Mail Application To:		**For Department use only:**
New Mexico Environment Department Air Quality Bureau Permitting Section 1301 Siler Road, Building B Santa Fe, NM 87507-3113 Phone: (505) 476-4300 Fax: (505) 476-4375 www.nmenv.state.nm.us/aqb		AIRS No.:

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, 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 being 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: ☐ a NOI 20.2.73 NMAC ☐ 20.2.72 NMAC application/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 ☐ NPR (no fee)

☒ $500 NSR Permit Filing Fee enclosed OR ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).

☒ Check No.: 083403962 in the amount of $500 (Fee not required for Title V) ☐ This facility meets the applicable requirements to register as a Small Business and a check for 50% of the normal fee is enclosed (only applicable **provided** that NMED has a Small Business Certification Form from your company on file found at: http://www.nmenv.state.nm.us/aqb/permit/app_form.html).

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

Synthetic Minor Source Information: A source is synthetic minor if its uncontrolled emissions are above major source applicability thresholds, but the facility is minor because it has federally enforceable requirements (federal requirements or permit conditions) that limit controlled emissions below major source thresholds. Facilities can be synthetic minor for either Title V (20.2.70 NMAC) or PSD (20.2.74 NMAC) or both. The Department tracks synthetic minor sources that are within 20% of either TV or PSD major source thresholds, referring to these as Synthetic Minor 80 Sources (abbreviated SM80). Please check all that apply:
Prior to this permitting action this source is a ☐ TV major source, ☐ a TV synthetic minor source, ☐ a TV SM80 source.
Prior to this permitting action this source is a ☐ PSD major source, ☐ a PSD synthetic minor source, ☐ a PSD SM80 source.
This permitting action results in a ☐ TV synthetic minor source and/or ☐ PSD synthetic minor source.

Section 1 – Facility Information

Section 1-A: Company Information

AI #:	Updating permit #: NSR 0039-M5

1	Facility Name: Linam Ranch Gas Plant	Plant primary SIC Code (4 digits): 1321
2	Owner's name: DCP Midstream, LP	Phone/Fax: (303) 605-2029/(303) 605-1957
a	Mailing Address: 370 17th Street, Suite 2500, Denver CO 80202	
b	Plant Street Address (If no facility street address, provide directions from a prominent landmark): From Hobbs , NM travel 7 miles west on Hwy 62/180. Plant is adjacent to highway on the south.	
3	Billing Party: Pete Stevenson	Phone/Fax: 303-605-2035/ 303-726-8937
a	Mailing Address: 370 17th Street, Suite 2500, Denver CO 80202	E-mail: pfstevenson@dcpmidstream.com

4	☒ Preparer: ☒ Consultant: Jason Swofford, Trinity Consultants, Inc.	Phone/Fax: (505) 266-6611
a	Mailing Address: 8220 Louisiana Blvd. NE, Suite A, Albuquerque, NM 87109	E-mail: jswofford@trinityconsultants.com
5	Plant Operator: DCP Midstream, LP	
a	Plant Operator Address: 370 17th Street, Suite 2500 Denver, Colorado 80202	
b	Plant Operator Contact: Matthew Hendricks	Phone/Fax: 575-391-5720 / 575-391-5781
c	Address: 139 W US Highway 62-180, Hobbs, NM 88240	E-mail: mrhendricks@dcpmidstream.com
7	Air Permit Contact: Peter F. Stevenson	Title: Manager – Rockies Permitting
	E-mail: pfstevenson@dcpmidstream.com	Phone/Fax: 303-605-2035/ 303-726-8937
a	Mailing Address: 370 17th Street, Suite 2500, Denver CO 80202	

Section 1-B: Current Facility Status

1	Has this facility already been constructed? ☒ Yes ☐ No	If yes, is it currently operating in New Mexico? ☒ Yes ☐ No
2	Is the plant currently shut down? ☐ Yes ☒ No	If yes, give month and year of shut down (MM/YY):
3	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☒ Yes ☐ No	
4	If Yes, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☒Yes ☐No ☐N/A	
5	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: P094R1M1
6	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is: N/A
7	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒No	If yes, the NOI No. is: N/A
8	Does this facility have a construction permit (20.2.72 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: 039-M5
9	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the registr. No. is: N/A

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)			
a	Current	Hourly: 7.08 MMscf (actual)	Daily: 180MMscf (approximate)	Annually: 65,700 MMscf (approximate)
b	Proposed	Hourly: 9.44 MMscf	Daily: 225 MMscf	Annually: 82,125 MMscf
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 7.08 MMscf (actual)	Daily: 180MMscf (approximate)	Annually: 65,700 MMscf (approximate)
b	Proposed	Hourly: 9.44 MMscf	Daily: 225 MMscf	Annually: 82,125 MMscf

Section 1-D: Facility Location Information

1	Section: 6	Range: 37E	Township: 19S	County: Lea	Elevation (ft): 3710
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 660,740			UTM N (in meters, to nearest 10 meters): 3,618,810	

b	**AND** Latitude (deg., min., sec.): 32°41”43”	Longitude (deg., min., sec.): -103°17’7”
3	Name and zip code of nearest New Mexico town: Hobbs, NM 88240	
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Hobbs, NM, travel 7 miles west on Hwy 62/180. Plant is adjacent to highway on the south.	
5	The facility is 7 miles West of Hobbs.	
6	Status of land at facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)	
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Monument, NM (4.6 miles); Hobbs, NM (7.6 miles); Lea County, NM; Indian Tribes-None	
8	**20.2.72** NMAC applications **only**: 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 www.nmenv.state.nm.us/aqb/modeling/class1areas.html)? ☒ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: 20.6 kilometers from Texas.	
9	Name nearest Class I area: Carlsbad Caverns National Park.	
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 116,514 m	
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure:	
12	Method(s) used to delineate the Restricted Area: Fence and locking gates “**Restricted Area**” is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with 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 indentified with signage only. Public roads cannot be part of a Restricted Area.	
13	Is this a stationary portable source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No	
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?	

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

1	Facility **maximum** operating ($\frac{hours}{day}$): 24	($\frac{days}{week}$): 7	($\frac{weeks}{year}$): 52	($\frac{hours}{year}$): 8760
2	Facility’s maximum daily operating schedule (if less than 24 $\frac{hours}{day}$)? Start: N/A ☐AM ☐PM	End: N/A ☐AM ☐PM		
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than 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:		
a	If yes, NOV date or description of issue: N/A	NOV Tracking No: N/A	
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling being submitted with this application? ☒ Yes ☐ No		

3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No
a	If Yes, what type of source? ☒ **Major** (☒ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☐ **Minor** (☐ <10 tpy of any single HAP **AND** ☐ <25 tpy of any combination of HAPS)
b	If 4.a is Yes, indentify the subparts in 40 CFR 61 & 40 CFR 63 that apply to this facility (If no subparts apply, enter "N/A."): 40 CFR 63 Subpart HH; 40 CFR 63 Subpart A; 40 CFR 63 SubpYYYY; 40 CFR 63 Subpart ZZZZ; 40 CFR 63 Subpart DDDDD;

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: Title V Specific Information

(Fill this section out only if this is a Title V application.)

1	Responsible Official (20.2.70.300.D.2 NMAC): N/A	Phone:
a	R.O. Title:	R.O. e-mail:
b	R. O. Address:	
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): N/A	Phone:
a	A. R.O. Title:	A. R.O. e-mail:
b	A. R. O. Address:	
3	Company's State of Incorporation or Registration to do Business:	
4	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): N/A	
5	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): N/A	
a	Address of Parent Company: N/A	
6	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.): N/A	
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: N/A	

Section 1-I – Submittal Requirements

A 20.2.73 NMAC (NOI), a 20.2.70 NMAC (Title V), a 20.2.72 NMAC (NSR), or 20.2.74 NMAC (NSR) application package shall consist of the following:

Hard Copy Submittal Requirements:

1) One hard copy **original signed and notarized application package printed double sided 'head-to-toe' 2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. If 'head-to-toe printing' is not possible, print single sided. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process.

2) If the application is for a NSR or Title V permitting action, include one working hard **copy** for Department use. This copy does not need to be 2-hole punched. Technical revisions only need to fill out Section 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical revision. TV Minor Modifications need only fill out Section 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 on compact disk(s) (CD). **Two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below.

4) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver OR** one additional electronic copy of the air dispersion modeling including the input and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau. The complete dispersion modeling study, including all input/output files, should be submitted electronically as part of the electronic submittal.

5) If subject to PSD review under 20.2.74 NMAC (PSD) include,
   a. one additional hard copy and one additional CD copy for US EPA,
   b. one additional hard copy and one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
   c. one additional hard copy and one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

1) All required electronic documents shall be submitted in duplicate (2 separate CDs). The documents should be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text 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 with the number of additional hard copies corresponding to the number of CD copies required. We must be able to review the formulas and inputs that calculated the emissions.
2) It is preferred that this application form be submitted as 3 electronic files (2 MSWord docs: Universal Application section 1 and Universal Application section 3-19) and 1 Excel file of the tables (Universal Application section 2) on the CD(s). 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.
3) 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 # (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. The footer information should not be modified by the applicant.

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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.

Unit Number[1]	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture or Reconstruction[2] / Date of Installation /Construction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	Applicable State & Federal Regulation(s) (i.e. 20.2.X, JJJJ, …)	Replacing Unit No.
2	Amine Plant Flare East	N/A	N/A	N/A	0.9 MMBtu/hr	0.9 MMBtu/hr	2005 2005	N/A 2	31000205	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	40 CFR 60.18	N/A
4A	ESD Flare	John Zink	N/A	N/A	0.9 MMBtu/hr	0.9 MMBtu/hr	2006 2008	N/A 4A	31000209	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	40 CFR 60.18	N/A
5	SRU Incinerator	N/A	N/A	N/A	10.2 MMBtu/hr	10.2 MMBtu/hr	1974 1974 or after	N/A 5	31000209	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	40 CFR 60.18	N/A
6	RICE	Clark	TLA-6	73779	2000 HP	2000 HP	1974 or before 1974	N/A 6	20200252	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A
7	RICE	Clark	TLA-6	73780	2000 HP	2000 HP	1974 or before 1974	N/A 7	20200252	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A
8	RICE	Clark	HBA-6	36288	1267 HP	1267 HP	1951 1954	N/A 8	20200252	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A
9	RICE	Clark	HBA-6	736290	1267 HP	1267 HP	1951 1954	N/A 9	20200252	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A
10	RICE	Clark	HBA-6	36289	1267 HP	1267 HP	1951 1954	N/A 10	20200252	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A
11	RICE	Clark	HBA-6	36303	1267 HP	1267 HP	1951 1954	N/A 11	20200252	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	20.2.61 NMAC, JJJJ, ZZZZ	N/A

Note regarding Units 6-11: These units will be dual-service (inlet / residue compression). Under Scenario A, two (2) TLAs and one (1) HBA may operate at any given time and under Scenario B two (2) HBAs and one TLA (1) may operate at any given time. The current permit allows five of the six units to operate at any given time. This application a proposes net reduction of three operating units under either Scenario A or Scenario B for these six units. Scenario A and B are described in Section 15 of this application.

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.

Unit Number[1]	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture or Reconstruction[2] / Date of Installation /Construction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	Applicable State & Federal Regulation(s) (i.e. 20.2.X, JJJJ, …)	Replacing Unit No.
28	Turbine	Solar	T-60	TBD	63.43 MMBtu/hr	63.43 MMBtu/hr	TBD TBD	N/A 28	20200201	☐ Existing (unchanged) ☐ To be Removed X New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, GG	N/A
29	Turbine	Solar	T-70	TC95592	77.63 MMBtu/hr	77.63 MMBtu/hr	1995 1995	N/A 29	20200201	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, GG	N/A
30	Turbine	Solar	T-70	TC95593	73.95 MMBtu/hr	73.95 MMBtu/hr	1995 1995	N/A 30	20200201	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, GG, KKKK	N/A
31	Turbine	Solar	T-4700	DCC0050	36.8 MMBtu/hr	36.8 MMBtu/hr	1995 1995	N/A 31	20200201	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, GG	N/A
32B	Turbine	Solar	T-4000	CM79453	35.5 MMBtu/hr	36.21 MMBtu/hr	1979 1995	N/A 32B	20200201	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, GG	N/A
34	Regenerator Heater	N/A	N/A	91-2348	15 MMBtu/hr	15 MMBtu/hr	1991 1995	N/A 34	31000404	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, Dc	N/A
36	Boiler	Rentech	N/A	2005-145	99 MMBtu/hr	99 MMBtu/hr	2005 2006	N/A 36	31000404	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, Dc	N/A
37	Boiler	Rentech	N/A	2005-147	99 MMBtu/hr	99 MMBtu/hr	2005 2006	N/A 37	31000404	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	20.2.77, Dc	N/A
TK-2	Storage Tank - Gasoline	N/A	N/A	N/A	11.9 bbl	11.9 bbl	1/1/1985 Unknown	N/A TK-2	40600061	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
AGI Flare	AGI Flare	TBD	TBD	TBD	5 MMscf/d	5 MMscf/d	2008 TBD	N/A 50	31000209	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	40 CFR 60.18	N/A
AM-10	Amine Unit	N/A	N/A	N/A	225 MMscf/d	225 MMscf/d	N/A N/A	2, AGI 2, AGI Flare	31000305	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
DH-10	Glycol Dehydrator	TBD	TBD	TBD	30 MMscf/d	30 MMscf/d	TBD TBD	N/A DH-10	31000303	☐ Existing (unchanged) ☐ To be Removed X New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-VRU	Five Condensate Tanks controlled by common VRU.	N/A	N/A	N/A	750 bbl x 5	750 bbl x 5	TBD TBD	VRU TK-VRU	40400321	☐ Existing (unchanged) ☐ To be Removed X New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-VRUTMP	Two Condensate Tanks controlled by common VRU. (Previously listed as TK39,40)	N/A	N/A	N/A	1500 bbl x 2	1500 bbl x 2	1954 Unknown	VRU-TMP TK-VRUTMP	40400321	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit X To Be Modified ☐ To be Replaced	N/A	N/A

