general terms, resuspended particulate emissions from paved roads originate from, and result in the depletion of, the loose material present on the surface (i.e., the surface loading). In turn, that surface loading is continuously replenished by other sources. At industrial sites, surface loading is replenished by spillage of material and trackout from unpaved roads and staging areas. Figure 13.2.1-1 illustrates several transfer processes occurring on public streets.

Various field studies have found that public streets and highways, as well as roadways at industrial facilities, can be major sources of the atmospheric particulate matter within an area.<sup>1-9</sup> Of particular interest in many parts of the United States are the increased levels of emissions from public paved roads when the equilibrium between deposition and removal processes is upset. This situation can occur for various reasons, including application of granular materials for snow and ice control, mud/dirt carryout from construction activities in the area, and deposition from wind and/or water erosion of surrounding unstabilized areas. In the absence of continuous addition of fresh material (through localized trackout or application of material resuspended matches the amount replenished. The equilibrium surface loading value depends upon numerous factors. It is believed that the most important factors are: mean speed of vehicles traveling the road; the average daily traffic (ADT); the number of lanes and ADT per lane; the fraction of heavy vehicles (buses and trucks); and the presence/absence of curbs, storm sewers and parking lanes.<sup>10</sup>

EPA's Office of Transportation and Air Quality plans to release the MOBILE6.1 model soon. This model will calculate particulate emissions from on road mobile sources from the engine exhaust, brake wear and tire wear. The emission factors in this section of AP-42 implicitly include the emissions of exhaust, brake wear, and tire wear that occurred in the field testing that produced the data used to develop the emission factor equation, in addition to resuspended particulate matter from the road surface. Therefore, adding the emission factors in this section to those calculated by MOBILE6.1 poses the problem of double counting. The double counting problem is of most concern when estimating the emissions on high traffic volume roads with low surface silt loadings. The following modifications should be made if double counting is a substantial issue for a particular application of this section. Where MOBILE6.1 predicts higher emissions of particulate matter than the equations in this section for a given combination of road and traffic variables, then only the MOBILE6.1 results should be used and resuspended particulate matter should be considered negligible. Where MOBILE6.1 predictions are less than the emissions that would be predicted from the equation in this section, then the emissions calculated with the equation in this section can be taken as a reasonable representation of total particulate emissions. If in such a case it is desired to separate emissions into resuspended particulate matter versus exhaust, brake and tire wear matter, then the MOBILE6.1 estimates can be subtracted from the estimates made using the equation in this section with the remainder taken as the resuspended portion of the emissions.

### 13.2.1.2 Emissions And Correction Parameters

Dust emissions from paved roads have been found to vary with what is termed the "silt loading" present on the road surface as well as the average weight of vehicles traveling the road. The term silt loading (sL) refers to the mass of silt-size material (equal to or less than 75 micrometers [ $\mu$ m] in physical diameter) per unit area of the travel surface. The total road surface dust loading consists of loose material that can be collected by broom sweeping and vacuuming of the traveled portion of the paved road. The silt fraction is determined by measuring the proportion of the loose dry surface dust that passes through a 200-mesh screen, using the ASTM-C-136 method. Silt loading is the product of the silt fraction and the total loading, and is abbreviated "sL". Additional details on the sampling and analysis of such material are provided in AP-42 Appendices C.1 and C.2.

The surface sL provides a reasonable means of characterizing seasonal variability in a paved road emission inventory. In many areas of the country, road surface loadings <sup>11-21</sup> are heaviest during the late winter and early spring months when the residual loading from snow/ice controls is greatest. As noted earlier, once replenishment of fresh material is eliminated, the road surface loading can be expected to reach an equilibrium value, which is substantially lower than the late winter/early spring values.

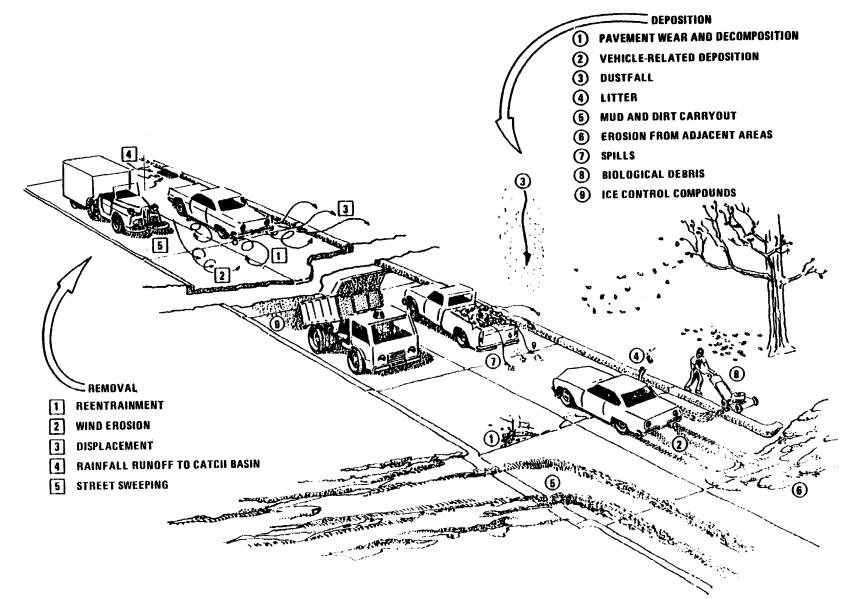


Figure 13.2.1-1. Deposition and removal processes.

13.2.1.3 Predictive Emission Factor Equations<sup>10</sup>

The quantity of particulate emissions from vehicle traffic on a dry paved road may be estimated using the following empirical expression:

$$E=k (sL/2)^{0.65} (W/3)^{1.5}$$
(1)

where:

- E = particulate emission factor (having units matching the units of k)
- k = particle size multiplier for particle size range and units of interest (see below)
- sL = road surface silt loading (grams per square meter)  $(g/m^2)$

W = average weight (tons) of the vehicles traveling the road

It is important to note that Equation 1 calls for the average weight of all vehicles traveling the road. For example, if 99 percent of traffic on the road are 2 ton cars/trucks while the remaining 1 percent consists of 20 ton trucks, then the mean weight "W" is 2.2 tons. More specifically, Equation 1 is *not* intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor should be calculated to represent the "fleet" average weight of all vehicles traveling the road.

The particle size multiplier (k) above varies with aerodynamic size range as shown in Table 13.2.1-1. To determine particulate emissions for a specific particle size range, use the appropriate value of k shown in Table 13.2.1-1.

Size range <sup>a</sup>	Particle Size Multiplier k <sup>b</sup>				
	g/VKT g/VMT lb/VMT				
PM-2.5 <sup>c</sup>	1.1	1.8	0.0040		
PM-10	4.6	7.3	0.016		
PM-15	5.5	9.0	0.020		
PM-30 <sup>d</sup>	24	38	0.082		

 Table 13.2-1.1.
 PARTICLE SIZE MULTIPLIERS FOR PAVED ROAD EQUATION

<sup>a</sup> Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.

<sup>b</sup> Units shown are grams per vehicle kilometer traveled (g/VKT), grams per vehicle mile traveled (g/VMT), and pounds per vehicle mile traveled (lb/VMT). The multiplier k includes unit conversions to produce emission factors in the units shown for the indicated size range from the mixed units required in Equation 1.

- <sup>°</sup> Ratio of PM-2.5 to PM-10 taken from Reference 22.
- <sup>d</sup> PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

The above equation is based on a regression analysis of numerous emission tests, including 65 tests for PM-10.<sup>10</sup> Sources tested include public paved roads, as well as controlled and uncontrolled industrial paved roads. All sources tested were of freely flowing vehicles traveling at constant speed on relatively level roads . No tests of "stop-and-go" traffic or vehicles under load were available for inclusion in the data base. The equations retain the quality rating of A (B for PM-2.5), if applied within the range of source conditions that were tested in developing the equation as follows:

Silt loading:	0.02 - 400 g/m <sup>2</sup>
	0.03 - 570 grains/square foot (ft <sup>2</sup> )
Mean vehicle weight:	1.8 - 38 megagrams (Mg)
-	2.0 - 42 tons
Mean vehicle speed:	16 - 88 kilometers per hour (kph)
-	10 - 55 miles per hour (mph)

To retain the quality rating for the emission factor equation when it is applied to a specific paved road, it is necessary that reliable correction parameter values for the specific road in question be determined. With the exception of limited access roadways, which are difficult to sample, the collection and use of site-specific silt loading (sL) data for public paved road emission inventories are strongly recommended. The field and laboratory procedures for determining surface material silt content and surface dust loading are summarized in Appendices C.1 and C.2. In the event that site-specific values cannot be obtained, an appropriate value for a paved public road may be selected from the values given in Table 13.2.1-2, but the quality rating of the equation should be reduced by 2 levels. Also, recall that Equation 1 refers to emissions due to freely flowing (not stop-and-go) traffic at constant speed on level roads.

Equation 1 may be extrapolated to average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual (or other long-term) average emissions are inversely proportional to the frequency of measurable (> 0.254 mm [0.01 inch]) precipitation by application of a precipitation correction term. The precipitation correction term can be applied on a daily or an hourly basis. For the daily basis, equation 1 becomes:

$$E_{ext} = k (sL/2)^{0.65} (W/3)^{1.5} (1-P/4N)$$
(2)

where k, sL, and W are as defined in Equation 1 and

 $E_{ext}$  = annual or other long-term average emission factor in the same units as k

- P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
- N = number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly)

Note that the assumption leading to Equation 2 is based on analogy with the approach used to develop long-term average unpaved road emission factors in Section 13.2.2. However, Equation 2 above incorporates an additional factor of "4" in the denominator to account for the fact that paved roads dry more quickly than unpaved roads and that the precipitation may not occur over the complete 24-hour day.

For the hourly basis, equation 1 becomes:

$$E_{ext} = k (sL/2)^{0.65} (W/3)^{1.5} (1-1.2P/N)$$
(3)

where k, sL, and W are as defined in Equation 1 and

 $E_{ext}$  = annual or other long-term average emission factor in the same units as k

P = number of hours with at least 0.254 mm (0.01 in) of precipitation during the averaging period

N = number of hours in the averaging period (e.g., 8760 for annual, 2124 for seasonal, 720 for monthly)

Note: In the hourly moisture correction term (1-1.2P/N) for equation 3, the 1.2 multiplier is applied to account for the residual mitigative effect of moisture. For most applications, this equation will produce satisfactory results. However, if the time interval for which the equation is applied is short, e.g., for one hour or one day, the application of this multiplier makes it possible for the moisture correction term to become negative. This will result in calculated negative emissions which is not realistic. Users should expand the time interval to include sufficient "dry" hours such that negative emissions are not calculated. For the special case where this equation is used to calculate emissions on an hour by hour basis, such as would be done in some emissions modeling situations, the moisture correction term should be modified so that the moisture correction "credit" is applied to the first hours following cessation of precipitation. In this special case, it is suggested that this 20% "credit" be applied on a basis of one hour credit for each hour of precipitation up to a maximum of 12 hours.

Note that the assumption leading to Equation 3 is based on analogy with the approach used to develop long-term average unpaved road emission factors in Section 13.2.2.

Figure 13.2.1-2 presents the geographical distribution of "wet" days on an annual basis for the United States. Maps showing this information on a monthly basis are available in the *Climatic Atlas of the United States*<sup>23</sup>. Alternative sources include other Department of Commerce publications (such as local climatological data summaries). The National Climatic Data Center (NCDC) offers several products that provide hourly precipitation data. In particular, NCDC offers *Solar and Meteorological Surface Observation Network 1961-1990* (SAMSON) CD-ROM, which contains 30 years worth of hourly meteorological data for first-order National Weather Service locations. Whatever meteorological data are used, the source of that data and the averaging period should be clearly specified.

It is emphasized that the simple assumption underlying Equations 2 and 3 has not been verified in any rigorous manner. For that reason, the quality ratings for Equations 2 and 3 should be downgraded one letter from the rating that would be applied to Equation 1.

During the preparation of the background document (Reference 10), public road silt loading values from 1992 and earlier were assembled into a data base. This data base is available in the file named "r13s03-1b.zip" located at the Internet URL

"http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-1.html" on the World Wide Web. Although hundreds of public paved road silt loading measurements had been collected, there was no uniformity in sampling equipment and analysis techniques, in roadway classification schemes, and in the types of data reported. Not surprisingly, the data set did not yield a coherent relationship between silt loading and road class, average daily traffic (ADT), etc., even though an inverse relationship between silt loading and ADT has been found for a subclass of curbed paved roads in urban areas. Further complicating the analysis is the fact that, in many parts of the country, paved road silt loading varies greatly over the course of the year, probably because of cyclic variations in mud/dirt carryout and in use of anti-skid materials. Although there were strong reasons to suspect that the assembled data base was skewed towards high values, independent data were not available to confirm the suspicions.

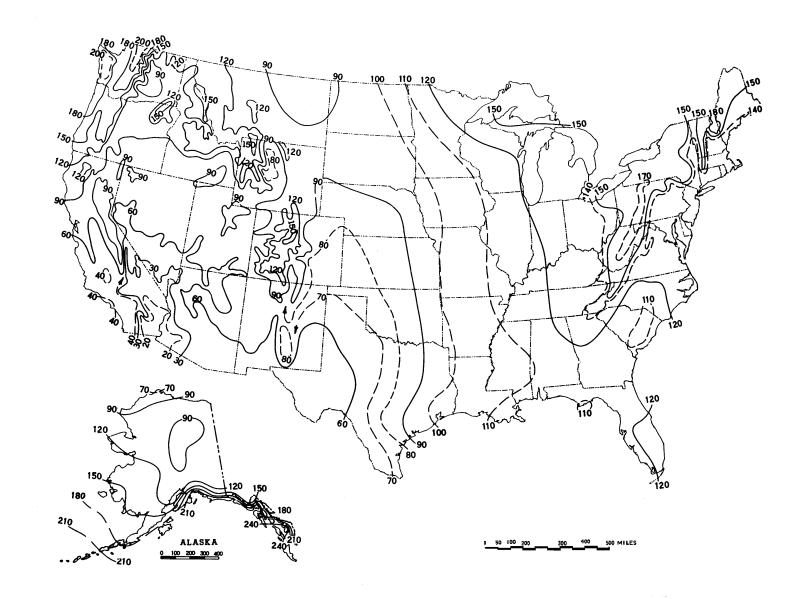


Figure 13.2.1-2. Mean number of days with 0.01 inch or more of precipitation in the United States.

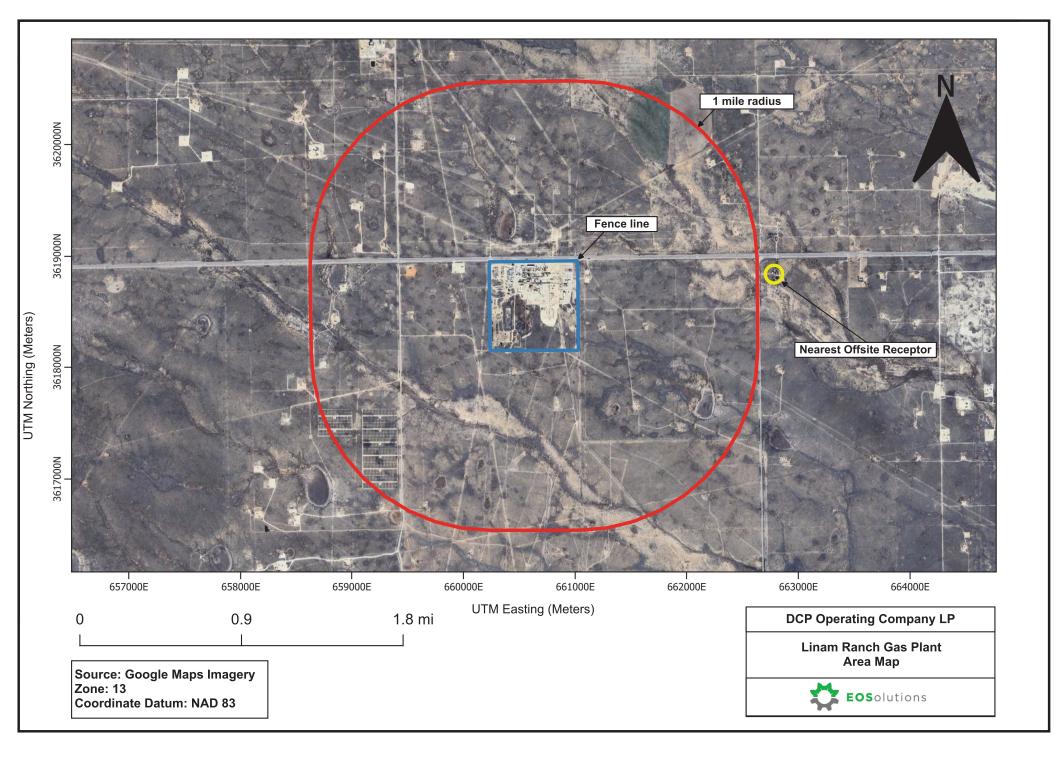
# Section 8

## Map(s)

<u>A map</u> such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

A topographic map is included in this section.