[1] Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided
[2] Specify dates required to determine regulatory applicability
[3] 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 se

Table 2-B: Insignificant Activities[1] (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.nmenv.state.nm.us/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 20.2.72.300.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.nmenv.state.nm.us/aqb/forms/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. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
TK-1	Diesel	Unknown	N/A	500	20.20.72.202.B.2	1/1/1985	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-3	Diesel	Unknown	N/A	250	20.20.72.202.B.2	1/1/1994	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-7	Detergent	Unknown	N/A	300	Not a source of regulated pollutants	1955	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-8	Solvent	Unknown	N/A	560	20.20.72.202.B.2	1955	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-9	Boiler Treatment	Unknown	N/A	500	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-10	Boiler Treatment	Optisperse	APO200	500	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-11	Boiler Treatment	Unknown	NA2460	560	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-13	Clark Engine Lube Oil	Unknown	V-505	9590	20.20.72.202.B.2	1/1/1968	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-14	Ethylene Glycol	Thor Steel	V-511a	1368	20.20.72.202.B.2	1981	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			687-1	gal		Unknown	
TK-15	Ethylene Glycol	Unknown	V-511b	1368	20.20.72.202.B.2	1981	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			10/28/3022	gal		Unknown	
TK-16	Clark Engine Lube Oil	Unknown	V-504a	410	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-17	Clark Engine Lube Oil	Unknown	V-504b	410	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-19	Lube Oil Make-up	Unknown	N9406	500	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			95-108	gal		Unknown	
TK-20	Methanol	Unknown	N/A	1130	20.20.72.202.B.5	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	

Table 2-B: Insignificant Activities[1] (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.nmenv.state.nm.us/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 20.2.72.300.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.nmenv.state.nm.us/aqb/forms/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. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
TK-21	Methanol	Unknown	N/A	660	20.20.72.202.B.5	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-22	Corrosion Inhibitor	Spectrus	BD1501	500	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-23	Corrosion Inhibitor	Dianodic	DN2478	2000	20.20.72.202.B.2	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-27	Methanol	API	Birmingham	168	20.20.72.202.B.5	1961	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TS-8540	bbl		Unknown	
TK-30	Lube Oil Make-up	Unknown	N9406	500	20.20.72.202.B.2	1995	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			95-107	gal		Unknown	
TK-32	Amine DGA	Wyatt	95-V106a	5000	Not a source of regulated pollutants	1953	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			53-412	gal		Unknown	
TK-33	DGA	Unknown	N/A	5000	Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-41	Stabilized Crude	Unknown	N/A	66960	Pressurized Vessel: Not a source of regulated pollutants	1954	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-42	Produced Water	Wyatt	N/A	49980	Not a source of regulated pollutants	1954	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			53-567	gal		Unknown	
TK-43	Produced Water	Wyatt	N/A	49980	Not a source of regulated pollutants	1957	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			53-566	gal		Unknown	
TK-44	Condensate	Unknown	N/A	42000	Pressurized Vessel: Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-45	Condensate	Unknown	N/A	42000	Pressurized Vessel: Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-46	Condensate	Unknown	N/A	42000	Pressurized Vessel: Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-47	Condensate	Unknown	N/A	42000	Pressurized Vessel: Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	

Table 2-B: Insignificant Activities[1] (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.nmenv.state.nm.us/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 20.2.72.300.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.nmenv.state.nm.us/aqb/forms/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. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
TK-48	Condensate	N/A	N/A	42000	Pressurized Vessel: Not a source of regulated pollutants	1954	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-53	Propane	Unknown	N/A	77820	Pressurized Vessel: Not a source of regulated pollutants	1993	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-54	NGL	Unknown	N/A	67200	Pressurized Vessel: Not a source of regulated pollutants	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-55	Firewater	J&J Steel	N/A	9065	Not a source of regulated pollutants	1995	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			11-481	bbl		Unknown	
TK-56	Firewater	Unknown	N/A	3500	Not a source of regulated pollutants	6/1/1981	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			W6537	bbl		Unknown	
TK-57	Firewater	Unknown	N/A	147000	Not a source of regulated pollutants	6/1/1981	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			FW-318	gal		Unknown	
TK-58	Softened Water	Unknown	N/A	21000	Not a source of regulated pollutants	1967	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-59	Water	Unknown	95-V700	500	Not a source of regulated pollutants	9/2003	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	bbl		Unknown	
TK-9A	Antifreeze (Ethylene glycol)	Unknown	N/A	1000	20.20.72.202.B.2	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-25A	Sulfuric Acid	Unknown	N/A	2000	Not a source of regulated pollutants	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-26A	Corrosion Inhibitor (Sodium Hypochlorite)	Unknown	N/A	300	Not a source of regulated pollutants	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-31A	Lube Oil	Unknown	N/A	500	20.20.72.202.B.2	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			95-109	gal		Unknown	
TK-34A	Lube Oil	Unknown	N-99406	500	20.20.72.202.B.2	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			95-206	gal		Unknown	
TK-72	Skimmer Water (10% oil)	Unknown	N/A	19000	20.20.72.202.B.2	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	

Table 2-B: Insignificant Activities[1] (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.nmenv.state.nm.us/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 20.2.72.300.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.nmenv.state.nm.us/aqb/forms/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. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
TK-73	Solvent	Stoddard	N/A	500	20.20.72.202.B.2	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-74	Soap	Unknown	N/A	305	Not a source of regulated pollutants	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-75	Soap	Unknown	N/A	305	Not a source of regulated pollutants	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-76	Slop Water	Unknown	N/A	8820	Not a source of regulated pollutants	Unknown	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gal		Unknown	
TK-77	Methanol Tank	TBD	TBD	500	20.20.72.202.B.5	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-78	Cylinder Oil Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-79	Crankcase Oil Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-80	Waste lube Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-1325	Cylinder Oil Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-1327	Crankcase Oil Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-1329	Waste lube Tank	TBD	TBD	1000	20.20.72.202.B.2	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-1370	Methanol Tank	TBD	TBD	500	20.20.72.202.B.5	TBD	X Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	
TK-2801	Turbine lube Tank	TBD	TBD	500	20.20.72.202.B.2	TBD	☐ Existing (unchanged) ☐ To be Removed X New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gal		TBD	

[1] Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

[2] 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.

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
2	Amine Plant Flare East	2005	H_2S, VOC	Amine Treating	~ 98%	Eng. Judgement
4A	ESD Flare	2008	H_2S, VOC	All Units	~ 98%	Eng. Judgement
AGI	Acid Gas Injection (AGI) Well	Dec-09	H_2S, VOC	Amine Treating	100%	Eng. Judgement
AGI Flare	AGI Flare	Dec-09	H_2S, VOC	AGI	~ 98%	Eng. Judgement
VRU	Vapor Recovery Unit (VRU)	2011	VOC	TK-VRU	95%	Eng. Judgement
VRU-TMP	Vapor Recovery Unit (VRU)	2011	VOC	TK-VRUTMP	95%	Eng. Judgement

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. For each unit with flashing, list tank-flashing emissions estimates as a separate line item (20.2.70.300.D.5 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.B.6, & 20.2.74.301 NMAC). Fill all cells in this tablewith the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed with a minimum of two significant figures[1] If there are any significant figures to the left of a decimal point, there shall be no more than one significant figure to the right of the decimal point.

Unit No.	NOx		CO		VOC		SOx		TSP[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	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
Totals																		

[1] **Significant Figures Examples:** One significant figure – 0.03, 3, 0.3. Two significant figures – 0.34, 34, 3400, 3.4

[2] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. For each unit with flashing, list tank-flashing emissions estimates as a separate line item (20.2.70.300.D.5 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.B.6, & 20.2.74.301 NMAC). Fill all cells in this tablewith the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed with a minimum of two significant figures[1]. If there are any significant figures to the left of a decimal point, there shall be no more than one significant figure to the right of the decimal point. Please do not change the column widths on this table.

Unit No.	NOx		CO		VOC		SOx		TSP[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	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	0.06	0.27	0.33	1.46	0.13	0.55	0.03	0.12	-	-	-	-	-	-	-	-	-	-
4A	0.06	0.26	0.34	1.50	0.14	0.60	0.03	0.12	-	-	-	-	-	-	-	-	-	-
6	39.29		19.84		3.05		0.01		0.86		0.86		0.86		-	-	-	-
7	39.29	566.10	19.84	283.10	3.05	60.90	0.01	0.13	0.86	10.10	0.86	10.10	0.86	10.10	-	-	-	-
8,9,10, or 11	47.49		23.52		6.45		0.01		0.57		0.57		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	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	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	0.49	2.14	-	-	-	-
31	26.03	114.01	4.95	21.60	0.35	1.53	0.13	0.55	0.24	1.06	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	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	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	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	0.84	3.68	-	-	-	-
TK-2	-	-	-	-	0.16	0.70	-	-	-	-	-	-	-	-	-	-	-	-
AGI Flare	0.01	0.06	0.11	0.49	0.00016	0.00069	0.30	1.33	-	-	-	-	-	-	-	-	-	-
AM-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-10	-	-	-	-	0.28	1.21	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRU	-	-	-	-	22.70	4.97	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRUTMP	-	-	-	-	23.2	5.08	-	-	-	-	-	-	-	-	-	-	-	-
							-	-	-	-	-	-	-	-	-	-	-	-
							-	-	-	-	-	-	-	-	-	-	-	-
Totals	215.2	956.6	115.3	511.2	43.2	98.8	2.2	9.7	6.9	30.3	6.9	30.3	6.9	30.3	-	-	-	-

[1] **Significant Figures Examples**: One significant figure – 0.03, 3, 0.3. Two significant figures – 0.34, 34, 3400, 3.4

[2] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

[3] Emissions from AM-10 are routed to the flares and incorporated in emissions for those units. The source is presented here solely to be consistent with Table 2-A

[4] Emissions from TK-VRU and TK-VRUTMP are not additive since the latter unit will be transitioned to the former unit. Emissions for each unit are caculated conservatively by assuming total throughput will be routed through one tank.

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

☐ This table is intentionally left blank as all SSM emissions at this facility do not require an increase in Requested Allowables greater than those listed in Table 2-E. If you are required to report GHG emissions as described in Section 21, include any GHG emissions due Startup, Shutdown, and/or Scheduled Maintenance in Table 2-P. Provide explanation in Section 6.

All applications, including NOI applications, must fill out this table, reporting Maximum Emissions during Startup, Shutdown and Scheduled Maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). Only report SSM emissions greater than the cooresponding Table 2-E emissions[1]. Not providing emissions for a unit indicates that SSM emissions for this unit are less than the Requested Allowables for that unit in Table 2-E. In Section 6, provide emissions calculations for any emissions listed in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions. For each unit with flashing, list tank-flashing emissions estimates as a separate line item (20.2.72.203.A.3 and 20.2.70.300.D.5 NMAC). List all units and SSM fugitives, except GHGs, in this table. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Unit No.	NOx		CO		VOC		SOx		TSP[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	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
DCP has not included SSM emissions in this application, but will provide such emissions upon request from the NMED.																		
Totals																		

[1] **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 the table below. 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.

[2] **Condensables**: Include condensable particulate matter emissions in particulate matter calculations.

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. List tank-flashing emissions estimates as a separate line item. 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.

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		TSP		PM10		PM2.5		☐ H_2S or ☐ Lead	
		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
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package.

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate (acfs)	Flow Rate (dscfs)	Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter or L x W (ft)
2	2	V	No	222	1832	131.2	-		65.6	2.00
4A	4A	V	No	175	1832	131.2	-	-	65.6	2.00
6	6	V	No	74	750	318.3	-	-	132.3	1.75
7	7	V	No	74	750	318.3	-	-	132.3	1.75
10	10	V	No	74	650	215.8	-	-	122.1	1.50
11	11	V	No	74	650	215.8	-	-	122.1	1.50
28	28	V	No	35.78	890	1787.4	-	-	154.9	3.83
29	29	V	No	44	858	1964.1	-	-	156.3	4.00
30	30	V	No	44	826	1916.4	-	-	67.8	6.00
31	31	V	No	44	817	1300.0	-	-	103.5	4.00
32B	32B	V	No	32	817	1307.7	-	-	104.1	4.00
34	34	V	No	45	600	114.1	-	-	36.3	2.00
36	36	V	No	50	300	552.2	-	-	50.0	3.75
37	37	V	No	50	300	552.2	-	-	50.0	3.75
AGI Flare	AGI Flare	V	No	210	1832	15.1	-	-	65.6	2.00

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

In the table below, report each HAP that may be emitted in excess of its de minimis level listed in the US EPA document "De Minimus Rates specified in Proposed 40 CFR Part 63, Subpart B", EPA-453/R-93-035 or de minimis levels established under subsequent rule making for 112(g). Per 20.2.72.403.A.1 NMAC, report each TAP that may be emitted in excess of its pounds per hour screening level specified in Table A or B of 20.2.72.502 NMAC. 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. Both HAPs and TAPs should be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Include tank-flashing emissions estimates of HAPs and TAPs in this table. Note that 20.2.72.402.C NMAC lists sources that are exempt from the permitting requirements of 20.2.72.400—499. 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.