# Section 9

### **Proof of Public Notice**

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC) (This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

☑ I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications" This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant's Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

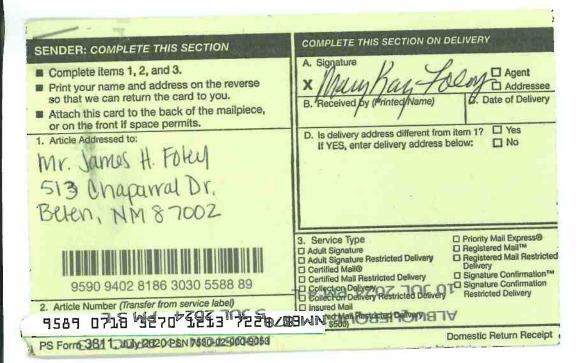
### New Permit and Significant Permit Revision public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

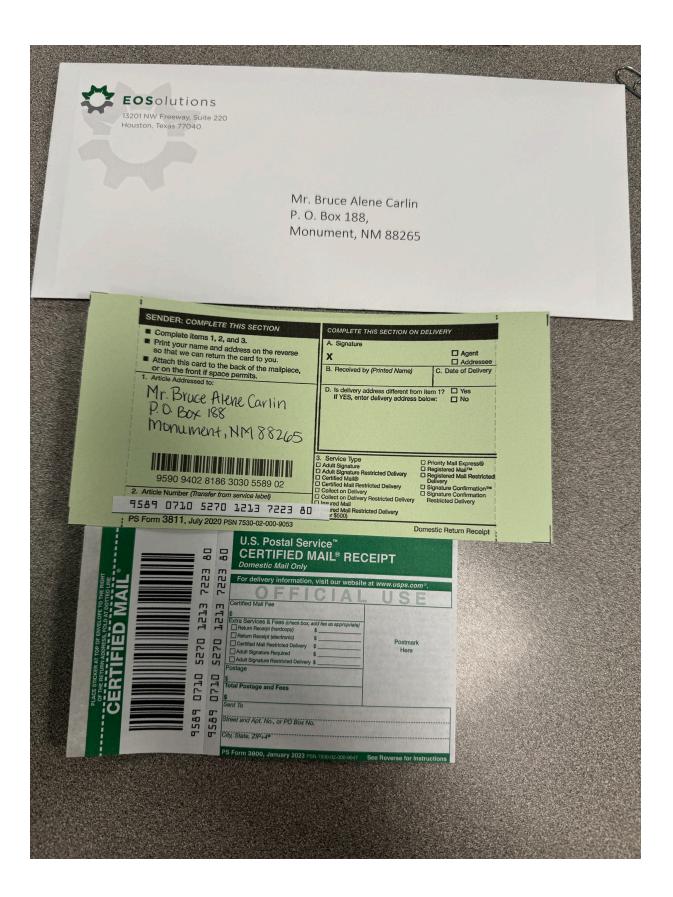
- 1. A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
- 2. A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
- 3. A copy of the property tax record (20.2.72.203.B NMAC).
- 4.  $\square$  A sample of the letters sent to the owners of record.
- 5. A sample of the letters sent to counties, municipalities, and Indian tribes.
- 6.  $\square$  A sample of the public notice posted and a verification of the local postings.
- 7. 🛛 A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
- 8. 🛛 A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
- 9. A copy of the <u>classified or legal</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 10. A copy of the <u>display</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 11. A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.

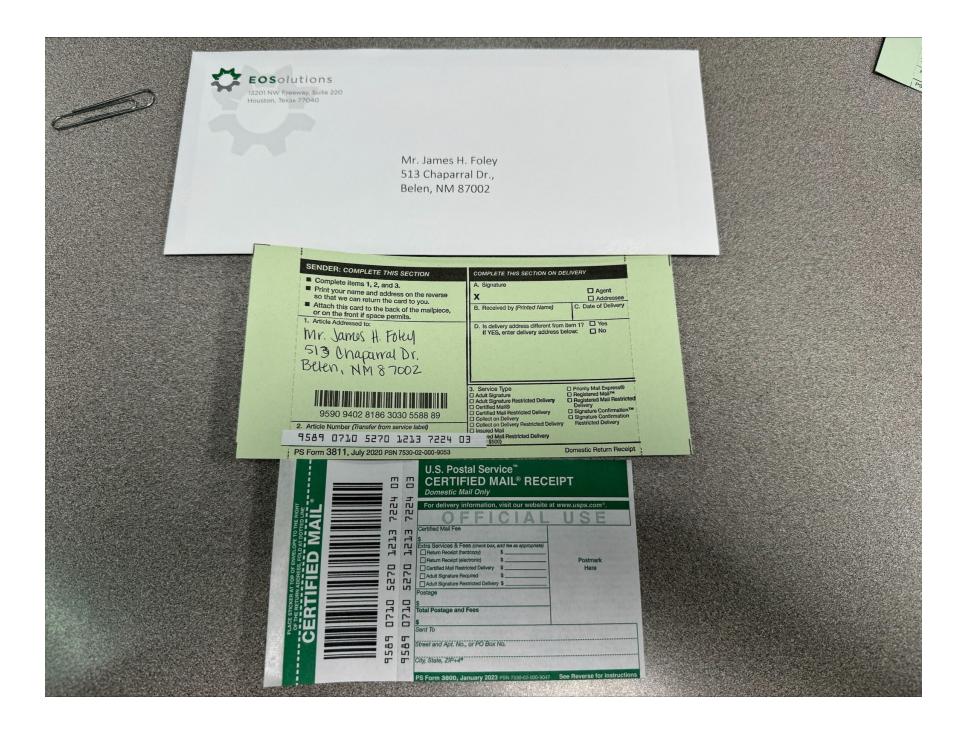
All public notice requirements have been completed and are included in this section.

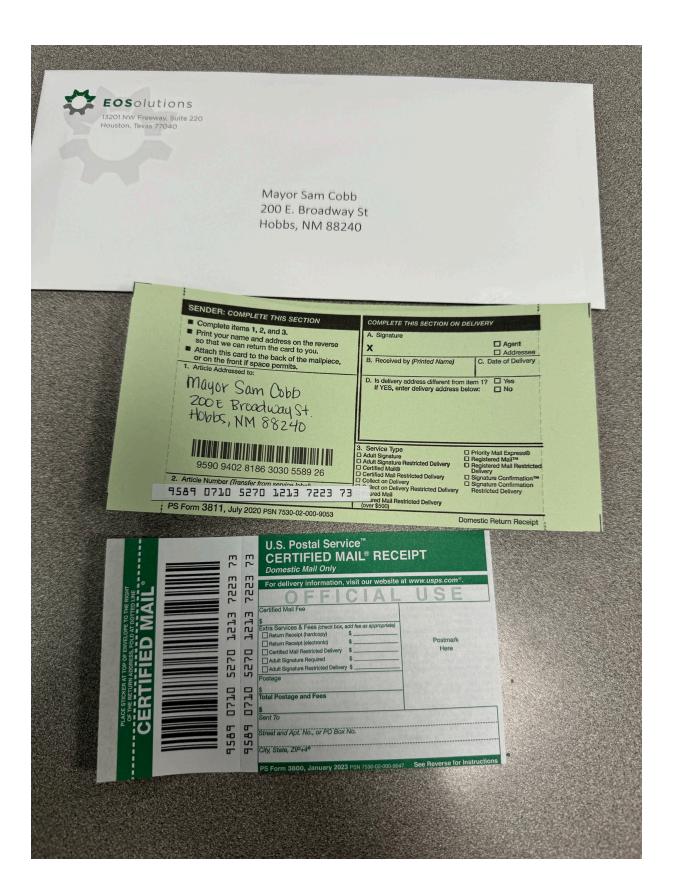


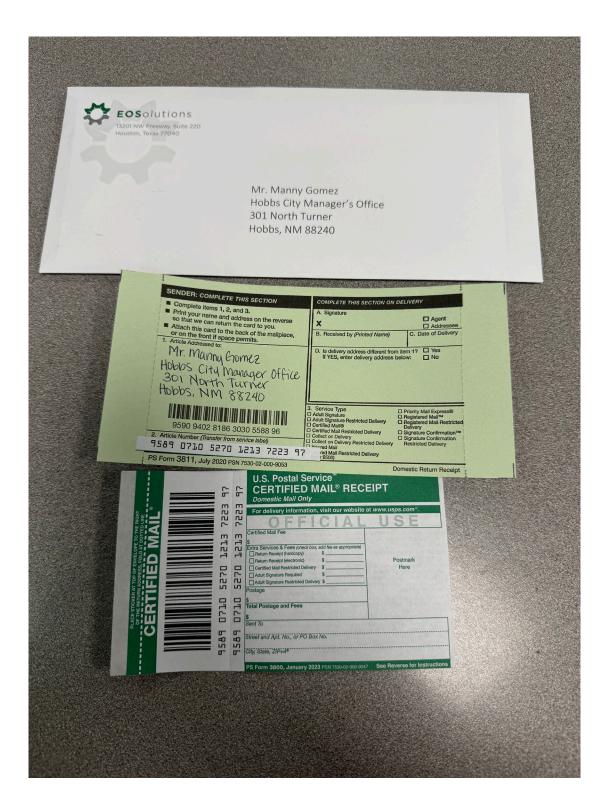
	Shorr &	1 12 3 20
SENDER. COMPLETE THIS SECTION	COMPLETE THIS SECTION ON D	DELIVERY
<ul> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> <li>Article Addressed to: Mr. Manny Gomez Hobbs City Manager Office</li> </ul>	A Received by (Printed Name)     B. Received by (Printed Name)     D. Is delivery address different from     If YES, enter delivery address b	Agent Addressee C. Date of Delivery 7-9-34 nitem 1? Yes pelow: PNo
301 North Turner Hobbs, NM 88240	3. Service Type Adult Signature Adult Signature Restricted Delivery Certified Mail® Certified Mail Restricted Delivery	Priority Mall Express®     Registered Mail™     Registered Mail Restricted     Delivery     Signature Confirmation™
9590 9402 8186 3030 5588 96 2. Article Number (Transfer from service label) 9589 0710 5270 1213 7223 9 PS Form 3811, July 2020 PSN 7530-02-000-9053	Collect on Delivery     Collect on Delivery Restricted Delivery     Tourged Mail     red Mail Restricted Delivery     r \$500	Signature Confirmation











NOTICE: THIS TAX BILL IS THE ONLY NOTICE YOU WILL RECEIVE FOR PAYMENT OF BOTH INSTALLMENTS OF YOUR 2023 PROPERTY TAX.

DCP OPERATING COMPANY, LP 6900 E. LAYTON AVE., STE. 900 DENVER CO 80237-3658 2023 TAX BILL

Remit to: SUSAN MARINOVICH LEA COUNTY TREASURER 100 N. MAIN AVE., SUITE 3C LOVINGTON, NEW MEXICO 88260-4000 (575) 396-8643

VISA

I PLEASE CHECK HERE AND USE THE BACK OF THIS COUPON FOR ADDRESS CHANGE.

BILL NO. ► 2023-1-IRB

OWNER NO. ►

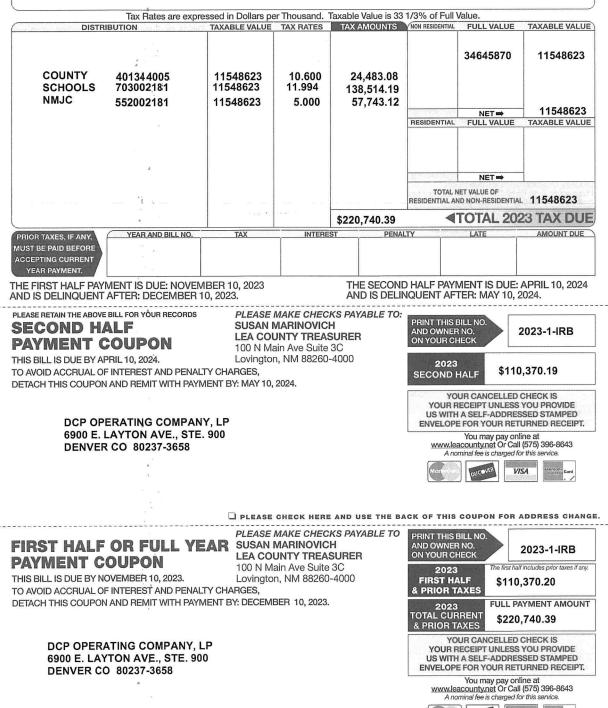
Your mortgage company may be paying this bill: However, it is the responsibility of the property owner to ensure property taxes are paid Owners with mortgages should contact lender to determine responsibility for payment of tax

NET TAXABLE VALUES WILL BE ALLOCATED TO THE GOVERNMENTAL UNITS IN SCHOOL DISTRICT > 160

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July 03, 2024

### CERTIFIED MAIL 9589 0710 5270 1213 7223 80 RETURN RECEIPT REQUESTED

Mr. Bruce Alene Carlin P. O. Box 188 Monument, NM 88265

To Whom It May Concern,

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) include emissions from these tanks to the site's main flare, Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
PM 10	10 pph	41 tpy
PM 2.5	7 pph	30 tpy
Sulfur Dioxide (SO <sub>2</sub> )	28,504 pph	87 tpy
Nitrogen Oxides (NO <sub>x</sub> )	536 pph	974 tpy
Carbon Monoxide (CO)	1,874 pph	663 tpy
Volatile Organic Compounds (VOC)	6,101 pph	276 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	84 pph	56 tpy
Hydrogen Sulfide (H₂S)	271 pph	12 tpy
Green House Gas Emissions as Total CO₂e	n/a	> 100,000 tpy

Mr. Bruce Alene Carlin P. O. Box 188, Monument, NM 88265 July 3, 2024 Page 2 of 3

The standard and maximum operating schedules of the facility will be 24 hours per day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is:

DCP Operating Company, LP 2331 CityWest Blvd. Houston, TX 77042

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico 87505-1816

Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009;

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

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### Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Sincerely,

Elena L. Hofmann President EOSolutions 13201 NW Freeway, Suite 220 Houston, TX 77040

Mr. Bruce Alene Carlin P. O. Box 188, Monument, NM 88265 July 3, 2024 Page 3 of 3

### **Notice of Non-Discrimination**

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.