Stack No.	Unit No.(s)	Total HAPs		Benzene ☒ HAP or ☐ TAP		Toluene ☒ HAP or ☐ TAP		Ethylbenzene ☒ HAP or ☐ TAP		Xylenes ☒ HAP or ☐ TAP		Formaldehyde ☒ HAP or ☐ TAP		Acetaldehyde ☒ HAP or ☐ TAP		n-Hexane ☒ HAP or ☐ TAP		Acrolein ☒ HAP or ☐ TAP		Methanaol ☒ HAP 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	lb/hr	ton/yr
2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4A	4A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	6	1.364	5.975	0.034	0.151	0.017	0.075	0.002	0.008	0.005	0.021	0.979	4.286	0.138	0.603	0.008	0.035	0.138	0.604	0.044	0.193
7	7	1.364	5.975	0.034	0.151	0.017	0.075	0.002	0.008	0.005	0.021	0.979	4.286	0.138	0.603	0.008	0.035	0.138	0.604	0.044	0.193
8,9,10, or 11	8,9,10, or 11	0.912	3.995	0.023	0.101	0.011	0.050	0.001	0.006	0.003	0.014	0.654	2.866	0.092	0.403	0.005	0.023	0.092	0.404	0.029	0.129
28	28	0.171	0.749	0.001	0.003	0.008	0.036	0.002	0.009	0.004	0.018	0.153	0.670	0.003	0.011	0.000	0.000	0.000	0.002	0.000	0.000
29	29	0.077	0.338	0.001	0.004	0.010	0.044	0.002	0.011	0.005	0.022	0.055	0.241	0.003	0.014	0.000	0.000	0.000	0.002	0.000	0.000
30	30	0.074	0.322	0.001	0.004	0.010	0.042	0.002	0.010	0.005	0.021	0.053	0.230	0.003	0.013	0.000	0.000	0.000	0.002	0.000	0.000
31	31	0.037	0.160	0.000	0.002	0.005	0.021	0.001	0.005	0.002	0.010	0.026	0.114	0.001	0.006	0.000	0.000	0.000	0.001	0.000	0.000
32B	32B	0.036	0.158	0.000	0.002	0.005	0.021	0.001	0.005	0.002	0.010	0.026	0.113	0.001	0.006	0.000	0.000	0.000	0.001	0.000	0.000
34	34	0.031	0.137	0.000	0.000	0.000	0.000	-	-	-	-	0.001	0.005	-	-	0.030	0.131	-	-	-	-
36	36	0.208	0.911	0.000	0.001	0.000	0.002	-	-	-	-	0.008	0.036	-	-	0.199	0.872	-	-	-	-
37	37	0.208	0.911	0.000	0.001	0.000	0.002	-	-	-	-	0.008	0.036	-	-	0.199	0.872	-	-	-	-
TK-2	TK-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AM-10	AM-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DH-10	DH-10	0.135	0.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRU	TK-VRU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AGI flare	AGI flare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-VRUTMP	TK-VRUTMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals:		4.62	20.22	0.10	0.42	0.08	0.37	0.01	0.06	0.03	0.14	2.94	12.88	0.38	1.66	0.45	1.97	0.37	1.62	0.12	0.51

Table 2-J: Fuel

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

Unit No.	Fuel Type (No. 2 Diesel, Natural Gas, Coal, …)	Specify Units				
		Lower Heating Value (Btu/scf)	Hourly Usage (Mscf/hr)	Annual Usage (MMscf/yr)	% Sulfur	% Ash
2	Natural Gas	900	1.63	14.2		-
4A	Natural Gas	900	1.63	14.2		-
6	Natural Gas	900	19.70	172.6		-
7	Natural Gas	900	19.70	172.6		-
8,9,10, or 11	Natural Gas	900	13.17	115.4		-
28	Natural Gas	900	70.47	617.3		-
29	Natural Gas	900	82.68	724.2		-
30	Natural Gas	900	78.75	689.8		-
31	Natural Gas	900	40.89	358.2		-
32B	Natural Gas	900	40.23	352.4		-
34	Natural Gas	900	16.67	146.0		-
36	Natural Gas	900	110.56	968.5		-
37	Natural Gas	900	110.56	968.5		-
AGI Flare	Natural Gas	900	1.63	14.2		-

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.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
TK-2	40600061	Gasoline (fuel)	Mixed C8+ hydrocarbons	5.6	62	76	9.34	92	12.45
TK-VRU1	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRU2	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRU3	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRU4	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRU5	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRUTMP1	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36
TK-VRUTMP2	40400321	Gasoline (RVP 10)	Mixed C8+ hydrocarbons	5.6	66	63	5.52	71	6.36

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	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
TK-2	Unknown	Gasoline fuel	N/A	N/A	12	1.9	1.2	0.01	WH	WH	Good	3,000	6.00
TK-VRU1	TBD	Gasoline (RVP 10)	N/A	N/A	750	119.2	4.7	3.7	WH	WH	Good	27,594,000	876
TK-VRU2	TBD	Gasoline (RVP 10)	N/A	N/A	750	119.2	4.7	3.7	WH	WH	Good		
TK-VRU3	TBD	Gasoline (RVP 10)	N/A	N/A	750	119.2	4.7	3.7	WH	WH	Good		
TK-VRU4	TBD	Gasoline (RVP 10)	N/A	N/A	750	119.2	4.7	3.7	WH	WH	Good		
TK-VRU5	TBD	Gasoline (RVP 10)	N/A	N/A	750	119.2	4.7	3.7	WH	WH	Good		
TK-VRUTMP1	Unknown	Gasoline (RVP 10)	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good	27,594,000	438
TK-VRUTMP2	Unknown	Gasoline (RVP 10)	N/A	N/A	1,500	363	3.65	0.25	WH	WH	Good		

Table 2-L2: Liquid Storage Tank Data Codes Reference Table

All 20.2.70 NMAC (Title V) applications must list all	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
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	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

Material Processed				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	225 MMscf/day	Natural gas	mixed hydrocarbons	Gas	225 MMscf/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
No CEMS at this facility.									

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
No PEM at this facility.								

Section 3

Application Summary

The **Application Summary** 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 collocated 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 effect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM): 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.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

DCP Midstream, LP (DCP) proposes to modify its Linam Ranch Gas Plant (Linam). The facility is a natural gas processing plant located in near Hobbs in Lea County New Mexico. The facility is a Title V major source and currently hold Operating Permit P094-M2 and NSR Permit 0039-M5. The proposed action requires a significant modification to the NSR permit pursuant to 20.2.72.219.D NMAC. If the proposed action is approved, Linam will remain a Title V major source.

The expansion project will provide equipment and modifications necessary to expand the Linam Ranch Plant from 175 MMSCFD to 225 MMSCFD. This includes separate subprojects to expand and upgrade the inlet receiving, amine system, inlet/residue, compression, cold plant, and electrical infrastructure.

- The bottlenecked single 12-inch header feeding the V-111A/B inlet receivers will be replaced by two 20-inch headers.
- Five vertical fixed-roof tanks with a VRU will be installed to receive the condensate.
- This project will install a new Solar T60 turbine/compressor package which will provide 75 MMSCFD of additional compression capacity. To offset the environmental emissions of the new turbine, only three (3) of the TLA's or HBA's combined will be allowed to operate at any one time (currently a maximum of 2 TLA's and 3 HBA's are permitted to run simultaneously). The T60 turbine will provide enough inlet compression capacity to allow for the remaining TLA's and HBA's (currently in inlet service) to be dual serviced to provide additional residue compression. The dual service will also provide additional reliability at the plant and the ability to absorb lost production during residue turbine troubles or PM's.
- To increase amine circulation rate in the treater, this project will install two new 300 hp, 5-stage Schlumberger REDA HP pumps with 25 hp booster pumps
- To allow for the new pump operating pressure, the lean amine filter will be replaced with a Porous Media filter rated to match the rest of the treater system pressure MAWP of 550 psig.
- This project will also re-tray the four (4) amine contactors with new moving valve trays to accommodate the higher amine circulation rate.
- To upgrade the cold plant, this project will provide a second turboexpander which will parallel the existing unit.
- This project will upgrade the already overloaded electrical system at Linam Ranch plant to allow installation of new electrical loads required for the expansion and provide overall improved reliability.

Separate O&M projects unrelated to the expansion are also included as part of this permit:

- A glycol contactor will be installed to fix the existing high moisture problem with the dehydration regen gas system.

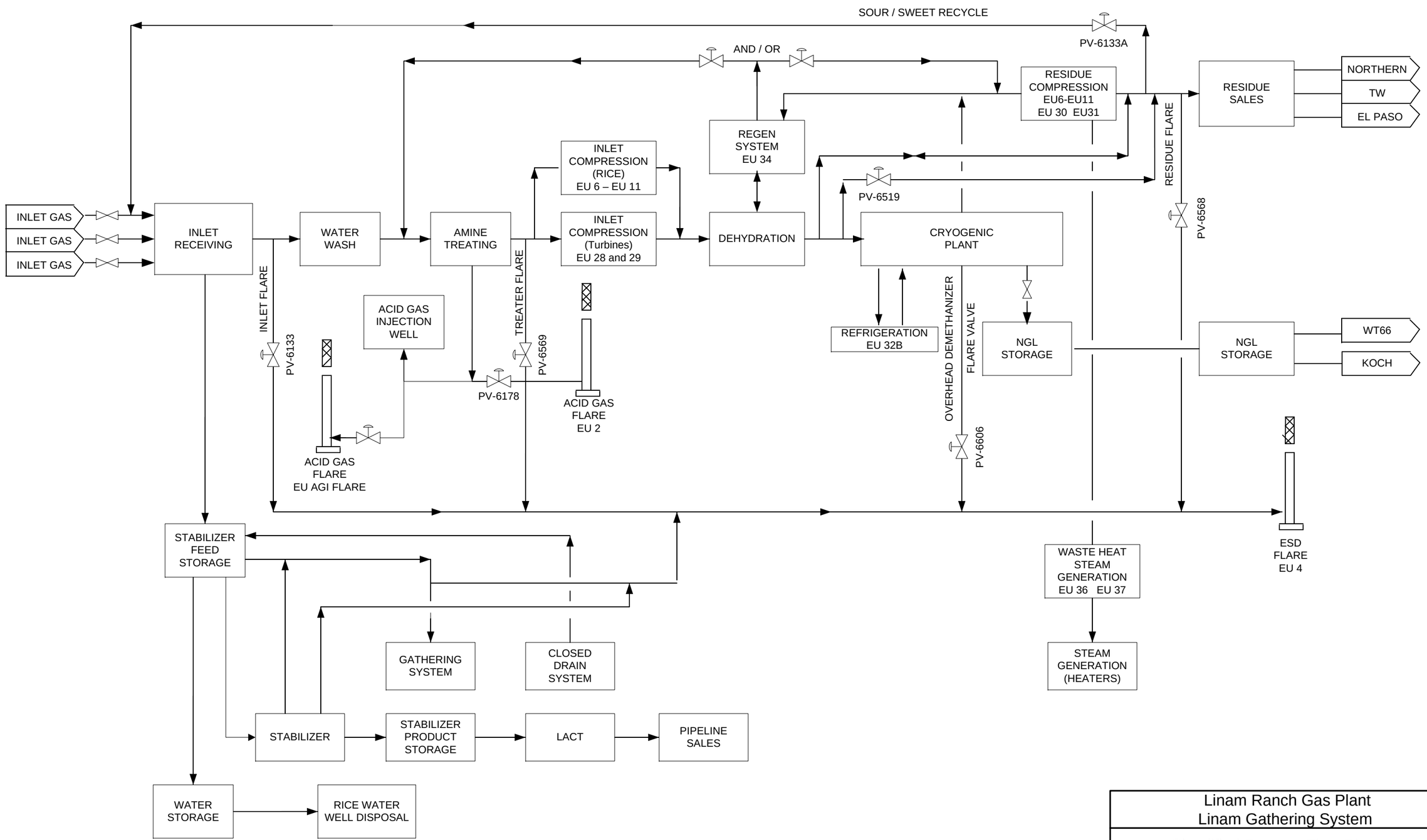
The net effect of the proposed changes is a reduction in the requested allowable emissions from the facility with the exception of a less than one (1) pound per hour increase for each of TSP, PM_{10} and $PM_{2.5}$ requested allowable emissions. The air pollutant emissions from Linam are summarized in the tables included in this application.

DCP will provide SSM emission estimates to the NMED upon request.

Section 4

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.



Linam Ranch Gas Plant
Linam Gathering System

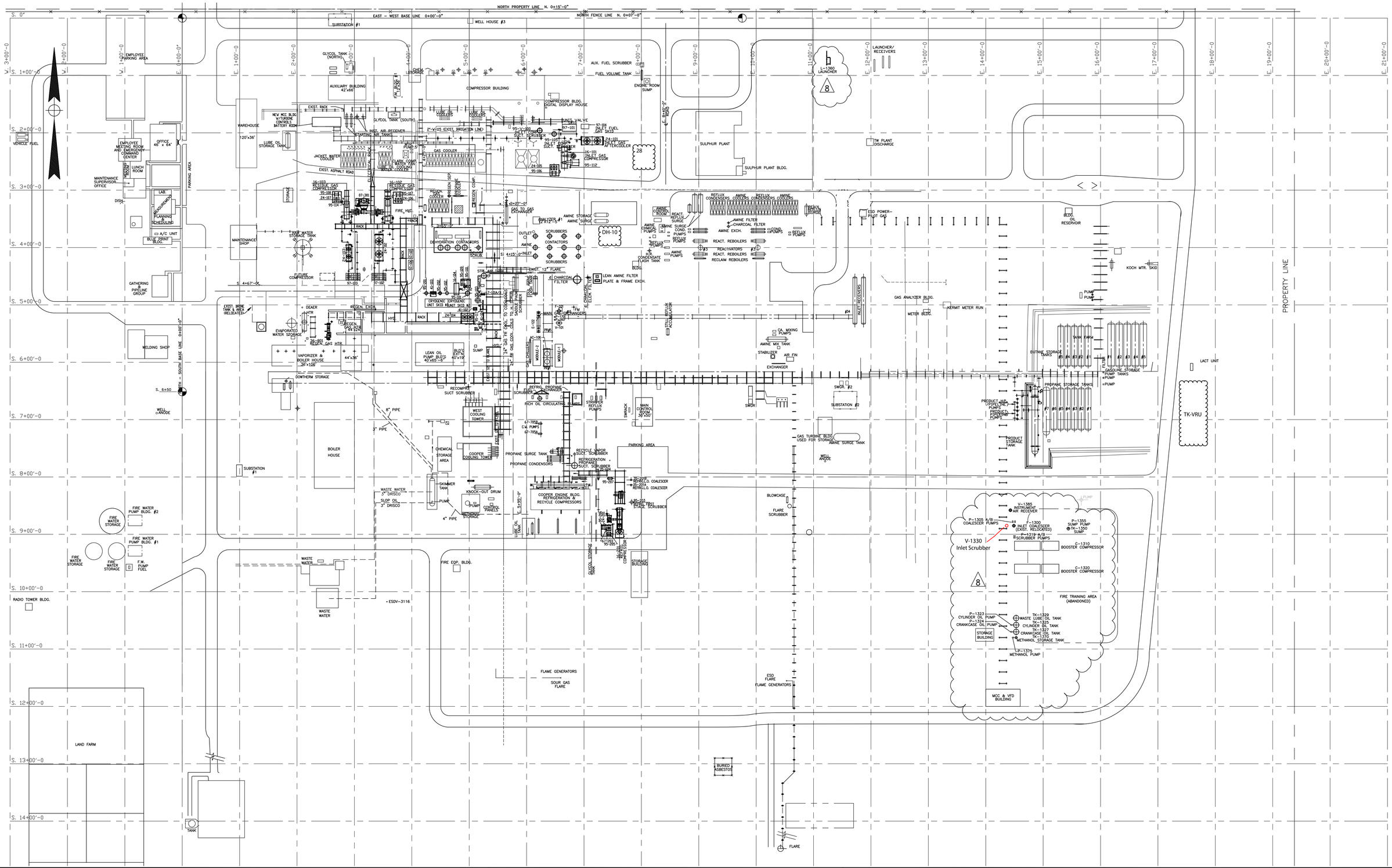
Simplified Process Flow Diagram

104402.0066
March 2011

Section 5

Plot Plan Drawn To Scale

A **plot plan drawn to scale** showing emissions points, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. The unit numbering system should be consistent throughout this application.



REV.	DATE	REVISION	BY	CHK'D	ENGR.	REV.	DATE	REVISION	BY	CHK'D	ENGR.
0	4/11/95	ISSUED FOR CONSTRUCTION	E.A. M.	D.C.		5	12/05/05	UPDATED PLOT PLAN	P.L.		
1	522/95	REVOSED MPTES 16, 19 & 27	E.A. M.	D.C.		6	07/26/06	ADDED WATER WASH EQP.	P.L.		
2	7/20/95	ADDED INLET REC.'S, REGEN COMP., PROPANE COOL	JAM			7	8/23/06	REMOVED EQUIPMENT PER FIELD MARKS	wr-t		
3	11/7/95	REMOVED GENERAL NOTES AND LEGEND	JAM			8	IN PROG	ADD AGI EQUIPMENT	MAC		
4	3/30/99	UPDATED DRAWING	JC								

NOTES:

dcp Midstream

PLOT PLAN
LINAM RANCH
GAS PLANT

LINAM RANCH PLANT — WEST PERMIAN BASIN

DRAWN: E.A. MOWERS — DATE: 9/6/94

JA NO.	FILE NAME 07307MP002
AFE NO.	SCALE 1"=80'
BASE NO.	07-3-07
DWG. NO.	MP-002 8

PLOT TIME: January 18 2008 - 12:17 pm

Section 6

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 and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation 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.

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 Table and the rational for why the others are reported as zero (or left blank in the SSM Table). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/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.

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.

Calculations for existing emission sources, for both criteria and hazardous air pollutants, remain unchanged from the previous permit application and are presented here for convenience. Calculation of emissions related to the new or revised emission sources are presented here.

Criteria and hazardous air pollutant emissions for Unit 28 are based on manufacturer's data or AP-42 emission factors as noted.

DCP will provide SSM emission calculations to the NMED upon request.

DCP Midstream Services, LP- Linam Ranch Gas Plant

Flare

Emission Unit: 2
Source Description: Amine Flare

Fuel Data

Flare Pilot

987	Btu/scf	Field gas heating value	Gas Analysis
1625	scf/hr	Fuel Usage Rate	Manufacturer's Data
14.24	MMscf/yr	Fuel Usage Rate	scf/hr*8760 / 1e6
0.900	MMBtu/hr	Flare Pilot Heat Input	Gas heat value * Fuel usage rate/1e6

Emergency Worse Case Upset

4.5	MMscf/d	Tail Gas throughput	Wet basis throughput
0.188	MMscf/hr	Gas rate during upset event	Assume entire throughput (4.5 MMscf/d /24hr)
350.0	Btu/scf	Acid Gas Heat Value	Mixture of Fuel & Acid Gas (Engineering Estimate)
65.6	MMBtu/hr	Flare Heat Input	Heat Value * blowdown rate per hour
24	hrs	length of upset period	Estimated, nominal

Total

66.5	MMBtu/hr	Total heat input	flare + pilot

Emission Rates

Flare Pilot	NOx	CO	VOC	SO2	Units	
	0.068	0.37	0.14		lb/MMBtu	AP-42 Table 13.5-1
	0.061	0.33	0.13	0.028	lb/hr	permitted
	0.268	1.459	0.552	0.120	tpy	permitted
Maintenance Flare	0.068	0.37			lb/MMBtu	AP-42 Table 13.5-1
	4.5	24.3	22.1	7582	lb/hr	
Total	4.5	24.6	22.3	7582	lb/hr	Total Emission rates (flare + flare pilot)

Stack Parameters

1000	˚C	Exhaust temperature	Per NMAQB guidelines
20	m/sec	Exhaust velocity	Per NMAQB guidelines
65.6	ft/s	Exhaust velocity	m/sec * 3.28ft/m
222.0	ft	Flare height	
39.74	lb/mol	Field gas molecular weight	See attached
4,656,750	cal/sec	Heat release (q)	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
3,247,694		q_n	$q_n = q(1-0.048(MW)^{1/2})$
1.802	m	Effective stack diameter (D)	$D = (10^{-6}q_n)^{1/2}$

Emergency Worst Case Upset Emissions (for information only; not requested allowable)

VOC Emissions:	1 atm	2.072% mol propane	187500 scf/hr	44.1 lb propane	95% destruction
	530 R	0.73 atm-scf / R - lb mol		lb mol	
	=	**22.14 lb/hr VOC**			

SO2 Emissions:	1 atm	25.000% mol H2S *	187500 scf/hr	34.06 lb H2S	
	530 R	0.73 atm-scf / R - lb mol		lb mol	
x	1.87 lb SO2 / lb H2S	98.00% conversion	=	**7582.24 lb/hr SO2**	

* Based on mass balance

H2S Emissions:	1 atm	25.000% mol H2S *	187500 scf/hr	34.06 lb H2S	2% unconverted
	530 R	0.73 atm-scf / R - lb mol		lb mol	
	=	**82.53 lb/hr H2S**			

* Based on mass balance

DEFS, LP--Linam Ranch GP

Flare Gas Heating Value

Emission Unit: 2
Source Description: Acid Gas Flare

Flow Rate: 208.0 dscfh Estimated
60.7 MBtu/hr dscfh * mixture heating value / 1000

Extended Gas Analysis meter # M0494-00
linam ranch acid gas flare

Component	MW	Dry vol%	MW * dry vol %	Btu/scf	Btu/scf * dry vol %
Water	18.02				
CO2	44.01	55.783%	24.55	0	0.00
H2S	34.08	41.138%	14.02	586.71	241.36
Nitrogen	28.01	0.747%	0.21	0	0.00
Methane	16.04	0.255%	0.04	909.1	2.32
Ethane	30.07		0.00	1617.8	0.00
Propane	44.10	2.072%	0.91	2315.9	47.99
I-Butane	58.12		0.00	3001	0.00
N-Butane	58.12		0.00	3010.5	0.00
I-Pentane	72.15		0.00	3697.9	0.00
N-Pentane	72.15	0.005%	0.00	3706.8	0.19
Cyclopentane	70.13		0.00	3512.2	0.00
N-Hexane	86.18		0.00	4403.9	0.00
Cyclohexane	84.16		0.00	4179.7	0.00
Other hexanes	86.18		0.00	4403.9	0.00
Heptanes	100.20		0.00	5100.3	0.00
Methylcyclohexane	98.19		0.00	4863.7	0.00
Benzene	78.11		0.00	3591	0.00
Toluene	92.14		0.00	4273.5	0.00
Ethylbenzene	106.17		0.00	4970.6	0.00
Xylenes	106.17		0.00	4956.2	0.00
C8+	114.23		0.00	5796.1	0.00
Total (dry)		**100%**	**39.74**		**291.85**
			(mixture mol. wt)		(mixture heating value)

mols NMHC	2.0770%
mols NMEHC	2.077%
VOC Mol fraction	
VOC Mol %	2.07700%

DCP Midstream Services, LP- Linam Ranch Gas Plant

Flare

Emission Unit: 4
Source Description: ESD Flare

Fuel Data

Flare Pilot

987	Btu/scf	Field gas heating value	Gas Analysis
1625	scf/hr	Fuel Usage Rate	Manufacturer's Data
14.24	MMscf/yr	Fuel Usage Rate	scf/hr*8760 / 1e6
0.900	MMBtu/hr	Flare Pilot Heat Input	Gas heat value * Fuel usage rate/1e6

Emergency Worse Case Upset

95.0	MMscf/d	Upset throughput	
3.958	MMscf/hr	Gas rate during upset event	Assume limted throughput over longer duration (95 MMscf/d /24hr)
1174.0	Btu/scf	Wet Gas Inlet	Gas Analysis
4647.1	MMBtu/hr	Flare Heat Input	Heat Value * blowdown rate per hour
72	hrs	length of upset period	Estimated, nominal

Total

4648.0	MMBtu/hr	Total heat input	flare + pilot

Emission Rates

Flare Pilot	NOx	CO	VOC	SO2	Units	
	0.068	0.37	0.14		lb/MMBtu	AP-42 Table 13.5-1
	0.061	0.33	0.13	0.028	lb/hr	permitted
	0.268	1.459	0.552	0.120	tpy	permitted
Maintenance Flare	0.068	0.37			lb/MMBtu	AP-42 Table 13.5-1
	316.0	1719.4	1741.9	3393.47	lb/hr	
Total	316.1	1719.8	1742.0	3393.5	lb/hr	Total Emission rates (flare + flare pilot)

Stack Parameters

1000	˚C	Exhaust temperature	Per NMAQB guidelines
20	m/sec	Exhaust velocity	Per NMAQB guidelines
65.6	ft/s	Exhaust velocity	m/sec * 3.28ft/m
175.0	ft	Flare height	
20.80	lb/mol	Field gas molecular weight	Attached
325,358,833	cal/sec	Heat release (q)	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
254,129,182		q_n	$q_n = q(1-0.048(MW)^{1/2})$
15.94	m	Effective stack diameter (D)	$D = (10^{-6}q_n)^{1/2}$

Emergency Worst Case Upset Emissions (for information only; not requested allowable)

VOC Emissions:	1 atm	7.72% mol VOC	3958333 scf/hr	44.1 lb propane	95% destruction
	530 R	0.73 atm-scf / R - lb mol		lb mol	
	=	**1741.90 lb/hr VOC**			

SO2 Emissions:	1 atm	0.53% mol H2S	3958333 scf/hr	34.06 lb H2S	
	530 R	0.73 atm-scf / R - lb mol		lb mol	
x	1.87 lb SO2 / lb H2S	98.00% conversion	=	**3393.47 lb/hr SO2**	

*From inlet analysis plus 10%

H2S Emissions:	1 atm	0.53% mol H2S	3958333 scf/hr	34.06 lb H2S	2% unconverted
	530 R	0.73 atm-scf / R - lb mol		lb mol	
	=	**36.94 lb/hr H2S**			

*From inlet analysis plus 10%

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	6	Model:	Clark TLA-6
Name 2:	Clark T1	Serial Number:	73779
Name 3:	#5TLA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Horsepower (bhp):	2000
Status:	Active	Heat Rate (MMBtu/hr):	17.73
Service Type:	Other	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	8864
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	900
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	172.55
Operating Range (%):		Potential fuel usage (Mscf/hr):	19.70

Stack Parameters

Stack Name:	6	Height (ft):	74
Stack Number:	1	Diameter (ft):	1.75
Emission Percent:	100.00%	Temperature (^{o}F):	750
Stack Angle (^{o}):	0	Flow (ACFM):	19100
Raincap:	No	Velocity (ft/s):	132.3

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	8.91	g/hp-hr	2000	8760	39.287	172.075	Other
Carbon Monoxide	4.50	g/hp-hr	2000	8760	19.842	86.907	Other
VOC	0.692	g/hp-hr	2000	8760	3.051	13.364	Other
Formaldehyde	0.0552	lb/mmBtu	2000	8760	0.979	4.286	AP42
Sulfur Dioxide	0.000588	lb/mmBtu	2000	8760	0.010	0.046	AP42
PM10	0.04831	lb/mmBtu	2000	8760	0.856	3.751	AP42

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	7	Model:	Clark TLA-6
Name 2:	Clark T2	Serial Number:	73780
Name 3:	#6TLA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Horsepower (bhp):	2000
Status:	Active	Heat Rate (MMBtu/hr):	17.73
Service Type:	Other	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	8864
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	900
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	172.55
Operating Range (%):		Potential fuel usage (Mscf/hr):	19.70