13201 NW Freeway, Suite 220 Houston, Texas 77040 T 713.533.8511 F 281.971.0521 www.eosolutions.net

July 03, 2024

### CERTIFIED MAIL 9589 0710 5270 1213 7224 03 RETURN RECEIPT REQUESTED

Mr. James H. Foley 513 Chaparral Dr. Belen, NM 87002

To Whom It May Concern,

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) include emissions from these tanks to the site's main flare, Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

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Volatile Organic Compounds (VOC)	6,101 pph	276 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	84 pph	56 tpy
Hydrogen Sulfide (H <sub>2</sub> S)	271 pph	12 tpy
Green House Gas Emissions as Total CO <sub>2</sub> e	n/a	> 100,000 tpy

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DCP Operating Company, LP 2331 CityWest Blvd. Houston, TX 77042

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico 87505-1816

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Sincerely,

Elena L. Hofmann President EOSolutions 13201 NW Freeway, Suite 220 Houston, TX 77040

Mr. James H. Foley 513 Chaparral Dr., Belen, NM 87002 July 3, 2024 Page 3 of 3

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13201 NW Freeway, Suite 220 Houston, Texas 77040 T 713.533.8511 F 281.971.0521 www.eosolutions.net

July 03, 2024

### CERTIFIED MAIL 9589 0710 5270 1213 7223 73 RETURN RECEIPT REQUESTED

Mayor Sam Cobb 200 E. Broadway St Hobbs, NM 88240

To Whom It May Concern,

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

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Mayor Sam Cobb 200 E. Broadway St Hobbs, NM 88240. July 3, 2024 Page 2 of 3

The standard and maximum operating schedules of the facility will be 24 hours per day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is:

DCP Operating Company, LP 2331 CityWest Blvd. Houston, TX 77042

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico 87505-1816

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Elena L. Hofmann President EOSolutions 13201 NW Freeway, Suite 220 Houston, TX 77040

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July 03, 2024

### CERTIFIED MAIL 9589 0710 5270 1213 7223 97 RETURN RECEIPT REQUESTED

Mr. Manny Gomez Hobbs City Manager's Office 301 North Turner Hobbs, NM 88240

To Whom It May Concern,

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

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Sincerely,

Elena L. Hofmann President EOSolutions 13201 NW Freeway, Suite 220 Houston, TX 77040

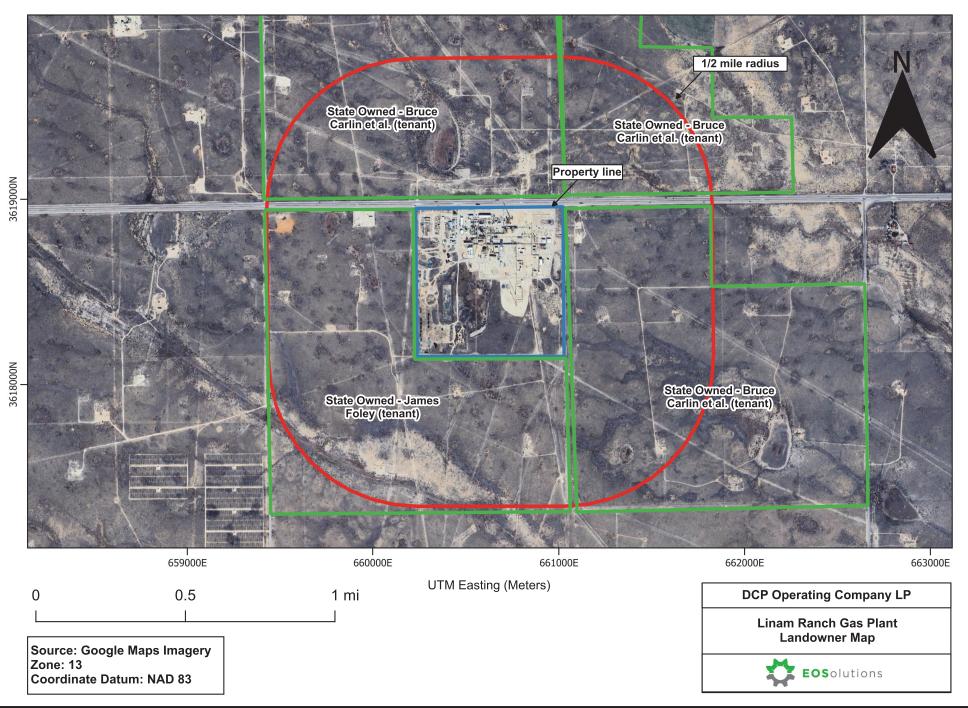
Mr. Manny Gomez Hobbs City Manager's Office 301 North Turner Hobbs, NM 88240 July 3, 2024 Page 3 of 3

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### **Table of Notices Sent**

Group	Contact Name	Address
Noticed Citizens	Mr. Bruce Alene Carlin	P. O. Box 188
		Monument, NM 88265
	Mr. James H. Foley	513 Chaparral Dr.
		Belen, NM 87002
Municipality	Mr. Manny Gomez	Hobbs City Manager Office
		301 North Turner
		Hobbs, NM 88240
City	Mr. Sam Cobb	Mayor
		200E Broadway Street
		Hobbs, NM 88240



UTM Northing (Meters)

# NOTICE

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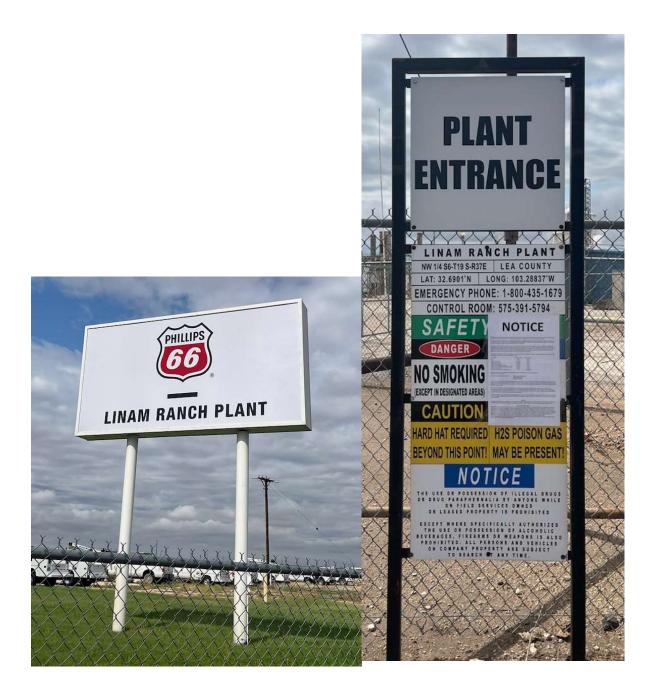














### **General Posting of Notices – Certification**

I, <u>Stocey</u>, <u>Daly</u>, the undersigned, certify that on **07/09/2024**, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the **City of Hobbs** of **Lea** County, State of New Mexico on the following dates:

1. Linam Ranch GP Entrance 07/09/2024

- 2. Hobbs City Hall 200 E Broadway St. Hobbs, NM 88240 07/09/2024
- 3. Hobbs Public Library 509 N. Shipp St, Hobbs, NM 88240 07/09/2024

4. Thriftway Supermarket – 1317 N Turner St, Hobbs, NM 88240 07/09/2024

Signed this Sth day of July , 2004

Date

Printed Name

Environmental Compliance Coordinator Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

### Radio Public Service Announcement

### NOTICE OF AIR QUALITY PERMIT APPLICATION

DCP Operating Company, LP, operates a natural gas gathering, compressing, dehydrating, and NGL extraction facility at its Linum Ranch Gas Plant. DCP Operating Company, LP announces its application to the New Mexico Environment Department for an air quality permit for the modification of its Linam Ranch Gas Plant facility, NSR air quality permit 39-M9.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32.695278 degree North and longitude -103.285278 degree West. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

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The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) add emissions from these tanks to the site's main flare, Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

The Public Notice Posting of this proposed modification is posted at the following locations:

- 1. Linam Ranch Gas Plant Facility Entrance
- 2. Hobbs City Hall 200 E Broadway St., Hobbs, NM 88240
- 3. Hobbs Public Library 509 N. Shipp St., Hobbs, NM 88240
- 4. Thriftway Supermarket 1317 N Turner St., Hobbs, NM 88240

If you have any comments regarding this application, please send your comments to:

Permit Programs Manager New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. (505) 476-4300 1 800 224-7009

### Submittal of Public Service Announcement – Certification

I, Ana Nolazco, the undersigned, certify that on June 28, 2024 submitted a public service announcement to KZOR-KIXN-KPZA-KEJL-KLEA-KBIM FM-KBIM- that serves the City\Town\Village of Hobbs, Lea County, New Mexico, in which the source is or is proposed to be located and that KZOR-KIXN-KPZA-KEJL-KLEA-KBIM FM-KBIM RESPONDED THAT IT WOULD AIR THE ANNOUNCEMENT.

Signed this <u>12</u> day of July, 2024,

Signature

07/12/24

Date

Signature

Ana Nolazco Printed Name

<u>Lead Admin/Bookkeeper</u>\_\_\_\_\_ Title

Amount: \$1.5 million

**Recipient: Luna County** 

Amount: \$1.5 million

Amount: \$2.5 million

Amount: \$660,000

Amount: \$5 million

Amount: \$1.7 million

Amount: \$2 million

Recipient: City of Las Cruces

Recipient: City of Las Cruces

Recipient: Town of Mesilla

**Improvement Project** 

Authority

ect

Project

## Crisis

from PAGE 1

eficial," Sparenberg said. "United Way has such great relationships throughout our community and we try to stay up to date on who can provide what service, (but) we struggle to know who has funding at what time.'

The benefits of having a facility such as this would be an improved crisis response, enhanced community resilience and reduce strain on existing resources, according to the proposal.

The crisis center would be its own entity with a board of directors which would include members from various agencies.

"So United Way would have a seat on the board as would the City of Hobbs, shelters, (or) the county emergency department. We can all work together," Sparenberg said.

The community projects application requires community support from different entities. In response, a committee is being formed with key stakeholders such as the City of Hobbs, Lea County Emergency Department, and Guidance Center of Lea County.

"We have not had a meeting yet. It's been pitched to different entities to see who is interested in coming to the table. We've had a lot of interest. Several different nonprofits want to help or be a part of it," Sparenberg said.

Nearly \$40 million in Community Project Funding for New Mexico's second congressional district were requested for fiscal year 2025, according to a press release from Vasquez.

Sparenberg was told the application was not chosen this year but Vasquez's office

said they will work with him to improve the application for next year.

"Unfortunately, the office was unable to include this project as one of the 15 submissions the Congressman was permitted to make to the House Appropriations Committee," Deputy Chief of Staff and Communications Director Valeria Ojeda-Avitia said. "There were tighter restrictions of what projects we could recommend. We received more than 150 applications for these 15 slots, so many worthy and valuable projects were not able to be submitted."

Congress is responsible for passing annual Appropriations legislation to fund the federal government, including funding for local projects. Members of the House can only submit 15 community project requests to the House Appropriations Committee, according to the press release.

Vasquez's proposed projects focus on an array of issues ranging from public safetv investments to infrastructure improvements on roads and wastewater facilities, according to the press release.

'Our budget is a statement of our values, that's why I'm especially proud to work with local leaders and partners to bring home much-needed federal investments to all parts of our district," Vasquez said in the press release. "From Acoma to Carlsbad to Columbus, the projects I'm proposing help support law enforcement, keep our constituents safe and increase access to clean water. I'm in office to serve New Mexicans and that means assisting in getting the necessary funding for our state to thrive."

Though no projects for 2024 or 2025 were selected in Lea County, Eddy County was selected for both years.

The Carlsbad Police Department was submitted for \$1 million for a renovation project for 2025 and the City of Carlsbad Double

Eagle Watermain received about \$1 million for a replacement project in 2024.

"We urge the residents, businesses and community leaders of Lea County to support the establishment of a community crisis center. Together, we can create a safer, more resilient community where everyone has access to the support they need during times of crisis. Let's stand together and build a brighter future for Lea County," the United Way proposal reads.

Christina Holt's email is reporter3@ hobbsnews.com.

Columbus Well and Storage Project

Recipient: Camino Real Regional Utility

Las Cruces De-Escalation Center Proj-

Las Cruces Innovation Park Expansion

Mesilla Town Hall Renovation Project

Ramah Navajo Drinking Water

Westside Emergency Housing Center

Recipient: Ramah Navajo School Board

CRRUA Well Renovation Project

### F.Y. '25 projects forwarded by Vasquez for funding

■ Acoma Senior Housing Repairs Project Recipient: City of Truth or Consequences **Recipient: Pueblo of Acoma** Amount: \$2.5 million

Albuquerque Crime Center Upgrades Project

Recipient: City of Albuquerque

Amount: \$5 million

Anthony Wastewater Treatment Plant **Improvement Project** 

Recipient: Anthony Water and Sanitation District

Amount: \$6.5 million

Belen Wastewater Treatment Project **Recipient: City of Belen** 

Amount: \$5 million

Bernalillo County Public Safety Technology Upgrades Project

Recipient: Bernalillo County Sheriff's Office Amount: \$500,000

Carlsbad Police Department Renovation Project

Recipient: City of Carlsbad Amount: \$1 million

Carson Drive Improvement Project Recipient: Village of Los Lunas

Amount: \$2.5 million

Clancy List Station Replacement Project

# Permian

from PAGE 1

Senator-elect Larry Scott of Hobbs. The goal of the increased permit fees is to boost the number of departmental inspectors who are responsible for monitoring oil and gas operations in the state, the NMED release said.

The request to increase fees drew significant 'push back in the (oil and gas) business and from the industry if this was fair or not," he said.

"I believe this (report) went out as a consequence of that application to raise fees to justify additional inspectors. I think this was an effort on the part of the air quality people to justify that increase.'

Volatile organic compounds may be released from oil and gas facilities as oil is being moved from wells to on-site storage tanks to await pickup and transport for further processing. A small amount is released due to pressure changes in the system, Scott said, when lighter elements in the crude oil are vaporized as pressure decreases, he said.

The vaporized components are traditionally recaptured and returned to the system by a device called a vapor recovery unit, Scott said. Sometimes, though, that vapor can escape and is detectable by inspection equipment. Low pressure can particularly be a problem with less-productive wells, he said.

"We have hundreds of 5-barrel to 10-barrel a day producers" in the Permian Basin, Scott said. "We're not doing anything different than we've done for the last 100 years.

be subject to fines. But it would be my opinion these vapors haven't materially contributed to the degradation of the quality of the air in southeast New Mexico."

Scott also called air quality and emission regulations imposed by NMED on oil and gas producers "over-onerous." Compliance with the regulations can be expensive, he said, particularly for legacy producers attempting to keep lower-volume production sites operating.

"Our members make every effort to comply with federal and state regulations to help protect the communities in which we operate, " Missi Currier, President and CEO of the New Mexico Oil and Gas Association, wrote in an emailed statement. "While we recognize the effort undertaken, the findings were based on a small sample of operations in the state. Our members are dedicated to correcting mistakes when they do occur and continuing to work with regulators.'

The regulations are part and parcel with what many in the industry see as the ongoing battle between state officials and the oil and gas industry, which provides most of the funding for the state's budget annually, Scott said.

This latest report "sends the wrong message (to oil and gas producers) they aren't welcome here," he said.

Several companies were cited in the press release as having settle compliance complaints. These include:

April 2024 - Ameredev II LLC agreed to pay \$24.5 million to settle alleged violations of state air regulations. This is the largest civil penalty collected by the Department with an oil and gas company and the total civil penalty was "When a particular operator wasn't recover- deposited in the state's general fund as the

February 2024 - Apache Corporation agreed to pay \$4 million in civil penalties and undertake projects expected to cost at least \$5.5 million to ensure 422 of its oil and gas well pads in New Mexico and Texas comply with state and federal clean air regulations and offset past illegal emissions. Under the federal/state settlement, the U.S. Treasury received \$2 million of the civil penalty and state's general fund received \$2 million.

December 2023 - Oxy USA, Inc. agreed to pay \$1.2 million in civil penalties for operating its facility at major source levels without applying for and obtaining a Title V permit and for exceeding federal standards for oil and gas facilities.

August 2023 - Mewbourne Oil Company agreed to pay a \$5.5 million penalty and to spend at least \$4.6 million for projects to ensure 422 of its oil and gas battery pads in New Mexico and Texas comply with state and federal clean air regulations. Under the federal/state settlement, the U.S. Treasury received \$2.75 million of the civil penalty and state's general

Improvement Project Recipient: City of Albuquerque Amount: \$2 million March 2023 - Matador Production Company agreed to pay \$1.15 million in civil penalties and undertake projects expected to cost at least \$5.05 million to ensure compliance with both state and federal clean air regulations at all 239 of its New Mexico oil and gas well pads to resolve liability alleged in a civil complaint filed today under the Clean Air Act and state regulation Under the federal/state settlement, the U.S. Treasury received \$650,000

of the civil penalty and state's general fund received \$500,000.

NMED currently regulates more than 55,000 facilities with 30 permitting staff and six enforcement staff, according to the press release. Air quality permit fees have not increased in two decades despite a 2,234 percent increase in workload for inspectors, Michelle Miano, Environmental Protection Division director, was quoted in the report.

Andy Brosig's email is reporter1@ hobbsnews.com.

### NOTICE OF AIR QUALITY PERMIT APPLICATION

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

fund received \$2.75 million.

ing a sufficient volume of the vapors he could DOJ and EPA did not assist in this matter.

# You can't park there

### Hobbs woman charged after driving into own apartment

### CALEB A. GALLEGOS

#### NEWS-SUN

Living in an apartment complex, parking spots can be hard to distinguish, often leaving people to park wherever there is an available spot.