Stack Parameters

Stack Name:	7	Height (ft):	74
Stack Number:	1	Diameter (ft):	1.75
Emission Percent:	100.00%	Temperature (^{o}F):	750
Stack Angle (^{o}):	0	Flow (ACFM):	19100
Raincap:	No	Velocity (ft/s):	132.3

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	8.91	g/hp-hr	2000	8760	39.29	172.08	Other
Carbon Monoxide	4.50	g/hp-hr	2000	8760	19.84	86.91	Other
VOC	0.692	g/hp-hr	2000	8760	3.05	13.36	Other
Formaldehyde	0.0552	lb/mmBtu	2000	8760	0.98	4.29	AP42
Sulfur Dioxide	0.000588	lb/mmBtu	2000	8760	0.01	0.05	AP42
PM10	0.04831	lb/mmBtu	2000	8760	0.86	3.75	AP42

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	8	Model:	Clark HBA-6
Name 2:	Clark H1	Serial Number:	36288
Name 3:	#1HBA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DCP owned	Horsepower (bhp):	1267
Status:	Active	Heat Rate (MMBtu/hr):	11.86
Service Type:	Inlet/Wet Gas	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	9357
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	1019
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	101.92
Operating Range (%):			

Stack Parameters

Stack Name:	8	Height (ft):	75
Stack Number:	1	Diameter (ft):	1.5
Emission Percent:	100.00%	Temperature (^{o}F):	Unit
Stack Angle (^{0}):	0	Flow (ACFM):	13000
Raincap:	No	Velocity (ft/s):	122.6

Control Model

Emission Controls:

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	17	g/hp-hr	1267	8760	47.49	207.99	Manufacturer Data
Carbon Monoxide	8.42	g/hp-hr	1267	8760	23.52	103.01	Manufacturer Data
VOC	2.31	g/hp-hr	1267	8760	6.45	28.26	Manufacturer Data
Formaldehyde	0.0552	lb/mmBTU	1267	8760	0.65	2.87	AP42
PM10	0.0483	lb/mmBTU	1267	8760	0.57	2.51	AP42
Sulfur Dioxide	0.00059	lb/mmBTU	1267	8760	0.01	0.03	Manufacturer Data

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	9	Model:	Clark HBA-6
Name 2:	Clark H2	Serial Number:	736290
Name 3:	#2HBA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DCP owned	Horsepower (bhp):	1267
Status:	Active	Heat Rate (MMBtu/hr):	11.86
Service Type:	Inlet/Wet Gas	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	9357
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	1019
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	101.92
Operating Range (%):			

Stack Parameters

Stack Name:	9	Height (ft):	75
Stack Number:	1	Diameter (ft):	1.5
Emission Percent:	100.00%	Temperature (^{o}F):	650
Stack Angle (^{0}):	0	Flow (ACFM):	13000
Raincap:	No	Velocity (ft/s):	122.6

Control Model

Emission Controls:

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	17	g/hp-hr	1267	8760	47.49	207.99	Manufacturer Data
Carbon Monoxide	8.42	g/hp-hr	1267	8760	23.52	103.01	Manufacturer Data
VOC	2.31	g/hp-hr	1267	8760	6.45	28.26	Manufacturer Data
Formaldehyde	0.0552	lb/mmBTU	1267	8760	0.65	2.87	AP42
PM10	0.0483	lb/mmBTU	1267	8760	0.57	2.51	AP42
Sulfur Dioxide	0.00059	lb/mmBTU	1267	8760	0.01	0.03	Manufacturer Data

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	10	Model:	Clark HBA-6
Name 2:	Clark H3	Serial Number:	36289
Name 3:	#3HBA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Horsepower (bhp):	1267
Status:	Active	Heat Rate (MMBtu/hr):	11.86
Service Type:	Other	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	9357
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	900
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	115.39
Operating Range (%):		Potential fuel usage (Mscf/hr):	13.17

Stack Parameters

Stack Name:	10	Height (ft):	74
Stack Number:	1	Diameter (ft):	1.5
Emission Percent:	100.00%	Temperature (^{o}F):	650
Stack Angle (^{o}):	0	Flow (ACFM):	12950
Raincap:	No	Velocity (ft/s):	122.1

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	17	g/hp-hr	1267	8760	47.49	208.0	Other
Carbon Monoxide	8.42	g/hp-hr	1267	8760	23.52	103.00	Other
VOC	2.31	g/hp-hr	1267	8760	6.45	28.26	Other
Formaldehyde	0.0552	lb/mmBtu	1267	8760	0.65	2.8663	AP42
Sulfur Dioxide	0.000588	lb/mmBtu	1267	8760	0.01	0.03	AP42
PM10	0.04831	lb/mmBtu	1267	8760	0.57	2.51	AP42

Emissions Calculation: ENGINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	11	Model:	Clark HBA-6
Name 2:	Clark H4	Serial Number:	36303
Name 3:	#4HBA	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Horsepower (bhp):	1267
Status:	Active	Heat Rate (MMBtu/hr):	11.86
Service Type:	Other	Rotations per Minute (rpm):	300
Configuration:	2-Cycle, Lean Burn	Fuel Consumption (btu/hp-hr):	9357
Fuel Type:	Residue	Fuel Heat Value (btu/scf):	900
Oil Type:	Unknown	Oil Usage (gal/month):	30
Compression Ratio:		Cylinders:	
Ignition Timing:		Potential fuel usage (MMscf/yr):	115.39
Operating Range (%):		Potential fuel usage (Mscf/hr):	13.17

Stack Parameters

Stack Name:	11	Height (ft):	74
Stack Number:	1	Diameter (ft):	1.5
Emission Percent:	100.00%	Temperature (^{o}F):	650
Stack Angle (^{o}):	0	Flow (ACFM):	12950
Raincap:	No	Velocity (ft/s):	122.1

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	17	g/hp-hr	1267	8760	47.49	207.99	Other
Carbon Monoxide	8.42	g/hp-hr	1267	8760	23.52	103.01	Other
VOC	2.31	g/hp-hr	1267	8760	6.45	28.26	Other
Formaldehyde	0.0552	lb/mmBtu	1267	8760	0.65	2.87	AP42
Sulfur Dioxide	0.000588	lb/mmBtu	1267	8760	0.01	0.03	AP42
PM10	0.04831	lb/mmBtu	1267	8760	0.57	2.51	AP42

Turbine

Emission Unit:	28
Source Description:	Natural gas fueled turbine
Manufacturer:	Solar
Model:	T60-7800S

Fuel heat value	900	Btu/scf	Nominal heat content of fuel gas
Heat rate	57.66	MMbtu/hr	Manufacturer's data (LHV)
	63.43	MMbtu/hr	Manufacturer's data (HHV)
Fuel consumption:	64.1	Mscf/hr	Manufacturer's heat rate / fuel heat value
Annual fuel usage:	561.2	MMscf/yr	Manufacturer's heat rate / fuel heat value * 8760 hrs

Emission Calculations

Uncontrolled Emissions

NOx	CO	VOC[1]	SO_2[2]	PM		
3.47	3.52	2.01			lb/hr	Mfg Data; full load @ 0 degrees F
			0.915		lb/hr	Note 1
				0.021	lb/MMBtu	Mfg recommended emission factor (HHV basis)
3.470	3.520	2.014	0.915	1.332	lb/hr	Hourly emission rate
15.199	15.418	8.821	4.007	5.834	tpy	Annual emission rate (8760 hrs/yr)

Notes

[1] VOC emissions set equal to unburned hydrocarbon (UHC) emissions

[2] SO_2 emissions based on fuel sulfur content of 50 gr S/Mscf, or 0.00714 lb S/Mscf
0.007146 lb S/Mscf * fuel consumption (Mscf/hr) * 64 lb SO_2/32 lb S = lb/hr SO_2

Exhaust Parameters

Exhaust temp (Tstk):	890	°F	Manufacturer data
Stack height:	35.78	ft	Design
Stack diameter:	3.83	ft	Design
Exhaust flow:	163,305	lb/hr	Manufacturer data
	28.58	MW; nominal exhaust for natural gas combustion	
	3647	ft MSL	Site Elevation
	12.86	psia	Pressure at Elevation
	1787.4	acfs; Ideal gas law, nominal MW and stack	
Exhaust velocity:	154.9	ft/sec	Exhaust flow ÷ stack area

Emissions Calculation: TURBINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	29	Model:	Solar Taurus 70-10302S
Name 2:	Turbine 1	Serial Number:	0021B
Name 3:	Inlet	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Turbine HP (hp):	10702
Status:	Active	Fuel Heat Value (btu/scf):	939
Fuel Type:	Other	Heat Rate (MMBtu/hr):	77.63
Service Type:	Other	Oil Usage (gal/month):	30
Cycle Type:	Other		
Oil Type:	Unknown	Potential fuel usage (MMscf/yr)	724.24
		Potential fuel usage (Mscf/hr):	82.68
		Heat Rate (BTU/bhp-hr)	7254

Stack Parameters

Stack Name:	29	Height (ft):	44
Stack Number:	1	Diameter (ft):	4
Emission Percent:	100.00%	Temperature (^{o}F):	858
Stack Angle (^{o}):	0	Flow (ACFM):	117844
Raincap:	No	Velocity (ft/s):	156.3
		Exh Flow (lbm/hr):	216169

Control Model 119609.8833 (ACFM=lb/hr*(T+460)/2382)

Emission Controls:

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	11.82	lb/hr	10702	8760	11.823	51.785	Manufacturer Data
Carbon Monoxide	9.47	lb/hr	10702	8760	9.470	41.479	Manufacturer Data
VOC	0.33	lb/hr	10702	8760	0.325	1.424	Manufacturer Data
Formaldehyde	0.00071	lb/mmBtu	10702	8760	0.055	0.241	AP42
Sulfur Dioxide	0.0034	lb/mmBtu	10702	8760	0.264	1.156	AP42
PM10	0.0066	lb/mmBtu	10702	8760	0.512	2.244	AP42

Emissions Calculation: TURBINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	30	Model:	Solar Taurus 70-9702S
Name 2:	Solar Taurus 70	Serial Number:	0146B
Name 3:	Residue	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Turbine HP (hp):	9990
Status:	Active	Fuel Heat Value (btu/scf):	939
Fuel Type:	Other	Heat Rate (MMBtu/hr):	73.95
Service Type:	Other	Oil Usage (gal/month):	30
Cycle Type:	Other		
Oil Type:	Unknown	Potential fuel usage (MMscf/yr)	689.85
		Potential fuel usage (Mscf/hr):	78.75
		Heat Rate (BTU/bhp-hr)	7402

Stack Parameters

Stack Name:	30	Height (ft):	44
Stack Number:	1	Diameter (ft):	6
Emission Percent:	100.00%	Temperature (^{o}F):	826
Stack Angle (^{o}):	0	Flow (ACFM):	114983
Raincap:	No	Velocity (ft/s):	67.8
		Exh Flow (lbm/hr):	216169

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	11.26	lb/hr	9990	8760	11.3	49.32	Manufacturer Data
Carbon Monoxide	9.02	lb/hr	9990	8760	9.02	39.51	Manufacturer Data
VOC	0.31	lb/hr	9990	8760	0.31	1.36	Manufacturer Data
Formaldehyde	0.00071	lb/mmBtu	9990	8760	0.05	0.23	AP42
Sulfur Dioxide	0.0034	lb/mmBtu	9990	8760	0.25	1.10	AP42
PM10	0.0066	lb/mmBtu	9990	8760	0.49	2.14	AP42

Emissions Calculation: TURBINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	31	Model:	Solar Centaur T-4700
Name 2:	Turbine 2	Serial Number:	OHK06-C0131
Name 3:	#2 Res	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Turbine HP (hp):	3915
Status:	Active	Fuel Heat Value (btu/scf):	900
Fuel Type:	Residue	Heat Rate (MMBtu/hr):	36.8
Service Type:	Residue	Oil Usage (gal/month):	30
Cycle Type:	Other		
Oil Type:	Unknown	Potential fuel usage (MMscf/yr)	358.2
		Potential fuel usage (Mscf/hr):	40.9
		Heat Rate (BTU/bhp-hr)	9400

Stack Parameters

Stack Name:	31	Height (ft):	44
Stack Number:	1	Diameter (ft):	4
Emission Percent:	100.00%	Temperature (^{o}F):	817
Stack Angle (^{o}):	0	Flow (ACFM):	78000
Raincap:	No	Velocity (ft/s):	103.5

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	26.0	lb/hr	3915	8760	26.030	114.011	Manufacturer Data
Carbon Monoxide	5.0	lb/hr	3915	8760	4.950	21.600	Manufacturer Data
VOC	0.4	lb/hr	3915	8760	0.350	1.533	Manufacturer Data
Formaldehyde	0.00071	lb/mmBtu	3915	8760	0.026	0.114	AP42
Sulfur Dioxide	0.0034	lb/mmBtu	3915	8760	0.125	0.548	AP42
PM10	0.0066	lb/mmBtu	3915	8760	0.243	1.064	AP42

Emissions Calculation: TURBINE

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	32B	Model:	Solar Centaur T-4000
Name 2:	Turbine 4	Serial Number:	4678C
Name 3:	Refrig	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Turbine HP (hp):	3684
Status:	Active	Fuel Heat Value (btu/scf):	900
Fuel Type:	Other	Heat Rate (MMBtu/hr):	36.21
Service Type:	Other	Oil Usage (gal/month):	30
Cycle Type:	Other		
Oil Type:	Unknown	Potential fuel usage (MMscf/yr)	352.44
		Potential fuel usage (Mscf/hr):	40.23
		Heat Rate (BTU/bhp-hr)	9829

Stack Parameters

Stack Name:		Height (ft):	32
Stack Number:		Diameter (ft):	4
Emission Percent:		Temperature (^{o}F):	817
Stack Angle (^{o}):		Flow (ACFM):	78464
Raincap:		Velocity (ft/s):	104.1
		Exh Flow (lbm/hr):	116568

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(hp)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	0.655	lb/mmBtu	3684	8760	23.718	103.883	Manufacturer Data
Carbon Monoxide	0.121	lb/mmBtu	3684	8760	4.381	19.191	Manufacturer Data
VOC	0.069	lb/mmBtu	3684	8760	2.498	10.943	Manufacturer Data
Formaldehyde	0.00071	lb/mmBtu	3684	8760	0.026	0.113	AP42
Sulfur Dioxide	0.0034	lb/mmBtu	3684	8760	0.123	0.539	AP42
PM10	0.0066	lb/mmBtu	3684	8760	0.239	1.047	AP42

Emissions Calculation: HEATER/BOILER/REBOILER

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	34	Model:	Other External Combustion Device
Name 2:	Furnace B	Serial Number:	91-2348
Name 3:	Regen	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Heat Input Fuel (mmbtu/hr):	15
Status:	Active	Fuel Heat Value (btu/scf):	900.00
Ext. Comb.Type:	Heaters	Heat Input Wste (mmbtu/hr):	
Fuel Type:	Residue	Waste heat Value (btu/scf):	
Equipment Usage:			
Configuration:			
		Potential fuel usage (MMscf/yr):	146.00
		Potential fuel usage (Mscf/hr):	16.67

Stack Parameters

Stack Name:	34	Height (ft):	45
Stack Number:	1	Diameter (ft):	2
Emission Percent:	100.00%	Temperature (^{o}F):	600
Stack Angle (^{o}):	0	Flow (ACFM):	6843
Raincap:	No	Velocity (ft/s):	36.3

Emission Controls: **Control Model**

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(MMBtu/hr)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	100	lb/MMscf	15	8760	1.667	7.300	AP42
Carbon Monoxide	84	lb/MMscf	15	8760	1.400	6.132	AP42
VOC	5.5	lb/MMscf	15	8760	0.092	0.402	AP42
PM10	7.6	lb/MMscf	15	8760	0.127	0.555	AP42
Sulfur Dioxide	0.6	lb/MMscf	15	8760	0.010	0.044	AP42

Emissions Calculation: HEATER/BOILER/REBOILER

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	36	Model:	Other External Combustion Device
Name 2:	Boiler 36	Serial Number:	
Name 3:	Boiler	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Heat Input Fuel (mmbtu/hr):	99.5
Status:	Active	Fuel Heat Value (btu/scf):	900.00
Ext. Comb.Type:	Heaters	Heat Input Wste (mmbtu/hr):	
Fuel Type:	Residue	Waste heat Value (btu/scf):	
Equipment Usage:			
Configuration:			
		Potential fuel usage (MMscf/yr):	968.47
		Potential fuel usage (Mscf/hr):	110.56

Stack Parameters

Stack Name:	36	Height (ft):	50
Stack Number:	36	Diameter (ft):	3.75
Emission Percent:	100.00%	Temperature (^{o}F):	300
Stack Angle (^{o}):	0	Velocity (ft/s):	50
Raincap:	No	Flow (ACFM):	33134.0

	Control Model
Emission Controls:	Low-NOx Burners: Other Control

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(MMBtu/hr)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	50	lb/MMscf	99.5	8760	5.528	24.212	AP42
Carbon Monoxide	84	lb/MMscf	99.5	8760	9.287	40.676	AP42
VOC	5.5	lb/MMscf	99.5	8760	0.608	2.663	AP42
PM10	7.6	lb/MMscf	99.5	8760	0.840	3.680	AP42
Sulfur Dioxide	0.6	lb/MMscf	99.5	8760	0.066	0.291	AP42

Emissions Calculation: HEATER/BOILER/REBOILER

Facility ID: 54 **Facility:** Linam Ranch Gas Plant

Equipment Information

Source ID Number:	37	Model:	Other External Combustion Device
Name 2:	Boiler 37	Serial Number:	
Name 3:	Boiler	Service Date:	
Coordinates:	Latitude/Longitude	Manufacture Date:	
Latitude:		Permit Status:	
Longitude:		SCC:	

Ownership:	DEFS owned	Heat Input Fuel (mmbtu/hr):	99.5
Status:	Active	Fuel Heat Value (btu/scf):	900.00
Ext. Comb.Type:	Heaters	Heat Input Wste (mmbtu/hr):	
Fuel Type:	Residue	Waste heat Value (btu/scf):	
Equipment Usage:			
Configuration:			
		Potential fuel usage (MMscf/yr):	968.47
		Potential fuel usage (Mscf/hr):	110.56

Stack Parameters

Stack Name:	37	Height (ft):	50
Stack Number:	37	Diameter (ft):	3.75
Emission Percent:	100.00%	Temperature (^{o}F):	300
Stack Angle (^{o}):	0	Velocity (ft/s):	50
Raincap:	No	Flow (ACFM):	33134.0

	Control Model
Emission Controls:	Low-NOx Burners: Other Control

Potential operation: 8760 hr/yr

Potential Emissions

Pollutant	Emission Factor		Nominal Rating	Hrs of Operation	Estimated Emissions		Source of Emission Factor
	EF	Units	(MMBtu/hr)	(hrs/yr)	(lb/hr)	(tpy)	
Nitrogen Oxides	50	lb/MMscf	99.5	8760	5.53	24.21	AP42
Carbon Monoxide	84	lb/MMscf	99.5	8760	9.29	40.68	AP42
VOC	5.5	lb/MMscf	99.5	8760	0.61	2.66	AP42
PM10	7.6	lb/MMscf	99.5	8760	0.84	3.68	AP42
Sulfur Dioxide	0.6	lb/MMscf	99.5	8760	0.07	0.29	AP42

Gasoline Tank

Emission units:	TK-2
Source Description:	500 gallon horizontal gasoline tank

General Tank Information

Volume	500	gallon	
Length (shell)	5.25	ft	
Diameter	4	ft	
Throughput	250	gal/mo	
Throughput	3000	gal/yr	bbl/mo * 12 mo/yr
Turnovers	5.0	turnovers/yr	bbl/yr / Volume
Turnovers	6.0	maximum turnovers/yr	Turnovers x 1.2 (per 40 CFR 63.760 (subpart HH)
Throughput	8.2	maximum gal/day	Maximum turnovers * Volume / 365 days/year

VOC Emissions

	VOCs		
	1399.0	lb/yr	TANKS 4.09 d
	0.70	tpy	tpy = lb/hr x [(8760hr/yr) / (2000lb/ton)])
	N/A	tpy	No flashing losses from this tank at atmospheric conditions
Total VOCs	0.70	tpy	Working and Breathing + Flash
	0.16	lb/hr	tpy * 2000 lb/ton / 8760 hrs/yr

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Linam Ranch TK-2
City:	Near Hobbs
State:	New Mexico
Company:	DCP Midstream, LP
Type of Tank:	Horizontal Tank
Description:	500 gallon gasoline tank

Tank Dimensions

Shell Length (ft):		5.25
Diameter (ft):		4.00
Volume (gallons):		500.00
Turnovers:		6.00
Net Throughput(gal/yr):		3,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	Red/Primer
Shell Condition	Poor

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Roswell, New Mexico (Avg Atmospheric Pressure = 12.73 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Linam Ranch TK-2 - Horizontal Tank
Near Hobbs, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	76.33	59.43	93.23	65.28	9.3367	6.8731	12.4481	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3
1,2,4-Trimethylbenzene						0.0383	0.0200	0.0699	120.1900	0.0250	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
Benzene						1.8062	1.1494	2.7453	78.1100	0.0180	0.0052	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.8549	1.1927	2.7929	84.1600	0.0024	0.0007	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1875	0.1064	0.3165	106.1700	0.0140	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.8812	1.8851	4.2700	86.1700	0.0100	0.0046	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isooctane						0.9898	0.5689	1.5043	114.2200	0.0400	0.0063	114.22	Option 1: VP70 = .812 VP80 = 1.093
Isopropyl benzene						0.0920	0.0500	0.1614	120.2000	0.0050	0.0001	120.20	Option 2: A=6.963, B=1460.793, C=207.78
Toluene						0.5386	0.3243	0.8617	92.1300	0.0700	0.0060	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						11.9594	11.8441	11.8481	61.4715	0.7456	0.9749	89.36	
Xylene (-m)						0.1570	0.0886	0.2665	106.1700	0.0700	0.0017	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Linam Ranch TK-2 - Horizontal Tank
Near Hobbs, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	1,358.4042
Vapor Space Volume (cu ft):	42.0213
Vapor Density (lb/cu ft):	0.1006
Vapor Space Expansion Factor:	1.7509
Vented Vapor Saturation Factor:	0.5026
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	42.0213
Tank Diameter (ft):	4.0000
Effective Diameter (ft):	5.1722
Vapor Space Outage (ft):	2.0000
Tank Shell Length (ft):	5.2500
Vapor Density	
Vapor Density (lb/cu ft):	0.1006
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	9.3367
Daily Avg. Liquid Surface Temp. (deg. R):	535.9964
Daily Average Ambient Temp. (deg. F):	60.8167
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	524.9467
Tank Paint Solar Absorptance (Shell):	0.9100
Daily Total Solar Insulation Factor (Btu/sqft day):	1,810.0000
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	1.7509
Daily Vapor Temperature Range (deg. R):	67.5988
Daily Vapor Pressure Range (psia):	5.5751
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	9.3367
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.8731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	12.4481
Daily Avg. Liquid Surface Temp. (deg R):	535.9964
Daily Min. Liquid Surface Temp. (deg R):	519.0967
Daily Max. Liquid Surface Temp. (deg R):	552.8961
Daily Ambient Temp. Range (deg. R):	29.8333
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.5026
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	9.3367
Vapor Space Outage (ft):	2.0000
Working Losses (lb):	41.3484
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	9.3367
Annual Net Throughput (gal/yr.):	3,000.0000
Annual Turnovers:	6.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	4.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	1,399.7525

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Linam Ranch TK-2 - Horizontal Tank
Near Hobbs, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	41.35	1,358.40	1,399.75
Hexane (-n)	0.19	6.22	6.41
Benzene	0.21	7.02	7.23
Isooctane	0.26	8.55	8.81
Toluene	0.25	8.14	8.39
Ethylbenzene	0.02	0.57	0.58
Xylene (-m)	0.07	2.37	2.44
Isopropyl benzene	0.00	0.10	0.10
1,2,4-Trimethylbenzene	0.01	0.21	0.21
Cyclohexane	0.03	0.96	0.99
Unidentified Components	40.31	1,324.27	1,364.58

DCP-Linam Ranch

AGI Flare

Emission Unit: AGI flare
Source Description: normal

Flow Rate:

0.171	Mscf/d	MMscf/d * 1000
0.007	Mscf/hr	Mcf/d / 24
0.001	MMBtu/hr	scfh * mixture heating value / 1000

normal high H2S

Component	MW	Wet vol/mol%	Dry vol/mol%	MW * dry vol %	LHV Btu/scf	Btu/scf * dry vol %	Mass Fraction (dry)	Spec. Volume ft^3/lb	Spec. Volume VOC ft^3/lb
Water	18.02	1.13%						21.06	
Nitrogen	28.01	0.06%	0.06%	0.017	0	0.00	0.04%	13.547	
CO_2	44.01	73.60%	73.78%	32.470	0	0.00	78.95%	8.623	
H_2S	34.08	25.00%	25.06%	8.541	586.71	147.03	20.77%	11.136	
Methane	16.04	0.35%	0.35%	0.056	909.1	3.19	0.14%	23.65	
Ethane	30.07	0.04%	0.04%	0.012	1617.8	0.65	0.03%	12.62	
Propane	44.10	0.02%	0.02%	0.010	2315.9	0.51	0.02%	8.606	0.267
I-Butane	58.12	0.60%	0.00%	0.000	3001	0.02	0.00%	6.529	5.526
N-Butane	58.12	0.01%	0.01%	0.003	3010.5	0.18	0.01%	6.529	0.055
I-Pentane	72.15	0.00%	0.00%	0.000	3697.9	0.01	0.00%	5.26	0.001
N-Pentane	72.15	0.00%	0.00%	0.001	3706.8	0.07	0.00%	5.26	0.015
Hexanes	86.18	0.00%	0.00%	0.000	4403.9	0.02	0.00%	4.404	0.003
Benzene	78.11	0.05%	0.01%	0.004	3591	0.19	0.01%	4.858	0.343
Toluene	92.14	0.02%	0.00%	0.000	4273.5	0.01	0.00%	4.119	0.116
Ethylbenzene	106.17	0.00%	0.00%	0.003	4970.6	0.15	0.01%	3.574	0.015
Xylenes	106.17	0.00%	0.00%	0.000	4957	0.01	0.00%	3.574	0.001
C7+	100.21	0.01%	0.01%	0.005	5796.1	0.29	0.01%	3.787	0.027
Total		101%	99%	41.12		152.34	100%		6.369
Dry total		100%		*(mixture mol. wt)*		*(mixture heating value)*			
	NMHC	*0.75%*							
	NMEHC (VOC)	*0.71%*					0.07%		

DCP-Linam Ranch

AGI Flare Emissions

Emission Unit: AGI flare
Source Description: normal

Fuel Data

Flare Pilot

100	scf/hr	Engineering Estimate	
0.1	Mscf/hr		
1000	Btu/scf	nominal	
100.0	MBtu/hr	Pilot heat input	Btu/scf * dscf/hr / 1000
0.10	MMBtu/hr		MBtu/hr / 1000

Assist Gas

152.34	Btu/scf	Higher calorific value of gas
200	Btu/scf	target heat content
1000	Btu/scf	Assist gas-assumed sweet
0.0004	Mscf/hr	Assist gas volume
0.42	MBtu/hr	Assist gas heat input
0.0004	MMBtu/hr	

Flaring

7	scf/hr	(dry) volumetric throughput
0.001	MMBtu/hr	Total hourly plant throughput (dry)

Total

0.1	MMBtu/hr	Pilot + Flare + Assist

Emission Rates

Normal (Pilot Only)

NOx	CO	VOC	H_2S	SO_2	Total HAPS[1]	Units	
0.0641	0.5496					lb/MMBtu	TNRCC RG-109
			3.57E-04			lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
			3.57E-05			lb H_2S/hr	H_2S rate * fuel usage
				7.14E-03		lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				1.43E-03		lb SO_2/hr*	SO_2 rate * fuel usage
		0.00%				mol%	Assume no VOC content in purchased fuel (methane)
		23.7				ft^3/lb	specific volume
		0.00				lb/hr	vol. Gas * mole fraction / specific volume
0.01	**0.05**					lb/hr	lb/MMBtu * MMBtu/hr
		0.000	**7.14E-07**	**1.50E-03**		lb/hr	98% combustion H_2S; 100% conversion to SO_2
0.03	**0.2**	**0.000**	**3.13E-06**	**6.55E-03**	**<0.01**	tpy	8760 hrs/yr

[1] HAP emissions with pilot only are assumed to be neglible.