But one place a person definitely can't park is inside an apartment itself, as a Hobbs woman found out after allegedly driving her vehicle into her own residence while she was drunk. Mary Ruth Cooksey, 52, of Hobbs, was arrested July 4, and charged with aggravated DWI, a misdemeanor.

At around 2 a.m., the Hobbs Police Department received a report of a vehicle had struck a building at Highland Apartments in the 2300 block of N. Jefferson in Hobbs. In the report, the caller was quoted saying they were in a neighboring apartment when they "suddenly heard a loud commotion outside and reportedly walked outside and saw Cooksey had driven her vehicle into her own apart- ing to the report. ment.

The caller reported they approached Cooksey's vehicle, a gold GMC Sierra, to try to help Cooksey and her passenger. The caller reported the "entire front of Mary's apartment (had) collapsed and heavy debris was on the ground.'

The vehicle was stopped directly in front of the apartment and sustained heavy damage to the front end. When officers talked to Cooksey, she told officers the vehicle was her mothers. and was coming back from the firework show, according to the report.

Cooksey told officers she pressed the gas pedal instead of the brakes, the report reads.

Officers reported a "strong odor of alcohol" coming from Cooksey, and noticed Cooksey had blood shot, watery eyes. Cooksey allegedly told officers she had a "couple of shots" at the firework show, accord- is courts@hobbsnews.com

In the report, officers asked Cooksey if she would preform a Standardized Field Sobriety Test, which she replied "I have really bad knees" and "I would rather take a blood test, then changed her mind and submitted to the SFST.

During the SFST, Cooksey reportedly was "unable to maintain balance while listening to instructions and started too soon, then placed both hands behind her back and reportedly stated "I can't do it sober," and refused to complete the test, according to the report.

Cooksey reportedly told officers, "I tried but I have bad knees and I hate me. It's fine, I'm drunk apparently, Couple of shots is a drunk.

Cooksey was arrested and charged with aggravated DWI and taken to Hobbs City Jail for booking.

Caleb A. Gallegos's email

### Texas coast braces for potential hit by Beryl

HOUSTON (AP) — Texas officials are urging coastal residents to brace for a potential hit by Beryl as the storm is expected to regain hurricane strength in the warm waters of the Gulf of Mexico.

"We're expecting the storm to make landfall somewhere on the Texas coast sometime Monday, if the current forecast is correct," said Jack Beven, a senior hurricane

specialist at the National but causing no injuries or Hurricane Center in Miami. "Should that happen, it'll most likely be a category one hurricane.<sup>3</sup>

The earliest storm to develop into a Category 5 hurricane in the Atlantic, Beryl caused at least 11 deaths as it passed through the Caribbean islands earlier in the week. It then battered Mexico as a Category 2 hurricane, toppling trees

deaths before weakening to a tropical storm as it moved across the Yucatan Peninsula.

The U.S. National Hurricane Center predicts that Beryl will intensify before making landfall, prompting expanded hurricane and storm surge watches. Beven said a hurricane warning is expected to be issued Sundav.

The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) add emissions from these tanks to the site's main flare. Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
PM 10	10 pph	41 tpy
PM 2.5	7 pph	30 tpy
Sulfur Dioxide (SO <sub>2</sub> )	28,504 pph	87 tpy
Nitrogen Oxides (NO <sub>x</sub> )	536 pph	974 tpy
Carbon Monoxide (CO)	1,874 pph	663 tpy
Volatile Organic Compounds (VOC)	6,101 pph	276 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	84 pph	56 tpy
Hydrogen Sulfide (H <sub>2</sub> S)	271 pph	12 tpy
Green House Gas Emissions as Total CO2e	n/a	> 100,000 tpy

The standard and maximum operating schedules of the facility will be 24 hours per day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: DCP Operating Company, LP, 2331 City West Blvd., Houston, TX 77042

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009;

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process, and links to the regulations can be found at the Air Quality Bureau's website: www.env.nm.gov/air-quality/permitting-section-home-page/. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC.

#### Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

#### Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

### NOTICE OF AIR QUALITY PERMIT APPLICATION

### Affidavit of Publicatic

STATE OF NEW MEXICO COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear the the clipping attached hereto was publish in the regular and entire issue of said newspaper, and not a supplement there for a period of 1 issue(s).

> Beginning with the issue dated July 07, 2024 and ending with the issue dated July 07, 2024.

Kay 10

Publisher

Sworn and subscribed to before me this 7th day of July 2024.

**Business Manager** 

My commission expires January 29 (Seal) NOTARY PUBLIC GUSSIE RUTH BLACK COMMISSION # 1087526 COMMISSION EXPIRES 01/29/2027

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws 1937 and payment of fees for said publica has been made. DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) add emissions from these tanks to the site's main flare, Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

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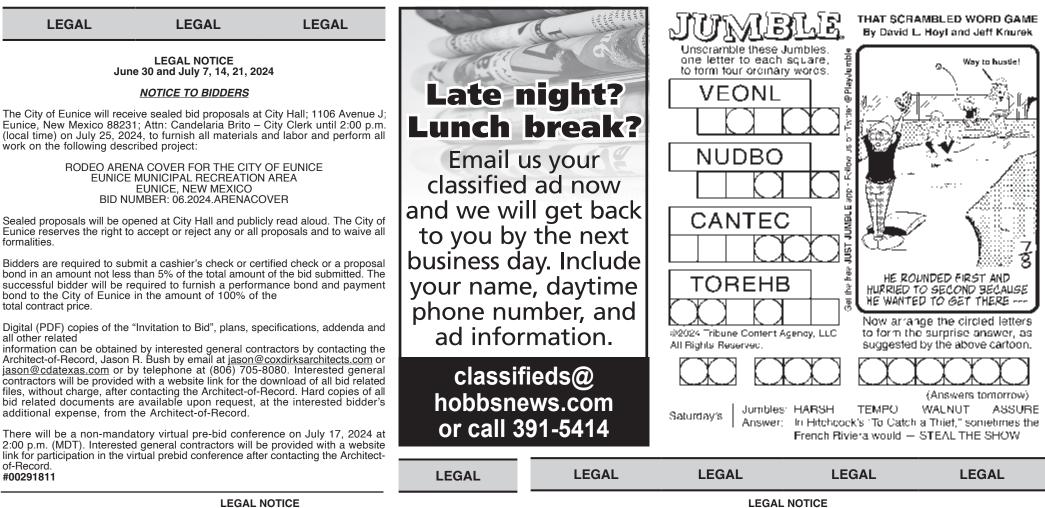
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### June 23, 30 and July 7, 2024

**NOTICE** is hereby given that on January 16, 2024, Treva Brensing Farms, LLC, C/o Atkins Engineering Associates, 2904 West 2nd Street, Roswell, NM, filed with the **STATE ENGINEER** Application No. L-10138 for Permit to change the place of use of 239.14 acre feet per annum, Farm Delivery Requirement, of shallow groundwater within the Lea County Underground Water Basin of the State of New Mexico.

Lea is the County affected by the diversion and in which the water has been or will be put to beneficial use. This notice is ordered to be published in the Hobbs News-Sun.

The applicant proposes to permanently Change the Place of Use of 239.14 acre-feet per annum, Consumptive Irrigation Requirement, of shallow groundwater under File No. L-10138 for the irrigation spread on 120.0 acres on land owned by Treva Brensing Farms, LLC, described as follows:

Move-From: SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
Pt. S1/2SE1/4	14	19 S.	38 E.)	
Pt. N1/2NE1/4	23	19 S.	38 E.)	
			TOTAL:	120.0

And spread the diversion of up to 239.14 acre-feet per annum for the Irrigation of 122.97 acres on land owned by the applicant, located at the following described Place of Use:

Move-To: SUBDIVISION	SECTION	TOWNSHIP	RANGE	ACRES
Pt. S1/2SE1/4	14	19 S.	38 E.	50.79
Pt. N1/2NE1/4	23	19 S.	38 E.	68.95
Pt. NE1/4SW1/4NE1/4	23	19 S.	38 E.	1.57
Pt. NW/4SE1/4NE1/4	23	19 S.	38 E.	1.66
			TOTAL:	122.97

The applicant proposes to continue to consumptively use groundwater Points of Diversion No. L-10138, L-10138-S, and L-10138-S2, whose locations are described as follows:

WELL NO.	SUBDIVISION	SECTION	TOWNSHIP	RANGE	EASTING	NORTHING
L-10138	SE1/4SW1/4SE1/4	14	19 S.	38 E.	676777	3614403
L-10138-S	NW1/4SW1/4SE1/4	14	19 S.	38 E.	676418	3614611
L-10138-S2	NE1/4SE1/4SE1/4	14	19 S.	38 E.	677045	3614687

If this application is granted, the applicants request an accounting period start date of January 1, 2024.

The points of diversion and places of use are located 0.5-1.0 miles east of the intersection of the South Eunice Highway (SR18) and Arco Road (CR 61), three miles south of Hobbs, New Mexico.

Coordinates of well locations are approximate and are in Universal Trans Mercator Zone 13N format.

To view the application and supporting documentation contact the State Engineer District Office to arrange a date and time for an appointment located at 1900 West Second Street, Roswell, NM 88201.

Any person, firm or corporation or other entity asserting standing to file objections or protests shall do so in writing (objection must be legible, signed, and include the writer's complete name, phone number, email address, and mailing address). If the protest does not include the complete name, phone number, email address, and mailing address, it may be deemed invalid and not accepted for filing unless Protestant provides with the protest an affidavit stating that it does not have one of the above-listedelements/requirements(phonenumber, mailingaddress, emailaddress, etc.). The objection to the approval of the application must be based on: (1) Impairment; if impairment, you must specifically identify your water rights; and/or (2) Public Welfare/Conservation of Water; if public welfare or conservation of water within the state of New Mexico, you shall be required to provide evidence showing how you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 1900 West Second Street, Roswell, New Mexico 88201, on or before **August 23, 2024**. Facsimiles (faxes) will be accepted as a valid protest if the hard copy is hand-delivered or mailed and postmarked within 24-hours of the facsimile. Mailing postmark will be used to validate the 24-hour period. Protests can be faxed to the Office of the State Engineer, 575-623-8559. A copy of the written protest filed with the State Engineer will also be sent to the applicant by certified mail. If no valid protest or objection is filed, the State Engineer will

July 7, 2024

CASE NO. 24661: Notice to all affected parties, as well as heirs and devisees of: Occidental Permian Limited Partnership; VPD New Mexico, LLC c/o Titanium Exploration Partners, LLC; T.H. McElvain Oil & Gas LLLP; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Charles A. Stoddard; SLVL, Ltd.; J&L Exploration LLC; Northern Oil and Gas Inc.; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling, Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:30 a.m. on July 25, 2024 to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via a virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: <u>https://www.emrd.nm.gov/ocd/hearing-info/</u>. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a 319.61-acre, more or less, Wolfcamp horizontal spacing unit comprised of the W/2 W/2 of Section 32, Township 18 South, Range 35 East, and Lot 4, SW/4 NW/4, and the W/2 SW/4 of irregular Section 5 (W/2 W/2 equivalent), Township 19 South, Range 35 East, N.M.P.M., Lea County, New Mexico. This spacing unit will be dedicated to the Foxtail State Com 701H and Foxtail State Com 801H wells to be horizontally drilled with a proposed first take point in the SW/4 SW/4 (Unit M) of Section 5 and a proposed last take point in the NW/4 NW/4 (Unit D) of Section 32. The producing area for the wells is expected to be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Franklin Mountain Energy 3, LLC as operator of the wells, and a

CASE NO. 24662: Notice to all affected parties, as well as heirs and devisees of: Occidental Permian Limited Partnership; VPD New Mexico, LLC c/o Titanium Exploration Partners, LLC; T.H. McElvain Oil & Gas LLLP; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Charles A. Stoddard; SLVL, Ltd.; J&L Exploration LLC; Northern Oil and Gas Inc.; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling and, to the extent necessary, approval of an overlapping spacing unit, Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:30 a.m. on July 25, 2024 to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via a virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: <a href="https://www.emnrd.nm.gov/ocd/hearing-info/">https://www.emnrd.nm.gov/ocd/hearing-info/</a>. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a 319.61-acre, more or less, Bone Spring horizontal spacing unit comprised of the W/2 W/2 of Section 32, Township 18 South, Range 35 East, and Lot 4, SW/4 NW/4, and the W/2 SW/4 of irregular Section 5 (W/2 W/2 equivalent), Township 19 South, Range 35 East, N.M.P.M., Lea County, New Mexico. Franklin also seeks, to the extent necessary, approval of an overlapping spacing unit. This spacing unit will be dedicated to the Foxtail State Com 301H and Foxtail State Com 501H wells to be horizontally drilled with a proposed first take point in the SW/4 SW/4 (Unit M) of Section 5 and a proposed last take point in the NW/4 NW/4 (Unit D) of Section 32. The producing area for the wells is expected to be orthodox. The proposed horizontal spacing unit w

CASE NO. 24663: Notice to all affected parties, as well as heirs and devisees of: VPD New Mexico, LLC c/o Titanium Exploration Partners, LLC; T.H. McElvain Oil & Gas LLLP; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Charles A. Stoddard; SLVL, Ltd.; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling, Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:30 a.m. on July 25, 2024 to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via a virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: <u>https://www.emnrd.nm.gov/ocd/hearing-info/</u>. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a 319.64-acre, more or less, Bone Spring horizontal spacing unit comprised of the E/2 W/2 of Section 32, Township 18 South, Range 35 East, and Lot 3, SE/4 NW/4, and the E/2 SW/4 of irregular Section 5 (E/2 W/2 equivalent), Township 19 South, Range 35 East, N.M.P.M., Lea County, New Mexico. Franklin seeks to dedicate the spacing unit to the Foxtail State Com 302H, Foxtail State Com 502H, and Foxtail State Com 602H wells to be horizontally drilled with a proposed first take point in the SE/4 SW/4 (Unit N) of Section 5 and a proposed last take point in the NE/4 NW/4 (Unit C) of Section 32. The producing area for the wells is expected to be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Franklin Mountain Energy 3, LLC as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 17 miles west of Hobbs, New Mexico. CASE NO. 24664: Notice to all affected parties, as well as heirs and devisees of: VPD New Mexico, LLC c/o Titanium Exploration Partners, LLC; T.H. McElvain Oil & Gas LLLP; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Charles A. Stoddard; SLVL, Ltd.; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling, Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:30 a.m. on July 25, 2024 to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via a virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: https://www.emnrd.nm.gov/ocd/hearing-info/. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a 319.64-acre, more or less, Wolfcamp horizontal spacing unit comprised of the E/2 W/2 of Section 32, Township 18 South, Range 35 East, and Lot 3, SE/4 NW/4, and the E/2 SW/4 of irregular Section 5(E/2 W/2 of Section 32, Township 16 South, Range 35 East, and Lot 3, SE/4 NW/4, and the E/2 SW/4 of irregular Section 5 (E/2 W/2 equivalent), Township 19 South, Range 35 East, N.M.P.M., Lea County, New Mexico. Franklin seeks to dedicate the spacing unit to the **Foxtail State Com 702H** and **Foxtail State Com 802H** wells to be horizontally drilled with a proposed first take point in the SE/4 SW/4 (Unit N) of Section 5 and a proposed last take point in the NE/4 NW/4 (Unit C) of Section 32. The producing area for the wells is expected to be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Franklin Mountain Energy 3, LLC as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 17 miles west of Hobbs, New Mexico. CASE NO. 24665: Notice to all affected parties, as well as heirs and devisees of: Northern Oil and Gas, Inc.; Great Western Drilling LTD; Mary Louise Galbreath, as her separate property; Coert Holdings 1, LLC; Jean Ann Pepper Johnson; The Brady Family Trust, U/D June 1, 1994; Curtis W. Mewbourne, Trustee; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Colgate Energy Management, LLC; McCombs Energy, Ltd.; PRP Delaware Basin, LLC; Marshall & Winston Inc.; BMD Exploration, LLC; Drew R. Scott Family Minerals, LLC; SLVL, Ltd.; Charles A. Stoddard; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling. Lea Courty, New Mexico The State of New Mexico through its Oil Conservation compulsory pooling, Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:30 a.m. on July 25, 2024 to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via a virtual meeting platform. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: https://www.emnrd.nm.gov/ocd/hearing-info/ Applicant seeks an order from the Division pooling all uncommitted mineral interests within a 319.66-acre, more or less, Bone Spring horizontal spacing unit comprised of the W/2 E/2 of Section 32, Township 18 South, Range 35 East, and Lot 2, SW/4 NE/4, and the W/2 SE/4 of irregular Section 5 (W/2 E/2 equivalent), Township 19 South, Range 35 East, N.M.P.M., Lea County, New Mexico. Franklin seeks to dedicate the spacing unit to the **Foxtail State Com 303H** and **Foxtail State Com 503H** wells to be horizontally drilled with a proposed first take point in the SW/4 SE/4 (Unit O) of Section 5 and a proposed last take point in the NW/4 NE/4 (Unit B) of Section 32. The producing area for the wells is expected to be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Franklin Mountain Energy 3, LLC as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 17 miles west of Hobbs, New Mexico. CASE NO. 24666: Notice to all affected parties, as well as heirs and devisees of: Northern Oil and Gas, Inc.; Great Western Drilling LTD; Mary Louise Galbreath, as her separate property; Coert Holdings 1, LLC; Jean Ann Pepper Johnson; The Brady Family Trust, U/D June 1, 1994; Mewbourne and Daughters, LTD; Thomaston, LLC; Wing Resources VII, LLC; Marathon Oil Permian, LLC; Marshall & Winston, Inc.; BMD Exploration, LLC; Drew R. Scott Family Minerals, LLC; Zunis Energy, LLC; James Adelson & Family 2015 Trusts; Tres Primo Partners, LLC; Pegsus Resources II, LLC; LT, James Adelson & Family 2015 Trusts; Tres Primo Partners, LLC; Pegsus Resources II, LLC; Advison and Associates: L& Gestarrise Ltd. Co: and State of New Maxico of the Application of J.T. Jackson and Associates; J&G Enterprise Ltd., Co.; and State of New Mexico of the Application of Franklin Mountain Energy 3, LLC for compulsory pooling, Lea County, New Mexico. 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Franklin seeks to dedicate the spacing unit to the **Foxtail State Com 304H** and **Foxtail State Com 504H** wells to be horizontally drilled with a proposed first take point in the SE/4 SE/4 (Unit P) of Section 5 and a proposed last take point in the NE/4 NE/4 (Unit A) of Section 32. The producing area for the wells is expected to be orthodox. Also to be considered will be the cost of drilling and completing said wells the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Franklin Mountain Energy 3, LLC as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 17 miles west of Hobbs, New Mexico. #00292020

also be sent to the applicant by certified mail. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with the provisions of Chapter 72 NMSA 1978. **#00291450** 

#### LEGAL NOTICE July 7, 2024

#### NOTICE OF AIR QUALITY PERMIT APPLICATION

DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

The exact location for the facility, known as Linam Ranch Gas Plant, is at latitude 32 deg, 41 min, 43 sec and longitude -103 deg, 17 min, 07 sec. The approximate location of this facility is 7 miles west of Hobbs, New Mexico in Lea County. To reach the facility from Hobbs, NM, travel 7 miles west on Hwy 62/180. The facility is adjacent to the highway on the south side.

The purpose of the proposed modification consists of the following: 1) increase condensate throughput in both the stabilized and unstabilized condensate tanks, 2) add emissions from these tanks to the site's main flare, Unit 4A, 3) increase condensate truck loading throughputs, 4) add two (2) existing pressurized produced water tanks and associated loading operation, 5) Add one (1) secondary/redundant Vapor Recovery Unit (VRU) for the control of the produced water tanks and associated loading operation, 6) Update the serial numbers for Unit IDs 29 and 31, and update tank Unit IDs, and 7) correct typographical error in the regenerator heater emissions.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant	Pounds per hour	Tons per year
PM <sub>10</sub>	10 pph	41 tpy
PM <sub>25</sub>	7 pph	30 tpy
Sulfur Dioxide (SO <sub>2</sub> )	28,504 pph	87 tpy
Nitrogen Oxides (NO <sub>x</sub> )	536 pph	974 tpy
Carbon Monoxide (CÖ)	1,874 pph	663 tpy
Volatile Organic Compounds (VOC)	6,101 pph	276 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	84 pph	56 tpy
Hydrogen Sulfide (H <sub>2</sub> S)	271 pph	12 tpy
Green House Gas Emissions as Total CO2e	n/a	>100,000 tpy

The standard and maximum operating schedules of the facility will be 24 hours per day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: DCP Operating Company, LP, 2331 City West Blvd., Houston, TX 77042

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009;

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process, and links to the regulations can be found at the Air Quality Bureau's website: www.env.nm.gov/air-quality/permitting-section-home-page/. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC.

#### Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

#### Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972, If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination. #**#00291929** 

#### LEGAL NOTICE July 7, 2024

STATE OF NEW MEXICO COUNTY OF LEA

I. Daniel Russell. Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated July 07. 2024 and ending with the issue dated July 07, 2024.

Publisher

Sworn and subscribed to before me this 7th day of July 2024.

Business Manager

My commission expires January 29, 2027 (Seal)

STATE OF NEW MEXICO NOTARY PUBLIC GUSSIE RUTH BLACK COMMISSION # 1087526 COMMISSION EXPIRES 01/29/2027 his newspaper is duly qualified to publish

legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

#### NOTICE OF AIR QUALITY PERMIT APPLICATION

Affidavit of Publication DCP Operating Company, LP, announces its application to the New Mexico Environment Department for the modification of the air quality permit for the Linam Ranch Gas Plant facility. The expected date of application submittal to the Air Quality Bureau is July 15, 2024.

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Notice of Non-Discrimination NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-pace/ to learn how and where to vebsite at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to le a complaint of discrimination.

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ANA NOLAZCO EOSOLUTIONS 13201 NM FREEWAY SUITE 220 HOUSTON, TX 77040

### Written Description of the Routine Operations of the Facility

<u>A written description of the routine operations of the facility</u>. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

Linam Ranch Gas Plant (Linam Ranch) is a natural gas processing plant permitted to process up to 227 MM standard cubic feet of natural gas per day. The natural gas processed at Linam Ranch is mostly methane but contains other hydrocarbons heavier than methane that can be condensed into liquids in the plant. The gas also contains impurities including water, hydrogen sulfide, and carbon dioxide.

The plant consists of an Inlet Receiving System, Amine Treater, Acid Gas Injection well, Sulfur Recovery Unit, Inlet Compression and Dehydration System, Cryogenic/Turbo Expander Plant with external Propane Refrigeration, Residue Compression, and Product Sales for Residue Gas, NGL Liquids, Stabilized Oil, Slop Oil, and Molten Liquid Sulfur. Additionally, the Fuel Gas Systems, Instrument and Starting Air Systems, Steam Systems, Cooling Towers, ESD Flare, Acid Gas Flare, Acid Gas Injection Flare and Drain Systems are supporting units that aid the processes. Processing operations involve chemical reaction processes, thermodynamic processes and physical processes. The chemical reactions that take place are exothermic in nature; that is, they generate heat.

#### Amine (DGA) Treating:

Amine treating is used to remove H<sub>2</sub>S and CO<sub>2</sub> from the gas. This is known as the gas sweetening process. Amine treating is an exothermic chemical reaction process. The treating solution is made up of DGA (Diglycolamine) in water solution. This aqueous mixture is regenerated and reused. Lean DGA solution is pumped to the top of the Contactor (trayed tower) and allowed to flow downward. Sour inlet gas is fed into the bottom of the Contactor and flows upward. As lean DGA solution flows down through the Contactor, it comes into contact with the sour gas. The sour gas contains H<sub>2</sub>S and CO<sub>2</sub>, which react with the amine to form an amine sulfide complex and carbonate, i.e., the amine absorbs the H<sub>2</sub>S and CO<sub>2</sub> and is known as sour (rich) amine. The remaining gas is known as sweet gas and leaves the Contactor containing less than 4 ppm of H<sub>2</sub>S.

Rich DGA solution leaves the bottom of the Contactor and is fed into a flash tank so any absorbed hydrocarbons can be flashed out of the liquid prior to amine regeneration. Due to weak chemical bonds between the sour gas components and the DGA, H<sub>2</sub>S and CO<sub>2</sub> can be stripped from the amine by heating up the amine at low pressures. Rich amine is fed into a stripper column known as a Still, which is operated at low pressure and high temperature. 45 # Steam is used to supply heat to the Still reboiler. H<sub>2</sub>S, and CO<sub>2</sub>, known as "Acid Gas", with small amounts of hydrocarbons and water vapors exit the top of the Still and normally routed to the Acid Gas Injection (AGI) well system. Alternately, during maintenance or upsets of the AGI system, the acid gas stream may be routed to the sulfur plant (SRU). The Lean DGA is now regenerated and leaves the stripper column to be cooled and recirculated to the Contactor.

### Acid Gas Injection (AGI) System

Acid gas from the Amine Treating system routed to the AGI well located approximately 1 ½ miles north of the main Linam Ranch facility for injection into sub-surface strata. The AGI system consists of electrically driven compressors, tanks and ancillary devices. During normal operation of the AGI system, a low volume of gas is flared at the AGI flare. Under upset conditions that require depressurization of the AGI system, the acid gas contained within the system may be flared.

### Waste Heat Recovery Units and Boilers:

The Linam Ranch (Volcano) Heat Recovery Unit is used to produce high pressure 250# steam from the Residue Turbine Exhaust. Additionally, two (2) fuel gas Fired Boilers producing 250# steam are available. This 250# steam is used primarily to operate the various Steam Driven Turbines throughout the plant. Some of the 250# Steam is used to supply heat for the stabilizer reboiler.

### **Cooling Water System:**

The cooling water system is a thermodynamic process that provides cooling for process and utility services. Water is circulated from the South Cooling Tower to various heat exchangers and then back to the cooling tower. The North Cooling Tower is a

'Bay Tower' with cooling water circulated over exposed process coils. To minimize corrosion, scaling, and fouling of plant equipment, chemicals are added to the cooling water. This chemical addition also helps control microbiological growth in the Cooling Towers, since these systems are open to the atmosphere and microbiological growth can be a problem.

### Stabilized, Unstabilized, and Produced Water Product System:

The stabilized product system is a heat added process, which is used to reduce the vapor pressure of inlet condensate, and closed drain liquids. Inlet liquids are sent to the stabilizer feed tanks where their pressure is reduced to allow certain light hydrocarbons to flash off to the gathering system. From the stabilizer system feed tanks, the liquid condensate is fed to the stabilizer tower where the pressure is further reduced, and the process is heated significantly to flash off more of the light hydrocarbons. The stabilized liquids are dumped to the two (2) stabilized condensate storage tanks, pressurized at 2 to 3 psig, and are pumped to a sales pipeline or shipped by truck. The produced water from the stabilized tower is routed to the two (2) produced water storage tanks, pressurized at 2 to 3 psig, and disposed offsite via trucks. The unstabilized inlet condensate liquid is routed to the seven (7) unstabilized condensate storage tanks, pressurized at 50 psig, and are pumped to a sales pipeline or shipped by truck.

The stabilized and unstabilized condensate tanks' vent release are captured with integrated dual vapor recovery unit (TK-VRU) and produced water storage tanks' vent release are captured with integrated dual vapor recovery unit (TK-PWVRU). These VRUs at the facility are inherent to the process and design of the facility. The VRUs are designed to recover vapors and return the vapors back into the low-pressure gathering system. Secondary VRUs are being used if the primary VRU is down. For condensate tanks, if both the primary and secondary VRUs are down or if the flare set pressure of 65 psig is exceeded, the vent is routed to the site main flare, ESD flare, Unit ID 4A.

### Molecular Sieve Dehydration (Mole Sieve):

Process gas is dehydrated to prevent hydrate formation in the turbo expander process unit. Molecular sieve dehydration is a solid bed adsorption process used to remove moisture from the inlet gas. There are four packed towers in the Linam Ranch system. Three towers are dehydrating gas while the other is being regenerated. The towers are packed with a molecular sieve desiccant. The Linam Ranch mole sieve is a Type 4A sieve (pore size) and does not slip minor amounts of H<sub>2</sub>S. This trace contaminant of H<sub>2</sub>S and Water Vapor are released from the mole sieve in the regeneration cycle.

The mole sieve is a crystalline aluminosilicate material selected for its ability to absorb water. Water is removed from the gas due to a weak bonding reaction between the solid mole sieve desiccant and water. The bonding action generates only a small amount of heat. Fresh molecular sieve can absorb about 10% of its weight in water. Sweet gas compressed to about 660 psig flows from the top of the mole sieve packed tower to the bottom of the tower. As the gas flows downward, the mole sieve adsorbs water and other trace contaminants. The moisture content of the mole sieve is monitored and once it becomes saturated, it must be regenerated. Regeneration of a tower is accomplished by passing hot  $(450^{\circ}F+)$ -residue gas through the tower from the bottom to the top of the tower. The hot gas breaks the water/desiccant weak bond and absorbs the free water and removes it from the tower.

The regeneration (regen) gas is cooled downstream of the desiccant beds so absorbed water will condense and drop out of the regen gas stream. After the water is separated from the regen gas in a separator, the gas is further cooled in the Regeneration Gas Propane Chiller Unit to remove additional water vapors and then is compressed to the Residue Compression System and into the residue gas sales stream.

### **Cryogenic / Turboexpander Plant:**

The purpose of the Cryogenic Plant is to recover the natural gas liquids (NGL) from the Plant feed gas. The NGL product is composed of ethane and heavier hydrocarbons when the plant is operated in ethane recovery mode and the residue gas is mostly methane. The plant can also be operated in an ethane rejection mode where most of the ethane will be rejected from the NGL product and into the residue gas stream.

The inlet gas passes through the Dehydration Outlet Filters to remove solid particles that can potentially plug downstream equipment. The inlet gas is then split into two streams. The first stream goes to the Inlet Gas Chiller and the second goes to the Demethanizer Reboiler. The main inlet gas stream enters the Inlet Gas Chiller, which is a multiple stream, brazed aluminum plate-fin exchanger. Physically, the exchanger is combined with the Reflux Condenser. The inlet gas is cooled to -60 °F by cross exchanging with the residue gas, and with propane refrigerant. The other portion of the inlet gas is cooled to -76 °F by cross exchanging with the Demethanizer bottom liquid product, reboiling the Demethanizer liquids, and heating the liquid stream from the Expander Inlet Separator. The chilled inlet gas stream is then combined with the inlet gas from the outlet of the Inlet Gas Chiller.

The combined stream enters the Expander Inlet Separator where the condensed liquids are separated from the vapors. The

vapors flow to the Turbo Expander and the liquid flows to the Liquid Gas Exchanger. The gas enters the Turbo Expander and the pressure is let down isentropically to about 170 psig. The energy released from the expansion, 2150 BHP, is used to drive the Booster Compressor. The expansion process cools the gas to -150 °F. If the Turbo Expander/Booster Compressor is removed from service, flow can be bypassed around the unit by using the J-T valve to throttle the pressure. After the Turbo Expander, the inlet gas enters the Demethanizer. The liquid from the Expander Inlet Separator flows through the Liquid Gas Exchanger to the Cold Gas Separator.

In the Cold Gas Separator, the vapor is separated from the liquid. The liquid flows to the Demethanizer and the vapors flow to the Reflux Condenser. In the Reflux Condenser, the vapors from the Cold Gas Separator are condensed to provide reflux at the top section of the Demethanizer using cold residue gas from the overhead of the Demethanizer. The exchanger is a brazed aluminum plate-fin exchanger and is physically attached to the Inlet Gas Chiller.

The Demethanizer accomplishes the separation of the inlet gas into the residue gas and NGL product that meets the required specifications. The residue gas leaves as column overhead and is composed mostly of methane. In the ethane rejection mode the residue gas will contain an increased amount of ethane and propane. The NGL product, which is composed of ethane and heavier hydrocarbons, leaves as the column bottoms. During ethane rejection most of the Demethanizer reboiler passes will be bypassed and the Demethanizer Trim Reboiler will be the operational reboiler. The Demethanizer Trim Reboiler is a once through reboiler using condensing 45# steam. From the Demethanizer the residue gas flows to the Reflux Condenser and the NGL product flows to the Demethanizer Bottoms Transfer Pumps.

From the Demethanizer, the NGL is pumped by the Demethanizer Bottoms Pump to the NGL Product Heater. During ethane rejection the NGL bypasses the NGL Product Heater and goes directly to the NGL Storage Tank. The residue gas flows to the Reflux Condenser and the Inlet Gas Chiller where the residue gas is heated by the Inlet gas stream. During ethane rejection there will not be a vapor flow coming from the Cold Gas Separator, but the residue gas will still flow through the Reflux Condenser.