DCP-Linam Ranch

AGI Flare Stack Parameters

Emission Unit: AGI flare
Source Description: normal
*Flaring Operations**

NOx	CO	VOC	H_2S	SO_2	ormaldehyd	Benzene	Toluene	Total HAPs	Units	
0.0641	0.5496				**0.00028**				lb/MMBtu	TNRCC RG-109; GRI-HAPCalc
		0.71%	25.06%			0.01%	0.0003%		mol%	Flare Gas (assume no VOC content in purchased fuel)
		6.4	11.136			4.858	4.119		ft^3/lb	specific volume
		0.01	0.2			0.0001	0.000004		lb/hr	vol. Gas * mole fraction / specific volume
0.01	**0.06**				**0.00003**				lb/hr	lb/MMBtu * MMBtu/hr
		0.00	**0.003**	**0.30**		**1.58E-06**	**8.93E-08**		lb/hr	98% combustion H_2S and VOC; 100% conversion to SO_2
0.01	0.05	**0.00**	**7.14E-07**	**1.50E-03**	**0.00**	**0.00**	**0.00**		lb/hr	Pilot Gas (from abve)
0.01	**0.11**	**0.00**	**0.00**	**0.30**	**2.84E-05**	**1.58E-06**	**8.93E-08**	**3.01E-05**	lb/hr	Pilot, Flare, and Assist Gas
0.06	**0.49**	**0.00**	**0.01**	**1.33**	**1.24E-04**	**6.90E-06**	**3.91E-07**	**1.32E-04**	tpy	lb/hr * 8760

NOTES: *Pilot, Flare and Assist Gas

Stack Parameters

1000	˚C	Exhaust temperature	Per NMAQB guidelines
20	m/sec	Exhaust velocity	Per NMAQB guidelines
210	ft	Flare height	Estimated

Normal

16.04	g/mol	Fuel gas molecular weight	Mol. wt. of methane, the dominant species
7,000	cal/sec	Heat release (q)	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
5,654		q_n	$q_n = q(1-0.048(MW)^{1/2})$
0.08	m	Effective stack diameter (D)	$D = (10^{-6}q_n)^{1/2}$

Flaring

41.12	g/mol	Fuel gas molecular weight	Mol. wt. of inlet gas
7,106	cal/sec	Heat release (q)	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
4,918		q_n	$q_n = q(1-0.048(MW)^{1/2})$
0.070	m	Effective stack diameter (D)	$D = (10^{-6}q_n)^{1/2}$

Dehy Emissions Summary

	Flash Tank to Gathering (lb/hr)	Regenerator Vent to Atm (lb/hr)	50% contingency Total Dehy to Atm (lb/hr)	50% contingency Total Dehy to Atm (tpy)
VOC (lb/hr)	0.002	0.184	0.28	1.21
GHG (lb/hr)	0.717	0.093	0.14	0.61
BTEX (lb/hr)	0.001	0.090	0.14	0.59
Total HAP (lb/hr)	0.001	0.090	0.14	0.59

Dehy Process Simulation Model Output

Linam Ranch Regeneration Gas TEG Dehydration Skid
Flow Rates and Compositions of Vapor Streams to the Flare, LP Gathering System or Atmosphere
Basis: Regeneration Gas Composition 7224 dated November 10, 2010

			Flash Drum to Gathering	Flash Drum to Gathering	Regenerator Vent to atm	Regenerator Vent to atm
Flow Rate, MMSCFD			0.0004922		0.000151	
Temperature, F			97 F		130 F	
Molecular Weight			18.03		30.64	
lbmoles/hr			0.05405		0.01658	
		Mwi		lb/hri		lb/hri
Nitrogen	N2	28.014	0.111457	0.168760351	0.300604	0.139619685
Hydrogen Sulfide	H2S	34.082	0	0	0	0
Carbon Dioxide	CO2	44.010	0	0	0	0
Methane	CH4	16.042	0.826561	0.716686329	0.350708	0.093280037
Ethane	C2H6	30.069	0.041655	0.067698933	0.051296	0.025573314
Propane	C3H8	44.096	0.000312	0.000743617	0.000617	0.000451096
iso-Butane	C4H10	58.122	0.000004	1.2566E-05	0.000004	3.85465E-06
normal-Butane	C4H10	58.122	0.000016	5.02639E-05	0.000016	1.54186E-05
iso-Pentane	C5H12	72.149	0.000004	1.55986E-05	0.000003	3.58869E-06
normal-Pentane	C5H12	72.149	0.000005	1.94983E-05	0.000004	4.78492E-06
Cyclopentane	C5H10	70.133	0.000003	1.13721E-05	0.000005	5.81403E-06
normal-Hexane	C6H14	86.175	0.000002	9.31552E-06	0.000001	1.42878E-06
2-Methylpentane	C6H14	86.175	0.000001	4.65776E-06	0.000001	1.42878E-06
3-Methylpentane	C6H14	86.175	0.000001	4.65776E-06	0.000001	1.42878E-06
Methylcyclopentane	C6H12	84.160	0.000004	1.81954E-05	0.000006	8.37224E-06
Benzene	C6H6	78.112	0.000013	5.48854E-05	0.004275	0.00553654
Cyclohexane	C6H12	84.160	0.000005	2.27442E-05	0.000009	1.25584E-05
2-Methylhexane	C7H16	100.202	0.000001	5.41592E-06	0	0
3-Methylhexane	C7H16	100.202	0.000001	5.41592E-06	0	0
Dimethylcyclopentane	C7H14	98.186	0.000002	1.06139E-05	0.000002	3.25585E-06
n-Heptane	C7H16	100.202	0.000001	5.41592E-06	0	0
Methylcyclohexane	C7H14	98.186	0.000003	1.59209E-05	0.000004	6.5117E-06
Toluene	C7H8	92.138	0.000044	0.000219123	0.017611	0.02690341
2-Methylheptane	C8H18	114.229	0.000001	6.17408E-06	0	0
3-Methylheptane	C8H18	114.229	0.000001	6.17408E-06	0	0
Dimethylcyclohexane	C8H16	112.213	0.000001	6.06511E-06	0.000001	1.86049E-06
n-Octane	C8H18	114.229	0.000001	6.17408E-06	0	0
Ethylbenzene	C8H10	106.165	0.000012	6.88586E-05	0.006090	0.010719714
m-Xylene	C8H10	106.165	0.000018	0.000103288	0.011090	0.019520792
p-Xylene	C8H10	106.165	0.000012	6.88586E-05	0.007242	0.012747482
o-Xylene	C8H10	106.165	0.000012	6.88586E-05	0.008425	0.014829817
1-Nonene	C9H18	126.239	0.000001	6.82322E-06	0	0
n-Nonane	C9H20	128.255	0.000001	6.93218E-06	0	0
n-Decane	C10H22	142.282	0	0	0	0
n-Undecane	C11H24	156.308	0.000004	3.37938E-05	0	0
Carbonyl Sulfide	COS	60.075	0.000001	3.24705E-06	0.000083	8.26716E-05
Methyl Mercaptan	CH4S	48.108	0.000045	0.000117011	0.007419	0.005917622
Ethyl Mercaptan	C2H6S	62.134	0.000027	9.06753E-05	0.014274	0.014704814
Dimethyl Sulfide	C2H6S	62.134	0.000005	1.67917E-05	0.002540	0.002616662
Carbon Disulfide	CS2	76.141	0.000009	3.70388E-05	0.001430	0.001805257
I-Propyl Mercaptan	C3H8S	76.161	0.000004	1.6466E-05	0.003737	0.004718894
N-Propyl Mercaptan	C3H8S	76.161	0.000001	4.1165E-06	0.001438	0.001815834
Methyl Ethyl Sulfide	C3H8S	76.161	0.000001	4.1165E-06	0.001183	0.001493833
Thiophene	C4H4S	84.140	0.000003	1.36433E-05	0.004355	0.006075404
Dimethyl Sulfide	C2H6S	62.134	0.000014	4.70168E-05	0.031471	0.032420849
Diethyl Disulfide	C4H10S2	122.252	0.000004	2.64309E-05	0.009368	0.018988357
Trimethyl Thiophene	C7H10S	126.219	0.000001	6.82214E-06	0.001109	0.002320817
Water	H2O	18.015	0.019727	0.019208712	0.163571	0.048857623
Tri-Ethylene Glycol	C6H14O4	150.173	0.000002	1.62337E-05	0.000006	1.49392E-05

TK-VRU Emissions

Source: TK-VRU: (RVP 10) Five (5) fixed-roof vertical tanks routed to a common VRU.

General Information for Each Tank

Volume	750	bbl
Height (shell)	24	ft
Diameter	15.5	ft
Throughput	1800	bpd
Throughput	27,594,000	gallons/yr
Turnovers	876	turnovers/yr

VOC Emissions for Condensate Tanks

VOCs		
64,233	lb/yr	VOC Working & Breathing Emissions: TANKS 4.09 d*
134,575	lb/yr	Flashing emissions; Promax and max. flow meter data
5%	%	VRU downtime
100%	%	VRU recovery (emissions are routed to process, only uncontrolled emissions are during VRU downtime)
9,940	lb/yr	
22.70	**lb/hr**	
4.97	**tpy**	

GHG Emissions per tank

0.001	**lb/hr**
0.004	**tpy**

*Maximum throughput for all five tanks combined is 1,800 bbl/day. Since each bbl of throughput will be routed through only one tank, working losses are counted only once. However, since each tank may contain condensate, the breathing losses from the TANKS 4.09 output are multiplied by five.

DCP Midstream

TK-VRU -Tanks Flashing Emissions

Source: TK-VRU: (RVP 10) Five (5) fixed-roof vertical tanks routed to VRU.

ProMax Condensate Vapor Analysis

Component	MW	Mol %	MW * Mol %	Mass Fraction	Specific Volume scf/lb	Specific Volume Vapor scf/lb
Nitrogen	28.01	0.00%	0.0000	0.00%	13.547	0.0000
Oxygen	32.00	0.00%	0.0000	0.00%	13.5	0.0000
CO_2	44.01	0.01%	0.0023	0.00%	8.623	0.0003
H_2S	34.08	0.02%	0.0081	0.01%	11.136	0.0013
Methane	16.04	0.01%	0.0023	0.00%	23.65	0.0008
Ethane	30.07	0.57%	0.1716	0.25%	12.62	0.0310
Propane	44.10	7.38%	3.2550	4.66%	8.606	0.4008
I-Butane	58.12	5.86%	3.4046	4.87%	6.529	0.3181
N-Butane	58.12	24.46%	14.2169	20.34%	6.529	1.3281
I-Pentane	72.15	13.94%	10.0588	14.39%	5.26	0.7570
N-Pentane	72.15	16.94%	12.2207	17.49%	5.26	0.9197
n-Hexane	86.18	30.81%	26.5496	37.99%	4.404	1.6730
Heptanes	100.21	0.00%	0.0000	0.00%	3.787	0.0000
Benzene	78.11	0.00%	0.0000	0.00%	4.858	0.0000
Toluene	92.14	0.00%	0.0000	0.00%	4.119	0.0000
Ethylbenzene	106.17	0.00%	0.0000	0.00%	3.574	0.0000
Xylenes	106.17	0.00%	0.0000	0.00%	3.574	0.0000
C8+	114.23	0.00%	0.0000	0.00%	3.322	0.0000
Total		100%		100%		
Wtd. Average			69.89			5.430
NMEHC (VOC)		99.39%		99.74%		
GHG Component		0.02%		0.01%		

Flow Rate Summary: September - October, 2010

Raw Data

	E G-Tank	W G-Tank	Total Tanks	
Average	0.331	0.485	0.816	Mcfd
Max	0.995	0.992	1.987	Mcfd

Corrected to STP

	E G-Tank	W G-Tank	Total Tanks		
Average	0.335	0.490	0.825	Mscfd	$V_{corrected} = V_{raw} *$
Max	1.005	1.002	2.007	Mscfd	$(T_{STP}/T_{site})*(P_{site}/P_{STP})$

Site Pressure	29.9 in. Hg	Sept-Oct. 2010 Climate Data, NWS Midland International.
Site Temperature	71.2 ºF	

Emission Calculations

Total Tanks Flow Rate

	Average	Maximum		
Flashing losses	151.5	368.7	VOC, lb/day	mass flow = corrected flow * mass
	55,280.0	134,575.5	VOC, lb/yr.	% NMNEHC / specific vol. vapor
GHG Emissions	0.01	0.02	(methane + CO2) lb/day	mass flow = corrected flow * mass
	4	9	(methane + CO2) lb/yr'	% GHG / specific vol. vapor