The residue gas enters the Booster Compressor where it is compressed to 215 psig. The gas flows to the Booster Compressor Aftercooler, a forced draft air cooled exchanger. A side stream is taken off at the discharge of the Booster Compressor as warm regen gas that goes to the Regeneration Gas Heater. Downstream of the Booster Compressor Aftercooler part of the residue gas is taken for fuel gas to run the plant. Further downstream, past the existing Cooling Tower, a side stream is taken as cool regeneration gas to the Dehydrators with the remainder of the residue gas continuing to the Residue Compression System.

### **Propane Refrigeration System:**

The purpose of the Propane Refrigeration System is to provide the additional refrigeration required at the Inlet Gas Chiller to achieve high ethane recoveries at the cryogenic plant. The refrigeration system also supplies refrigeration duty to the Regen Gas Chiller to cool the regen gas to achieve the required water specification on the residue gas and to the Refrigeration Compressor Lube Oil Cooler. Refrigeration is supplied at -37 °F and at 18 °F for the Inlet Gas Chiller and at 40 °F for the Regen Gas Chiller.

### Water Wash System:

A 200-MMscfd Water Wash System is operating at the facility. The process makes use of the existing utilities including electrical power, steam, cooling water, plant and acid gas flare(s), and instrument air. All heat trace is sourced from the 40# steam system. A stand-alone Reverse Osmosis water treatment system provides make-up water for the Water Wash System and replacement Boilers. Waste water from the Still Reflux Accumulator and Still Bottoms are dumped to the existing water holding tanks (referred to as the "A" Tanks). Vapors from the Still Inlet Surge Tank and Reflux Accumulator discharge to the low-pressure gathering system or to the existing plant flare if the gathering system is inaccessible. NGL from the Still Inlet Surge Tank and Reflux Accumulator are dumped to a battery of existing holding tanks (referred to as the "B" Tanks). In general, lighter than air releases are vented to the atmosphere and heavier than air releases are vented to the Plant Flare. Blanket gas to the Still Inlet and Bottoms Surge Tanks are sourced from the Residue System.

### **Source Determination**

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, <u>Single Source Determination Guidance</u>, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe):

### **B.** Apply the 3 criteria for determining a single source:

<u>SIC Code</u>: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

⊠ Yes □ No

<u>Common</u> <u>Ownership</u> or <u>Control</u>: Surrounding or associated sources are under common ownership or control as this source.

🖂 Yes 🛛 🗆 No

<u>Contiguous</u> or <u>Adjacent</u>: Surrounding or associated sources are contiguous or adjacent with this source.

Yes 🗆 No

### C. Make a determination:

- The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "YES" boxes should be checked. If in "A" above you evaluated other sources as well, you must check AT LEAST ONE of the boxes "NO" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.
- □ The source, as described in this application, <u>does not</u> constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

### Section 12.A PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

<u>A PSD applicability determination for all sources</u>. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the <u>EPA New Source Review Workshop Manual</u> to determine if the revision is subject to PSD review.

- A. This facility is:
  - **a** minor PSD source before and after this modification (if so, delete C and D below).
  - □ a major PSD source before this modification. This modification will make this a PSD minor source.
  - an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
  - □ an existing PSD Major Source that has had a major modification requiring a BACT analysis
  - □ a new PSD Major Source after this modification.
- B. This facility is not one of the listed 20.2.74.501 Table I PSD Source Categories. The "project" emissions for this modification are not significant. The proposed emission increases do not exceed the PSD significance thresholds. The "project" emissions listed below only result from changes described in this permit application, thus no emissions from other revisions or modifications, past or future to this facility. Also, this project does not result in "de-bottlenecking", or other associated emissions resulting in higher emissions. See Table 1-1 in section 6 with project emissions details and PSD significance levels. The project emissions are as follows, below significance threshold levels:
  - a. NOx: 0.04 TPY
  - b. CO: 0.08 TPY
  - c. VOC: -10.07 TPY
  - d. PM10: 0.63 TPY
  - e. PM2.5: 0.54 TPY

C. Netting is not required (project is not significant modification).

### D. BACT is not required for this modification, as this application is a minor modification.

E. If this is an existing PSD major source. This modification is not related to any other permit modifications and is considered to be a single project, As the emissions for this project are less than the significance levels reported in 20.2.74.502 Table 2, a PSD modification is not triggered.

The Linam Ranch Gas Plant is a PSD major source as the facility's potential to emit emissions are greater than 250 tpy of  $NO_x$ , and CO. Therefore, a determination is made below to show that the proposed changes do not result in a significant emission increase above thresholds requiring a netting analysis.

The proposed modification consists of the following operational changes and updates to permit representations:

1) Increase in condensate throughputs in both the site's stabilized and unstabilized condensate tanks. This is from larger volumes of field condensate that will be entering into the gas plant through their inlet gas pipelines. Total

throughputs, after increases, are 2,520 barrels per day (bbl/day) stabilized condensate and 3,240 bbl/day unstabilized condensate.

- 2) Increase condensate truck loading throughputs for both the stabilized and unstabilized condensate streams, Units LOAD-STAB and LOAD-UNSTAB.
- 3) Represent emissions from the condensate tanks to the site's main flare, Unit 4A. The stabilized and unstabilized condensate tank vapors are controlled by a VRU (VRU 1 & VRU 2/Unit ID TK-VRU) that returns the gas back to the process. Should the primary and secondary VRUs not function, then the tanks' vapor space, if sees high enough pressure, will vent to the site's flare (Unit 4A).
- 4) Represent two (2) existing pressurized produced water tanks (400A and 400B) and their associated loading operation, Unit LOAD-PW.
- Represent one existing VRU that has been used for the PW tanks (TK-PWVRU) and add a secondary/redundant vapor recovery unit (VRU), Unit TK-PWVRU, for the control of emissions from the produced water tanks and associated loading operation.
- 6) Remove TK-VRUTMP.
- 7) Update the turbine serial numbers for Unit IDs 29 and 31.
- 8) Update tank Unit IDs as follows:
  - a. two stabilized condensate tanks 400D and 400E
  - b. seven unstabilized condensate tanks B1 through B5, 400C and 400F.
- 9) Correct typographical error in the regenerator heater (Unit 34)  $PM_{10}$  and  $PM_{2.5}$  emissions.
- 10) Delete compressor engines Unit IDs 8 and 9 as these sources have been permanently shut down and are not operable.

There are no physical changes occurring at the plant site apart from the installation of secondary VRU for the produced water tanks. The processing rate of the plant remains the same, and there is no new processing equipment being added nor are there any new emissions sources installed in this permit revision.

Table 1-1 in Section 1 and attached to this section shows the currently permitted emission rates (from NSR Permit 39-M9, issued May 7, 2021) and the proposed project emissions as a result of the changes proposed in this application for the applicable emission units. The emission increase is compared to the PSD significance thresholds. The changes proposed in this application do not result in an increase in emissions above the PSD significance thresholds.

Table 1-1 Project Requested Allowable Emissions (Represented in NMED Table 2-E) DCP Operating Company, LP Linam Ranch Gas Plant Lea County, New Mexico													
Unit #	Source Description	Ν	O <sub>x</sub>	0	:0	V	00	S	02	P	M <sub>10</sub>	PI	M <sub>2.5</sub>
Unit #	Source Description	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Proposed Emissic	ons												
4A	ESD Flare	0.41	1.04	1.41	4.66	1.35	1.29	0.02	0.10				
34	Regenerator Heater	1.67	7.30	1.40	6.13	0.09	0.40	0.01	0.04	0.13	0.55	0.13	0.55
400A	Produced Water Tank					0.04	0.003						
400B	Produced Water Tank					0.04	0.003						
TK-VRU <sup>(1)</sup>	7 Unstabilized and 2 Stabilized Condensate Tanks controlled by common VRU												
TK-PWVRU <sup>(1)</sup>	Vents from 2 Produced Water Tanks												
TK-VRUTMP <sup>(2)</sup>	Two Condensate Tanks controlled by common VRU (Previously listed as TK-39 and 40)												
LOAD-STAB Stabilized Condensate Truck Loadout						1.39	3.76						
LOAD-PW	Produced Water Truck Loadout					<0.01	<0.01						
LOAD-UNSTAB	Unstabilized Condensate Truck Loadout					<0.01	<0.01						
HAUL Hauling emissions from condensate loading out of facility										0.20	0.49	0.03	0.08
Current Emission	S												
4A	ESD Flare	0.23	1.00	1.05	4.58	0.17	0.76	0.02	0.10				
34	Regenerator Heater	1.67	7.30	1.40	6.13	0.09	0.40	0.01	0.04	0.13	0.04	0.13	0.04
400A	Produced Water Tank												
400B	Produced Water Tank												
TK-VRU	7 Unstabilized and 2 Stabilized Condensate Tanks controlled by common VRU					27.54	6.03						
TK-VRUTMP <sup>(2)</sup>	Two Condensate Tanks controlled by common VRU (Previously listed as TK-39 and 40)					24.56	5.38						
LOAD-STAB	Stabilized Condensate Truck Loadout					0.67	2.95						
LOAD-PW	Produced Water Truck Loadout												
LOAD-UNSTAB	Unstabilized Condensate Truck Loadout					<0.01	<0.01						
HAUL	Hauling emissions from condensate loading out of facility									0.10	0.37	0.01	0.05
	REVISED PROJECT EMISSION TOTALS	2.08	8.34	2.81	10.79	2.92	5.45	0.03	0.14	0.33	1.04	0.16	0.63
	CURRENT PROJECT EMISSION TOTALS	1.90	8.30	2.45	10.71	53.04	15.53	0.03	0.14	0.23	0.42	0.14	0.09
	EMISSIONS INCREASES		0.04		0.08		-10.07		0.00		0.63		0.54
	PSD Significance Level		40		100		40		40		15		10
	Exceeds Thresholds?		No		No		No		No		No		No

(1) Unit IDs TK-VRU and TK-PWVRU operate independently of each other and at the same time.

(2) Unit TK-VRUTMP is being deleted from the permit.

### **Determination of State & Federal Air Quality Regulations**

### This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants.

Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

### **Required Information for Specific Equipment:**

For regulations that apply to specific source types, in the 'Justification' column **provide any information needed to determine if the regulation does or does not apply**. **For example**, to determine if emissions standards at 40 CFR 60, Subpart IIII apply to your three identical stationary engines, we need to know the construction date as defined in that regulation; the manufacturer date; the date of reconstruction or modification, if any; if they are or are not fire pump engines; if they are or are not emergency engines as defined in that regulation; their site ratings; and the cylinder displacement.

#### **Required Information for Regulations that Apply to the Entire Facility:**

See instructions in the 'Justification' column for the information that is needed to determine if an 'Entire Facility' type of regulation applies (e.g. 20.2.70 or 20.2.73 NMAC).

#### **Regulatory Citations for Regulations That Do Not, but Could Apply:**

If there is a state or federal air quality regulation that does not apply, but you have a piece of equipment in a source category for which a regulation has been promulgated, you must **provide the low level regulatory citation showing why your piece of equipment is not subject to or exempt from the regulation. For example,** if you have a stationary internal combustion engine that is not subject to 40 CFR 63, Subpart ZZZZ because it is an existing 2 stroke lean burn stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, your citation would be 40 CFR 63.6590(b)(3)(i). We don't want a discussion of every non-applicable regulation, but if it is possible a regulation could apply, explain why it does not. For example, if your facility is a power plant, you do not need to include a citation to show that 40 CFR 60, Subpart OOO does not apply to your non-existent rock crusher.

### **Regulatory Citations for Emission Standards:**

For each unit that is subject to an emission standard in a source specific regulation, such as 40 CFR 60, Subpart OOO or 40 CFR 63, Subpart HH, include the low level regulatory citation of that emission standard. Emission standards can be numerical emission limits, work practice standards, or other requirements such as maintenance. Here are examples: a glycol dehydrator is subject to the general standards at 63.764C(1)(i) through (iii); an engine is subject to 63.6601, Tables 2a and 2b; a crusher is subject to 60.672(b), Table 3 and all transfer points are subject to 60.672(e)(1)

#### Federally Enforceable Conditions:

All federal regulations are federally enforceable. All Air Quality Bureau State regulations are federally enforceable except for the following: affirmative defense portions at 20.2.7.6.B, 20.2.7.110(B)(15), 20.2.7.11 through 20.2.7.113, 20.2.7.115, and 20.2.7.116; 20.2.37; 20.2.42; 20.2.43; 20.2.62; 20.2.63; 20.2.86; 20.2.89; and 20.2.90 NMAC. Federally enforceable means that EPA can enforce the regulation as well as the Air Quality Bureau and federally enforceable regulations can count toward determining a facility's potential to emit (PTE) for the Title V, PSD, and nonattainment permit regulations.

### INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

### Table for State Regulations:

<u>State</u> <u>Regulation</u> Citation	Title	Applies ? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The TSP NM ambient air quality standard was repealed by the EIB effective November 30, 2018.
20.2.7 NMAC	Excess Emissions	Yes	Facility	If your entire facility or individual pieces of equipment are subject to emissions limits in a permit or numerical emissions standards in a federal or state regulation, this applies.
20.2.23 NMAC	Fugitive Dust Control	No	Facility	Facility is subject to a permit issued pursuant to the NM Air Quality Control Act (20.2.23.108.B NMAC).
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have existing gas burning equipment having a heat input of greater than 1 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.33.108 NMAC.
20.2.34 NMAC	Oil Burning Equipment: NO <sub>2</sub>	No	N/A	This facility does not have oil burning equipment having a heat input of greater than 1million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	Yes	Facility	This facility is subject to the requirements of NMAC 2.35 for "New Natural <b>Gas Processing</b> Plants for which a modification commenced on or after July 1, 1974". This facility meets the requirements established under 20.2.35.100.A-D NMAC.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
20.2.38 NMAC	Hydrocarbon Storage Facility	Yes	B1 through B5, 400A through 400F	This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities. The subject storage tanks comply by controlling emissions with VRUs.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This regulation establishes sulfur emission standards for sulfur recovery plants which are not part of petroleum or natural gas processing facilities. This regulation does not apply as 20.2.35 NMAC applies.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	Facility	<ul> <li>This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below:</li> <li>Include the construction status of applicable units as "New", "Existing", "Relocation of Existing", or "Reconstructed" as defined by this Part in your justification:</li> <li>Check the box for the subparts that are applicable:</li> <li>⊠ 113 – Engines and Turbines (Existing 6, 7, 10, 11, 28, 29, 30, 31, 32B)</li> <li>⊠ 114 – Compressor Seals</li> <li>⊠ 115 – Control Devices and Closed Vent Systems</li> <li>⊠ 116 – Equipment Leaks and Fugitive Emissions (Existing)</li> <li>□ 117 – Natural Gas Well Liquid Unloading</li> <li>□ 118 – Glycol Dehydrators</li> <li>□ 119 – Heaters</li> </ul>

<u>State</u> <u>Regulation</u> Citation	Title	Applies ? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				<ul> <li>I20 – Hydrocarbon Liquid Transfers (Existing Unit LOAD-STAB, LOAD-UNSTAB, and LOAD-PW)</li> <li>I21 – Pig Launching and Receiving</li> <li>I22 – Pneumatic Controllers and Pumps</li> <li>I23 – Storage Vessels</li> <li>I24 – Well Workovers</li> <li>I25 – Small Business Facilities</li> <li>I26 – Produced Water Management Unit</li> <li>I27 – Flowback Vessels and Preproduction Operations</li> </ul>
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	Facility	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). This facility was subject to the repealed regulation 20.2.37 NMAC; therefore, it is now subject to 20.2.61 NMAC.
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining an operating permit. This facility is a major source of NOx, CO, and VOC and complies by operating under Title V Permit P094-M2.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.70 NMAC and is therefore subject to requirements of this regulation.
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes the requirements for obtaining a construction permit. The facility is a stationary source that has potential emission rates great than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Air Quality Standard. The facility has a construction permit (NSR Permit) 39-M9 to meet the requirements of this regulation.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet all applicable reporting requirements under 20.2.73.300.B.1 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	Yes	Facility	This regulation establishes requirements for obtaining a PSD permit. This facility is a major source for PSD purposes and is in compliance with the applicable requirements of this regulation.
20.2.75 NMAC	Construction Permit Fees	No	N/A	This regulation establishes the guidelines and requirements for construction permitting fees. This facility is subject to 20.2.72 NMAC and is in turn subject to 20.2.75 NMAC. This facility is exempt from annual fees under this part (20.2.75.11.E NMAC) as it is subject to fees pursuant to 20.2.71 NMAC.
20.2.77 NMAC	New Source Performance	Yes	2, 4A, 28, 29, 30, 31 32B, 34, 36, 37, FUG, AM-10,	The facility is subject to this regulation as this is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended through January 15, 2017. The following regulations apply: • Subpart A • Unit 2 • Unit 4A • All other units listed below • Subpart Dc • 34, 36, and 37 • Subpart GG • 29-31 • 32B • Subpart KKK • FUG • Subpart KKK • 28

<u>State</u> <u>Regulation</u> Citation	Title	Applies ? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				<ul> <li>Subpart OOOO         <ul> <li>Equipment added in NSR 0039-M6</li> <li>28</li> <li>AM-10</li> </ul> </li> </ul>
20.2.78 NMAC	Emission Standards for HAPS	Yes (Potentially)	Facility	This regulation applies to all sources subject to a 40 CFR 60 regulation, as amended through January 15, 2017. Although this standard does not apply to this facility under routine operating conditions, in the case of asbestos demolition, Subpart M would apply.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is located in an attainment area and, therefore, is not subject to this regulation.
20.2.80 NMAC	Stack Heights	No	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as all stacks at the facility follow good engineering practice.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	6, 7, 10, 11, 28, 34, 36, 37, DH- 10	<ul> <li>This regulation established state authority to implement MACT Standards for source categories of HAPs. This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended through January 15, 2017. The following regulations apply:</li> <li>Subpart A <ul> <li>All units listed below</li> </ul> </li> <li>Subpart HH <ul> <li>DH-10</li> </ul> </li> <li>Subpart YYYY <ul> <li>28</li> </ul> </li> <li>Subpart ZZZZ <ul> <li>6, 7, 10 and 11</li> </ul> </li> <li>Subpart DDDDD <ul> <li>34, 36, and 37</li> </ul> </li> </ul>

### Table for Applicable Federal Regulations (Note: This is not an exhaustive list):

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NO <sub>x</sub> , CO, SO <sub>2</sub> , PM <sub>10</sub> , and PM <sub>2.5</sub> under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	2, 4A, 28, 29, 30, 31 32B, 34, 36, 37, FUG, AM- 10	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because the following subparts apply: Subpart A Unit 2 Unit 4A All other units listed below Subpart Dc 34, 36, and 37 Subpart GG 29-31 32B Subpart KKK FUG Subpart KKKK 28 Subpart OOOO C Equipment added in NSR 0039-M6

<u>Federal</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
				<ul> <li>○ 28</li> <li>○ AM-10</li> </ul>
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	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.
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for industrial-commercial- institutional steam generating units. There are no steam generating units that commenced construction, modification, or reconstruction after June 19, 1984, and that have a heat input capacity greater than 100 MMBtu/hr at the facility.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial- Commercial- Institutional Steam Generating Units	Yes	34, 36, and 37	This regulation establishes standards of performance for small industrial- commercial-institutional steam generating units. Units 34, 36, and 37 will be installed or modified after June 9, 1989 with a heat input capacity greater than or equal to 10 MMbtu/hr but less than 100 MMbtu/hr. The units will only burn natural gas and therefore will not be subject to performance tests, reporting requirements, or emission limits under this regulation. The facility will follow all record keeping requirements for these units.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstructio n, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	No	N/A	This regulation establishes standards of performance for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. The pressurized condensate tanks and produced water tanks at the facility were constructed in 1954 and are therefore not subject to this regulation.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which		N/A	This regulation establishes standards of performance for petroleum liquids for which construction, reconstruction, or modification commenced after July 23, 1984. The pressurized condensate tanks and produced water tanks at the facility were constructed in 1954 and are therefore not subject to this regulation.

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	Construction, Reconstructi on, or Modification Commenced <b>After</b> July 23, 1984	No		
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	Yes	29, 30, 31 and 32B	This regulation establishes standards of performance for certain stationary gas turbines. The turbines at Linam Ranch all have heat inputs greater than the 10 MMBtu/hour were installed on after the October 3, 1977, applicability date and prior to February 18, 2005.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from <b>Onshore</b> <b>Gas Plants</b>	Yes	Facility	Linam Ranch is an affected facility as it is an onshore natural gas processing plant that commenced construction, reconstruction, or modification after January 20, 1984. 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.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for <b>Onshore</b> <b>Natural Gas</b> <b>Processing</b> : SO <sub>2</sub> Emissions	Yes	Facility	reports twice annually. This regulation establishes standards of performance for SO <sub>2</sub> emissions from onshore natural gas processing for which construction, reconstruction, or modification of the amine sweetening unit commenced after January 20, 1984, and on or before August 23, 2011. The sweetening units produce acid gas that is completely re-injected into geologic strata or that is otherwise not released to the atmosphere; pursuant to §60.640(e) the sweetening units are not subject to this subpart.
NSPS 40 CFR Part 60 Subpart OOOO	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	Yes	Equipment leaks associate with equipment added in NSR 39 M6, 28, AM- 10	This regulation establishes emission standards and compliance schedule for the control of volatile organic compounds (VOC) and sulfur dioxide (SO <sub>2</sub> ) emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011. The following are equipment constructed after August 23, 2011, and subject to this regulation: Turbine (Unit 28), and equipment leaks associated with the equipment added in NSR 39-M6R1. The acid gas from the amine unit (sweetening unit) at the facility is completely injected into oil or gas-bearing geological strata (AGI wells) and is not subject to 60.5405 through 60.5407, 60.5410(g), and 60.5423 of this subpart [per NSPS OOOO 60.5365(g)(4)]. When the acid gas flare is used during planned SSM and, the acid gas is not sent to the AGI wells, the facility is subject to SO <sub>2</sub> standards for the amine unit. Since the flare will be used as a control device during planned SSM, the flare is subject to NSPS 60.18. The facility will comply with this regulation upon startup. The pneumatic devices located at the facility are driven by instrument air and therefore will not have applicable requirements under this regulation.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstructio	No	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission and distribution. The facility does not have any affected units that have been modified or reconstructed after <b>September 18, 2015 or before December 6, 2022.</b>

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	n Commenced After September 18, 2015			
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstructio	No	N/A	This regulation establishes standards of performance for crude oil and natural gas production, transmission and distribution. The pressurized tanks at this facility have the potential to emit less than 6 tpy and therefore are not subject to this regulation.
	n Commenced After December 6, 2022			
NSPS 40 CFR 60 Subpart IIII	Standards of peormance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary compression ignition internal combustion engines. All engines at this facility commenced construction prior to July 11, 2005. This regulation does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary spark ignition internal combustion engines. All engines at this facility commenced construction prior to June 12, 2006. This regulation does not apply.
NSPS 40 CFR Part 60 Subpart KKKK	Standards of Performance for <b>Stationary</b> <b>Combustion</b> <b>Turbines</b>	Yes	28	This regulation establishes standards of performance for new stationary gas turbines. Unit 28 is subject to this regulation as the unit commenced construction after February 18, 2005.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This facility does not have any affected equipment; therefore, this subpart does not apply.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This facility does not have any affected equipment; therefore, this subpart does not apply.
NSPS 40 CFR 60, Subparts WWW,	Standards of performance for Municipal Solid Waste	No	N/A	This facility does not have any affected equipment; therefore, this subpart does not apply.

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
XXX, Cc, and Cf	(MSW) Landfills			
NESHAP 40 CFR 61 Subpart A	General Provisions	Potentially	N/A	This part applies to the owner or operator of any stationary source for which a standard is prescribed under this part. There is one potentially applicable NESHAP. (See discussion of 40 CFR 61, part M below.)
NESHAP 40 CFR 61 Subpart E	National Emission Standards for <b>Mercury</b>	No	N/A	The provisions of this subpart are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. This subpart does not apply.
NESHAP 40 CFR 61 Subpart M	National Emission Standards for <b>Asbestos</b>	Potentially	N/A	Although this standard does not apply to this facility under routine operating conditions, in the case of <b>asbestos</b> demolition, Subpart M would apply.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No	N/A	This regulation establishes national emission standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service [40 CFR Part 61.240]. The regulated activities subject to this regulation do not take place at this facility. The facility is not subject to this regulation.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	6, 7, 10, 11, 28, 34, 36, 37, and DH-10	<ul> <li>This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because the following subparts apply:</li> <li>Subpart A <ul> <li>All units listed below</li> </ul> </li> <li>Subpart HH <ul> <li>Unit DH-10</li> </ul> </li> <li>Subpart YYYY <ul> <li>28</li> </ul> </li> <li>Subpart ZZZZ <ul> <li>6, 7, 10, and 11</li> </ul> </li> <li>Subpart DDDDD <ul> <li>34, 36, and 37</li> </ul> </li> </ul>
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	DH-10	The glycol dehydrator (Unit DH-10) at this facility is a closed system with flash and regeneration gases routed to inlet compression for recycling thus exempt from requirements due to emissions less than 1.0 Mg/yr benzene. This facility will comply with any limited requirements.
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No	N/A	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 facility is not a natural gas transmission and storage facility as defined in this subpart. This regulation does not apply.

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	Yes	34, 36, and 37	The facility is a major source of HAPS. Units 34, 36 and 37 will be subject to MACT 40 CFR 63 Subpart DDDDD as they were constructed after the June 4, 2010 applicability date. The boilers will be combusting natural gas and will have the following compliance requirement in MACT DDDDD: 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). Units 34, 36, and 37 do not have emission limits under this regulation. DCP will comply with all applicable MACT DDDDD requirements.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from coal- and oil-fired electric utility steam generating units (EGUs) as defined in § 63.10042 of this subpart. This facility does not have any coal- and oil-fired electric utility steam generating units (EGUs) as defined in this subpart. This regulation does not apply.
MACT 40 CFR 63 Subpart YYYY	National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	Yes	28	This subpart sets national emission standards for new stationary combustion turbines. Units 29, 30, 31 and 32B are existing units and pursuant to §63.6090(b)(4) have no requirements under this subpart or subpart A. Unit 28 is a new or reconstructed gas-fired combustion turbine. Pursuant to §63.6095(d), this unit is subject to the initial notification requirements set forth in §63.6145 and will comply with other requirements of Subpart YYYY as applicable.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	6, 7, 10, 11	This subpart sets national emission standards for Stationary Reciprocating Internal Combustion Engines. Units 6, 7, 10, and 11 are subject to Subpart ZZZZ and will comply as applicable.
40 CFR 64	Compliance Assurance Monitoring	Yes	AM-10, AGI Well, and AGI Flare	The sulfur recovery unit (Unit 5) has been removed and is no longer subject to CAM. The amine unit (Unit AM-10), AGI Well, and AGI Flare are a controlled major source and are subject to CAM.

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 68	Chemical Accident Prevention	Yes	Facility	This facility has quantities of materials regulated by this requirement that are in excess of the triggering threshold. A RMP has been submitted to and approved by the EPA on 6/29/2015
Title IV – Acid Rain 40 CFR 72	Acid Rain	No	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation [40 CFR Part 72.6].
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation.
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No	N/A	This facility has quantities of materials regulated by this requirement that are in excess of the triggering threshold. A RMP has been submitted to and approved by the EPA on 6/29/2015
Title VI – 40 CFR 82	Protection of Stratospheri c Ozone	Yes	Facility	DCP owns appliances containing CFCs and is therefore subject to this requirement. DCP uses only certified technicians for the maintenance, service, repair and disposal of appliances and maintains the appropriate records for this requirement. Note: Disposal definition in 82.152: Disposal means the process leading to and including: (1) The discharge, deposit, dumping or placing of any discarded appliance into or on any land or water; (2) The disassembly of any appliance for discharge, deposit, dumping or placing of its discarded component parts into or on any land or water; or (3) The disassembly of any appliance for reuse of its component parts. "Major maintenance, service, or repair means" any maintenance, service, or repair that involves the removal of any or all of the following appliance components: compressor, condenser, evaporator, or auxiliary heat exchange coil; or any maintenance, service, or repair that involves uncovering an opening of more than four (4) square inches of "flow area" for more than 15 minutes.
CAA Section 112(r)	Chemical Accident Prevention Provisions	Yes	Facility	Linam Ranch is subject to the chemical accident prevention provisions of the Clean Air Act.

### **Operational Plan to Mitigate Emissions**

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

- □ **Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an <u>Operational Plan to Mitigate Emissions During Startups</u>, <u>Shutdowns</u>, <u>and Emergencies</u> defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- □ NSR (20.2.72 NMAC), PSD (20.2.74 NMAC) & Nonattainment (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has developed an <u>Operational Plan to Mitigate Source Emissions</u> <u>During Malfunction, Startup, or Shutdown</u> defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- □ Title V (20.2.70 NMAC), NSR (20.2.72 NMAC), PSD (20.2.74 NMAC) & Nonattainment (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

Linam Ranch GP is in the process of developing an Operational Plan to mitigate emissions during Startup, Shutdowns, and Emergencies.

# Section 15

### **Alternative Operating Scenarios**

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

**Construction Scenarios**: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

In this section, under the bolded title "Construction Scenarios", specify any information necessary to write these conditions, such as: conservative-realistic estimated time for completion of construction of the various units, whether simultaneous operation of old and new units is being requested (and, if so, modeled), whether the old units will be removed or decommissioned, any PSD ramifications, any temporary limits requested during phased construction, whether any increase in emissions is being requested as SSM emissions or will instead be handled as a separate Construction Scenario (with corresponding emission limits and conditions, etc.

#### Scenario A

This is the primary operating scenario. Under Scenario A of one (1) of the two (2) HBAs (Units 10 to 11) is operating at any given time, while simultaneously being allowed to operate all other equipment at the facility at maximum capacity without limits on the hours of operation.

#### Scenario B

This is the alternative operating scenario. Under Scenario B, two (2) HBAs (Units 10 to 11) would operate when one of the TLA engines (Units 6 and 7) is down. In order to preserve the PSD netting result for NOx and VOC, the number of hours this scenario is allowed to run is up to 3,400 hours in any rolling 12-month period.

If DCP exceeds this threshold, DCP must perform an updated PSD netting analysis for these pollutants to show that the SERs were not exceeded based on actual hours of operation in each rolling 12-month period.

The following formula shall be used to calculate tons per year emissions for each HBA (Units 10 to 11) and TLA (Units 6 and 7). The sum of each of the HBA (Units 10 to 11) and TLA (Units 6 and 7) emissions calculated by the formula is then compared to the limits shown in Table 2-E of this application. The sum should be less than or equal to these limits to demonstrate that the SERs for NOx and VOC were not exceeded.

Formula to calculate emissions for NOx and VOC, in tons, for a given HBA or TLA unit over a rolling 12-month period:

[Permit Limit (lb/hr)] x [Rolling 12-month hours of operation (hr)] x [Actual power (hp) ÷ Permitted power (hp)] 2000 (lb/ton)

Then, for NOx and VOC, calculate the sum:

Unit 6 + Unit 7 + Unit 10 + Unit 11 = Total All Units

Then, compare the sum "Total All Units" for each pollutant to the corresponding tons per year limit shown in Table 2-E.

### Section 16 Air Dispersion Modeling

- Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
- 2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (<u>http://www.env.nm.gov/aqb/permit/app\_form.html</u>) for more detailed instructions on SSM emissions modeling requirements.
- 3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC).	Х
See #1 above. Note: Neither modeling nor a modeling waiver is required for VOC emissions.	
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3	
above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4),	
20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling	
Guidelines.	

#### Check each box that applies:

□ See attached, approved modeling **waiver for all** pollutants from the facility.

See attached, approved modeling **waiver for some** pollutants from the facility.

□ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.

□ Attached in UA4 is a **modeling report for some** pollutants from the facility.

No modeling is required.

New Mexico Environment Department Air Quality Bureau Modeling Section 525 Camino de Los Marquez - Suite 1 Santa Fe, NM 87505

Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/air-quality/



For Department use only:

Approved by: Sufi A. Mustafa

Date: 7/22/2024

#### Air Dispersion Modeling Waiver Request Form

This form must be completed and submitted with all air dispersion modeling waiver requests.

If an air permit application requires air dispersion modeling, in some cases the demonstration that ambient air quality standards and Prevention of Significant Deterioration (PSD) increments will not be violated can be satisfied with a discussion of previous modeling. The purpose of this form is to document and streamline requests to certify that previous modeling satisfies all or some of the current modeling requirements. The criteria for requesting and approving modeling waivers are found in the Air Quality Bureau Modeling Guidelines. Typically, only construction permit applications submitted per 20.2.72, 20.2.74, or 20.2.79 NMAC require air dispersion modeling. However, modeling is sometimes also required for a Title V permit application.

A waiver may be requested by e-mailing this completed form in **MS Word** format to the modeling manager, <u>sufi.mustafa@env.nm.gov</u>.

This modeling waiver is not valid if the emission rates in the application are higher than those listed in the approved waiver request.

Un 1 anu Table 1. Contact anu faci	I I and Table I. Contact and facility information.					
Contact name	Elena Hofmann					
E-mail Address:	Elena.hofmann@eosolutions.net					
Phone	713-983-0112					
Facility Name	Linam Ranch Gas Plant					
Air Quality Permit Number(s)	0039-M9 and P094-R3					
Agency Interest Number (if	589					
known)	569					
Latitude and longitude of	LAT 32.695278 and LONG -103.285278					
facility (decimal degrees)	LAT 32.095278 dilu LUNG -103.285278					

#### Section 1 and Table 1: Contact and facility information:

# General Comments: (Add introductory remarks or comments here, including the purpose of and type of permit application.)

DCP is submitting a NSR Permit 39-M9 minor revision application to increase the throughput of both the condensate storage tanks and condensate truck loading. The increase affects haul road emissions.

The current air permit, represented in the December 2020 application, listed the following haul road emissions: PM10 at 0.105 lb/hr and 0.371 tons/yr and PM2.5 at 0.014 lb/hr and 0.05 tons/yr. These emission rates are well below the NMAC 20.2.74.502 Significant Emissions Rates of 15 tons/yr for PM10 and 10 tons/yr for PM2.5, they are controlled and since BACT was not required, these emissions were not included in the site's issued air permit.

In evaluating this amendment, the calculated proposed haul road PM10 and PM2.5 emissions increases are negligible. Specifically, the proposed total haul road PM10 emissions are at 0.199 lb/hr and 0.0.487 tons/yr and PM2.5 emissions are at 0.032 lb/hr and 0.080 tons/yr. The increases in PM10 and PM2.5 emissions are 0.09 lb/hr and 0.02 lb/hr, respectively.

Since these increases are negligible and the total PM10 and PM2.5 emissions are not represented in the site's issued air permit and remain well below the NMAC 20.2.74.502 significant emissions rates, DCP is requesting NMED consider and approve this waiver request for air dispersion modeling.

On June 25, 2024, Ms. Hofmann discussed this request with Mr. Jim Nellessen and Mr. Sufi Mustafa. NMED representatives agreed that this was a reasonable request and indicated it would be considered and approved due to the minor increases in haul road emissions. On July 10, 2024, NMED approved this request.

Upon further review of condensate handling operations at the Linam Ranch Gas Plant, emissions to the site's flare, Unit ID 4A have been identified to be represented. Thus, updated flare emissions representations show NO<sub>2</sub> and CO emissions increases from Unit ID 4A. This permit revision application proposes to route the condensate tank emissions and condensate loading emissions for 5% of the year to site's main flare, ESD Flare, Unit ID 4A. Routinely, the condensate tank and loading emissions are controlled by dual Vapor Recovery Units (VRUs) routing the vapors back to the process line. Should the VRUs be down, or operational fluctuations occur increasing the pressure of the condensate being stored, the tank vapors would be routed to the site's flare. The resulting emissions increase in short-term emissions is negligible, less than 0.189 lb/hr for NO<sub>2</sub> and less than 16.037 lb/hr for CO, meeting the modeling waiver requirement. Thus, we kindly request NMED to once again consider this updated modeling waiver request for the NO<sub>2</sub> and CO emissions increases being proposed.

Sections 4, 5 and 6 below have not been completed as they do not apply to this situation. Should additional information be needed, please let us know. We greatly appreciate your consideration of this request.

#### Section 2 – List All Regulated Pollutants from the Entire Facility - Required

In Table 2, below, list all regulated air pollutants emitted from your facility, except for New Mexico Toxic Air Pollutants, which are listed in Table 6 of this form. All pollutants emitted from the facility must be listed whether or not a modeling waiver is requested for that pollutant or if the pollutant emission rate is subject to the proposed permit changes.

							Madalingfor
Pollutant	Pollutant is	Pollutant does not	Stack	Pollutant is	Pollutant is	A modeling	Modeling for
	not emitted	increase in emission	parameters	new to the	increased	waiver is	this pollutant
	at the facility	rate at any emission	or stack	permit, but	at any	being	will be
	and	unit (based on levels	location	already	emission	requested	included in
	modeling or	currently in the permit)	has	emitted at	unit (based	for this	the permit
	waiver are	and stack parameters	changed.	the facility.	on levels	pollutant.	application.
	not required.	are unchanged.			currently in		
		Modeling or waiver are			the		
		not required.			permit).		
СО					Х	Х	
NO <sub>2</sub>					Х	Х	
SO <sub>2</sub>		Х					
PM10					Х	Х	
PM2.5					Х	Х	
H₂S		Х					
Reduced	Х						
S							
O <sub>3</sub> (PSD	Х						
only)							
Pb	Х						

#### Table 2: Air Pollutant summary table (Check all that apply. Include all pollutants emitted by the facility):

#### Section 3: Pollutants, other than NMTAPs, with very small emission rates

The Air Quality Bureau has performed generic modeling to demonstrate that small sources, as listed in Appendix 2 of this form, do not need computer modeling. This modeling compared emissions from a project (the increase in emissions from the previous permit or total facility emissions for a new facility) with significance levels. After comparing the project's emission rates for various pollutants to Appendix 2, list in Table 3 the pollutants that do not need to be modeled because of very small emission rates.

The facility must be at least 2 km from the nearest Class I area to qualify for a waiver due to very small emission rates. List the nearest Class I area and the distance from the facility in Section 3 comments.

Section 3 Comments. (If you are not requesting a waiver for any pollutants based on their low emission rate, then note that here. You do not need to complete the rest of Section 3 or Table 3.) <Add comments here>

#### Table 3: List of Pollutants with very small emission rates from the project

	Requested Allowable Emission	Release Type	Waiver Threshold
Pollutant	Rate for Project	(select "all from stacks >20 m"	(from appendix 2)
	(pounds/hour)	or "other")	(lb/hr)
NO <sub>2</sub>	0.18	all from stacks >20 m	0.189
СО	0.35	all from stacks >20 m	16.037

#### Section 4: Pollutants that have previously been modeled at equal or higher emission rates

List the pollutants and averaging periods in Table 4 for which you are requesting a modeling waiver based on previous modeling for this facility. The previous modeling reports that apply to the pollutant must be submitted with the modeling waiver request. Request previous modeling reports from the Modeling Section of the Air Quality Bureau if you do not have them and believe they exist in the AQB modeling file archive.

Section 4 Comments. (If you are not asking for a waiver based on previously modeled pollutants, note that here. You do not need to complete the rest of section 4 or table 4.) <Add comments here>

#### Table 4: List of previously modeled pollutants (facility-wide emission rates)

Pollutant	Averaging period	Proposed emission rate (pounds/hour)	Previously modeled emission rate (pounds/hour)	Proposed minus modeled emissions (lb/hr)	Modeled percent of standard or increment	Year modeled

#### Section 4, Table 5: Questions about previous modeling:

Question	Yes	No
Was AERMOD used to model the facility?		
Did previous modeling predict concentrations less than 95% of each air quality standard and PSD		
ncrement?		
Nere all averaging periods modeled that apply to the pollutants listed above?		
Were all applicable startup/shutdown/maintenance scenarios modeled?		
Did modeling include all sources within 1000 meters of the facility fence line that now exist?		
Did modeling include background concentrations at least as high as current background concentrations?		
f a source is changing or being replaced, is the following equation true for all pollutants for which the		
waiver is requested? (Attach calculations if applicable.)		
EXISTING SOURCE REPLACMENT SOURCE		
$[(g) x (h1)] + [(v1)^{2}/2] + [(c) x (T1)] \le [(g) x (h2)] + [(v2)^{2}/2] + [(c) x (T2)]$		
q1 q2		
Where		
g = gravitational constant = 32.2 ft/sec <sup>2</sup>		
h1 = existing stack height, feet		
v1 = exhaust velocity, existing source, feet per second		
c = specific heat of exhaust, 0.28 BTU/lb-degree F		
T1 = absolute temperature of exhaust, existing source = degree F + 460		
q1 = emission rate, existing source, lbs/hour		
h2 = replacement stack height, feet		
v2 = exhaust velocity, replacement source, feet per second		
T2 = absolute temperature of exhaust, replacement source = degree F + 460		
q2 = emission rate, replacement source, lbs/hour		

If you checked "no" for any of the questions, provide an explanation for why you think the previous modeling may still be used to demonstrate compliance with current ambient air quality standards.

#### Section 5: Modeling waiver using scaled emission rates and scaled concentrations

At times it may be possible to scale the results of modeling one pollutant and apply that to another pollutant. Increases in emissions of one pollutant might also demonstrate compliance by applying a scaling factor to the modeling results. If the analysis for the waiver gets too complicated, then it becomes a modeling review rather than a modeling waiver, and applicable modeling fees will be charged for the modeling. Plume depletion, ozone chemical reaction modeling, post-processing, and unequal pollutant ratios from different sources are likely to invalidate scaling.

If you are not scaling previous results, note that here. You do not need to complete the rest of section 5. Scaling analyses are not intended to be used for previously modeled pollutants with decreasing emissions, which is already addressed in section 4.

To demonstrate compliance with standards for a pollutant describe scenarios below that you wish the modeling section to consider for scaling results.

#### Section 6: New Mexico Toxic air pollutants – 20.2.72.400 NMAC

Modeling must be provided for any New Mexico Toxic Air Pollutant (NMTAP) with a facility-wide controlled emission rate in excess of the pound per hour emission levels specified in Tables A and B at 20.2.72.502 NMAC - Toxic Air Pollutants and Emissions. An applicant may use a stack height correction factor based on the release height of the stack for the purpose of determining whether modeling is required. See Table C - Stack Height Correction Factor at 20.2.72.502 NMAC. Divide the emission rate for each release point of a NMTAP by the correction factor for that release height and add the total values together to determine the total adjusted pound per hour emission rate for that NMTAP. If the total adjusted pound per hour emission rate is lower than the emission rate screening level found in Tables A and B, then modeling is not required.

In Table 6, below, list the total facility-wide emission rates for each New Mexico Toxic Air Pollutant emitted by the facility. The table is pre-populated with common examples. Extra rows may be added for NMTAPS not listed or for NMTAPS emitted from multiple stack heights. NMTAPS not emitted at the facility may be deleted, left blank, or noted as 0 emission rate. Toxics previously modeled may be addressed in Section 5 of this waiver form. For convenience, we have listed the stack height correction factors in Appendix 1 of this form.

Section 6 Comments. (If you are not requesting a waiver for any NMTAPs then note that here. You do not need to complete the rest of section 6 or Table 6.) <Add comments here>

#### Table 6: New Mexico Toxic Air Pollutants emitted at the facility

If requesting a waiver for any NMTAP, all NMTAPs from this facility must be listed in Table 3 regardless of if a modeling waiver is requested for that pollutant or if the pollutant emission rate is subject to the proposed permit changes.

Requested Allowable Emission Rate (pounds/hour)	Release Height (Meters)	Factor	Allowable Emission Rate Divided by Correction Factor	Emission Rate Screening Level (pounds/hour)
				1.20
				0.333
				0.555
				0.233
				0.0333
				0.0467
				0.0667
				0.0667
				0.0007
				0.333
	Allowable Emission Rate (pounds/hour)	Allowable Emission Rate (pounds/hour)	Allowable Emission Rate (pounds/hour) Allowable Emission Rate (Meters) Allowable Factor Allowable (Meters) Allowable Factor Factor Allowable Factor F	Allowable Emission Rate (pounds/hour)Release Height (Meters)Correction FactorAllowable Emission Rate Divided by Correction FactorImage: Image: Image

#### Section 7: Approval or Disapproval of Modeling Waiver

The AQB air dispersion modeler should list each pollutant for which the modeling waiver is approved, the reasons why, and any other relevant information. If not approved, this area may be used to document that decision. Form Version: 3/4/2024 Printed: 7/22/2024

Small haul road emissions from this facility, as mentioned in the comment section above, will be considered exempt for an NSR permit application.

The proposed 0.18 lb/hr increase in NO2 and 0.35 lb/hr CO emissions from 53 meters tall flare is below Small Emission Rate Threshold (Appendix 2) for project emission increases. Modeling analyses waiver is approved for the requested emissions increases for PM2.5, PM10, NO2 and CO.

#### Appendix 1: Stack Height Release Correction Factor (adapted from 20.2.72.502 NMAC)

Release Height in Meters	Correction Factor
0 to 9.9	1
10 to 19.9	5
20 to 29.9	19
30 to 39.9	41
40 to 49.9	71
50 to 59.9	108
60 to 69.9	152
70 to 79.9	202
80 to 89.9	255
90 to 99.9	317
100 to 109.9	378
110 to 119.9	451
120 to 129.9	533
130 to 139.9	617
140 to 149.9	690
150 to 159.9	781
160 to 169.9	837
170 to 179.9	902
180 to 189.9	1002
190 to 199.9	1066
200 or greater	1161

#### Appendix 2. Very small emission rate modeling waiver requirements (updated 3/4/2024 to correct feet to meters) Modeling is waived if emissions of a pollutant for the project are below the amount:

Pollutant	If all emissions come from stacks 20 meters or greater in height and there are no horizontal stacks or raincaps (Ib/hr)	If not all emissions come from stacks 20 meters or greater in height, or there are horizontal stacks, raincaps, volume, or area sources (Ib/hr)
СО	16.037	2.580
H <sub>2</sub> S (Pecos-Permian Basin)	0.114	0.015
H <sub>2</sub> S (Not in Pecos-Permian Basin)	0.022	0.003
Lead	0.005	0.001
NO <sub>2</sub>	0.189	0.024
PM2.5 – Point Sources	0.056	0.009
PM2.5 – Volume Sources		0.003
PM10 – Point Sources	0.255	0.039
PM10 – Volume Sources		0.015
SO <sub>2</sub>	0.179	0.023
Reduced sulfur (Pecos-Permian Basin)	0.033	No waiver
Reduced sulfur (Not in Pecos-Permian Basin)	No waiver	No waiver

## Section 17

### **Compliance Test History**

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

To save paper and to standardize the application format, delete this sentence and the samples in the Compliance Test History Table, and begin your submittal for this attachment on this page.

Unit No.	Test Description	Test Date
6	NMED periodic test	2/15/2023 11/29/2023 1/8/2024
7	NMED periodic test	2/14/2023 7/10/2023 1/8/2024
10	NMED periodic test	2/15/2023 5/29/2024
11	NMED periodic test	10/2/2023
28	NMED KKKK periodic test YYYY Initial compliance test	2/13/2023 10/1/2023
29	NMED periodic test	2/13/2023 1/9/2024
30	NMED periodic test	2/13/2023 1/10/2024
31a	NMED periodic test	2/14/2023 1/9/2024
32b	NMED periodic test	10/2/2023

### **Compliance Test History Table**

# **Section 20**

### **Other Relevant Information**

**Other relevant information**. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

There is no other relevant information to be provided.

### Section 22: Certification

Company Name: DCP Operating Company LP

I, <u>Stephen Ondak</u>, hereby certify that the information and data submitted in this application are true and as accurate as possible. to the best of my knowledge and professional expertise and experience.

Signed this 25 day of 50 kg 2029, upon my oath or affirmation, before a notary of the State of

Texas

Out \*Signature

Stephen Ondak Printed Name

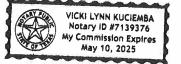
Director, Env. Projects Midstream Operations

7/25/2024

Scribed and sworn before me on this  $\frac{25}{35}$  day of  $5_{uly}$ , 202.4

My authorization as a notary of the State of \_\_\_\_\_\_

\_\_\_\_\_ expires on the



10 day of May 2025. Dickid ynn Kuuenbr Notary's Signature 7/25/24

Vicki Lynn Kuciembs

\*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.

Title

Saved Date: 7/25/2024



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