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	TK-VRU	
City:	Hobbs, NM	
State:		
Company:	DCP Midstream	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	750 bbl Linam Ranch Gas Plant	
Tank Dimensions		
Shell Height (ft):		24.00
Diameter (ft):		15.50
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		31,500.00
Turnovers:		876.00
Net Throughput(gal/yr):		27,594,000.00
Is Tank Heated (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) (Cone Roof)		0.06
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig)		0.03

Meterological Data used in Emissions Calculations: Roswell, New Mexico (Avg Atmospheric Pressure = 12.73 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

LRGP G-Tank - Vertical Fixed Roof Tank
Artesia, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 10)	All	63.26	55.73	70.78	60.84	5.5219	4.7708	6.3647	66.0000			92.00	Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

LRGP G-Tank - Vertical Fixed Roof Tank
Artesia, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	3,225.4083
Vapor Space Volume (cu ft):	2,294.7688
Vapor Density (lb/cu ft):	0.0649
Vapor Space Expansion Factor:	0.2703
Vented Vapor Saturation Factor:	0.2193
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	2,294.7688
Tank Diameter (ft):	15.5000
Vapor Space Outage (ft):	12.1615
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.1615
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.1615
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	7.7500
Vapor Density	
Vapor Density (lb/cu ft):	0.0649
Vapor Molecular Weight (lb/lb-mole):	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Daily Avg. Liquid Surface Temp. (deg. R):	522.9287
Daily Average Ambient Temp. (deg. F):	60.8167
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	520.5067
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,810.0000
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2703
Daily Vapor Temperature Range (deg. R):	30.0956
Daily Vapor Pressure Range (psia):	1.5939
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.7708
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	6.3647
Daily Avg. Liquid Surface Temp. (deg R):	522.9287
Daily Min. Liquid Surface Temp. (deg R):	515.4048
Daily Max. Liquid Surface Temp. (deg R):	530.4526
Daily Ambient Temp. Range (deg. R):	29.8333
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.2193
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.5219
Vapor Space Outage (ft):	12.1615
Working Losses (lb):	48,106.3704
Vapor Molecular Weight (lb/lb-mole):	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Annual Net Throughput (gal/yr.):	27,594,000.0000
Annual Turnovers:	876.0000
Turnover Factor:	0.2009
Maximum Liquid Volume (gal):	31,500.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	15.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	51,331.7787

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

LRGP G-Tank - Vertical Fixed Roof Tank
Artesia, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 10)	48,106.37	3,225.41	51,331.78

TK-VRUTMP Emissions

Source: TK-TMP: (RVP 10) Two (2) horizontal bullet tanks routed to a common VRU.

General Information for Each Tank

Volume	1,500	bbl
Diameter	12	ft
Throughput	1800	bpd
Throughput	27,594,000	gallons/yr
Turnovers	438	turnovers/yr

VOC Emissions for Condensate Tanks

VOCs		
68,450	lb/yr	VOC Working & Breathing Emissions: TANKS 4.09 d*
134,575	lb/yr	Flashing emissions; Promax and max. flow meter data
5%	%	VRU downtime
100%	%	VRU recovery (emissions are routed to process, only uncontrolled emissions are during VRU downtime)
10,151	lb/yr	
23.18	**lb/hr**	
5.08	**tpy**	

GHG Emissions per tank

0.001	**lb/hr**
0.004	**tpy**

*Maximum throughput for all five tanks combined is 1,800 bbl/day. Since each bbl of throughput will be routed through only one tank, working losses are counted only once. However, since each tank may contain condensate, the breathing losses from the TANKS 4.09 output are multiplied by five.

DCP Midstream

TK-VRUTMP -Tanks Flashing Emissions

Source: TK-TMP: (RVP 10) Two (2) horizontal bullet tanks routed to a common VRU.

ProMax Condensate Vapor Analysis

Component	MW	Mol %	MW * Mol %	Mass Fraction	Specific Volume scf/lb	Specific Volume Vapor scf/lb
Nitrogen	28.01	0.00%	0.0000	0.00%	13.547	0.0000
Oxygen	32.00	0.00%	0.0000	0.00%	13.5	0.0000
CO_2	44.01	0.01%	0.0023	0.00%	8.623	0.0003
H_2S	34.08	0.02%	0.0081	0.01%	11.136	0.0013
Methane	16.04	0.01%	0.0023	0.00%	23.65	0.0008
Ethane	30.07	0.57%	0.1716	0.25%	12.62	0.0310
Propane	44.10	7.38%	3.2550	4.66%	8.606	0.4008
I-Butane	58.12	5.86%	3.4046	4.87%	6.529	0.3181
N-Butane	58.12	24.46%	14.2169	20.34%	6.529	1.3281
I-Pentane	72.15	13.94%	10.0588	14.39%	5.26	0.7570
N-Pentane	72.15	16.94%	12.2207	17.49%	5.26	0.9197
n-Hexane	86.18	30.81%	26.5496	37.99%	4.404	1.6730
Heptanes	100.21	0.00%	0.0000	0.00%	3.787	0.0000
Benzene	78.11	0.00%	0.0000	0.00%	4.858	0.0000
Toluene	92.14	0.00%	0.0000	0.00%	4.119	0.0000
Ethylbenzene	106.17	0.00%	0.0000	0.00%	3.574	0.0000
Xylenes	106.17	0.00%	0.0000	0.00%	3.574	0.0000
C8+	114.23	0.00%	0.0000	0.00%	3.322	0.0000
Total		100%		100%		
Wtd. Average			69.89			5.430
NMEHC (VOC)		99.39%		99.74%		
GHG Component		0.02%		0.01%		

Flow Rate Summary: September - October, 2010

Raw Data

	E G-Tank	W G-Tank	Total Tanks	
Average	0.331	0.485	0.816	Mcfd
Max	0.995	0.992	1.987	Mcfd

Corrected to STP

	E G-Tank	W G-Tank	Total Tanks		
Average	0.335	0.490	0.825	Mscfd	$V_{corrected} = V_{raw} *$
Max	1.005	1.002	2.007	Mscfd	$(T_{STP}/T_{site})*(P_{site}/P_{STP})$

Site Pressure	29.9	in. Hg	Sept-Oct. 2010 Climate Data, NWS Midland International.
Site Temperature	71.2	ºF	

Emission Calculations

Total Tanks Flow Rate

	Average	Maximum		
Flashing losses	151.5	368.7	VOC, lb/day	mass flow = corrected flow * mass
	55,280.0	134,575.5	VOC, lb/yr.	% NMNEHC / specific vol. vapor
GHG Emissions	0.01	0.02	(methane + CO2) lb/day	mass flow = corrected flow * mass
	4	9	(methane + CO2) lb/yr'	% GHG / specific vol. vapor

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TK-VRUTMP 1 and 2
City:	Hobbs
State:	New Mexico
Company:	DCP Midstream
Type of Tank:	Horizontal Tank
Description:	Horizontal bullet tanks, 1500 bbl

Tank Dimensions

Shell Length (ft):	72.50
Diameter (ft):	12.00
Volume (gallons):	63,000.00
Turnovers:	438.00
Net Throughput(gal/yr):	27,594,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Roswell, New Mexico (Avg Atmospheric Pressure = 12.73 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

TK-VRUTMP 1 and 2 - Horizontal Tank
Hobbs, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 10)	All	63.26	55.73	70.78	60.84	5.5219	4.7708	6.3647	66.0000			92.00	Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TK-VRUTMP 1 and 2 - Horizontal Tank
Hobbs, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	12,143.6488
Vapor Space Volume (cu ft):	5,222.6477
Vapor Density (lb/cu ft):	0.0649
Vapor Space Expansion Factor:	0.2703
Vented Vapor Saturation Factor:	0.3629
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	5,222.6477
Tank Diameter (ft):	12.0000
Effective Diameter (ft):	33.2908
Vapor Space Outage (ft):	6.0000
Tank Shell Length (ft):	72.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0649
Vapor Molecular Weight (lb/lb-mole):	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Daily Avg. Liquid Surface Temp. (deg. R):	522.9287
Daily Average Ambient Temp. (deg. F):	60.8167
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	520.5067
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,810.0000
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.2703
Daily Vapor Temperature Range (deg. R):	30.0956
Daily Vapor Pressure Range (psia):	1.5939
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.7708
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	6.3647
Daily Avg. Liquid Surface Temp. (deg R):	522.9287
Daily Min. Liquid Surface Temp. (deg R):	515.4048
Daily Max. Liquid Surface Temp. (deg R):	530.4526
Daily Ambient Temp. Range (deg. R):	29.8333
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3629
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.5219
Vapor Space Outage (ft):	6.0000
Working Losses (lb):	56,306.3199
Vapor Molecular Weight (lb/lb-mole):	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5219
Annual Net Throughput (gal/yr.):	27,594,000.0000

Annual Turnovers:	438.0000
Turnover Factor:	0.2352
Tank Diameter (ft):	12.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	68,449.9687

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TK-VRUTMP 1 and 2 - Horizontal Tank
Hobbs, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 10)	56,306.32	12,143.65	68,449.97

Linam Ranch Gas Plant: Engine and Turbine HAP Calculations

Emission Unit ID No.	Emission Unit Description	Horsepower Site Rating hp	Heat Input mmBtu/hr	Benzene EF lb/MMBtu	Benzene Emiss Rate TPY	Toluene EF lb/MMBtu	Toluene Emiss Rate TPY	Ethylbenzene EF lb/MMBtu	Ethylbenzene Emiss Rate TPY	Xylenes EF lb/MMBtu	Xylenes Emiss Rate TPY
6	Clark TLA-6	2000	17.73	1.94E-03	0.151	9.63E-04	0.075	1.08E-04	0.008	2.68E-04	0.021
7	Clark TLA-6	2000	17.73	1.94E-03	0.151	9.63E-04	0.075	1.08E-04	0.008	2.68E-04	0.021
10 or 11	Clark HBA-6	1267	11.86	1.94E-03	0.101	9.63E-04	0.050	1.08E-04	0.006	2.68E-04	0.014
28	Solar Taurus T-60-7800S	7340	63.43	1.20E-05	0.003	1.30E-04	0.036	3.20E-05	0.009	6.40E-05	0.018
29	Solar Taurus 70-10302S	10702	77.63	1.20E-05	0.004	1.30E-04	0.044	3.20E-05	0.011	6.40E-05	0.022
30	Solar Taurus 70-9702S	9990	73.95	1.20E-05	0.004	1.30E-04	0.042	3.20E-05	0.010	6.40E-05	0.021
31	Solar Centaur T-4700	3915	36.80	1.20E-05	0.002	1.30E-04	0.021	3.20E-05	0.005	6.40E-05	0.010
32B	Solar Centaur T-4000	3684	36.21	1.20E-05	0.002	1.30E-04	0.021	3.20E-05	0.005	6.40E-05	0.010
Total HAP					**0.42**		**0.36**		**0.06**		**0.14**

Emission Unit ID No.	Description	Formaldehyde EF lb/MMBtu	Formaldehyde Emiss Rate TPY	Acetaldehyde EF lb/MMBtu	Acetaldehyde Emiss Rate TPY	n-Hexane EF lb/MMBtu	n-Hexane Emiss Rate TPY	Acrolein EF lb/MMBtu	Acrolein Emiss Rate TPY	Methanol EF lb/MMBtu	Methanol Emiss Rate TPY
6	Clark TLA-6	0.05520	4.286	7.76E-03	0.603	4.45E-04	0.035	7.78E-03	0.604	2.48E-03	0.193
7	Clark TLA-6	0.05520	4.286	7.76E-03	0.603	4.45E-04	0.035	7.78E-03	0.604	2.48E-03	0.193
10 or 11	Clark HBA-6	0.05520	2.866	7.76E-03	0.403	4.45E-04	0.023	7.78E-03	0.404	2.48E-03	0.129
28	Solar Taurus T-60-7800S	0.00241	0.670	4.00E-05	0.011	0	0.000	6.40E-06	0.002	0	0.000
29	Solar Taurus 70-10302S	0.00071	0.241	4.00E-05	0.014	0	0.000	6.40E-06	0.002	0	0.000
30	Solar Taurus 70-9702S	0.00071	0.230	4.00E-05	0.013	0	0.000	6.40E-06	0.002	0	0.000
31	Solar Centaur T-4700	0.00071	0.114	4.00E-05	0.006	0	0.000	6.40E-06	0.001	0	0.000
32B	Solar Centaur T-4000	0.00071	0.113	4.00E-05	0.006	0	0.000	6.40E-06	0.001	0	0.000
Total HAP			**12.81**		**1.66**		**0.09**		**1.62**		**0.51**

EPA-AP42 Tables 3.2-1 (7/00) & 3.1-3 (4/00) emission factors were used for HAP calculations for all units except Unit 28 formaldehyde.
Manufacturer's emission factor (HHV basis) was used for Unit 28 formaldehyde. Unit 28 HAP emissions are based in HHV.

Linam Ranch Gas Plant: External Combustion Source HAP Calculations

Emission Unit ID No.	Emission Unit Description	Fuel Use MMscf/yr	Benzene EF lb/MMscf	Benzene Emiss Rate TPY	Toluene EF lb/MMscf	Toluene Emiss Rate TPY	Formaldehyde EF lb/MMscf	Formaldehyde Emiss Rate TPY	Hexane EF lb/MMscf	Hexane Emiss Rate TPY
2 **	Amine Plant Flare	14.2	0.00E+00	0.000	0.00E+00	0.000	0.00E+00	0.000	0	0.000
4 **	ESD (Plant) Flare	14.2	0.00E+00	0.000	0.00E+00	0.000	0.00E+00	0.000	0	0.000
34	Furnace B	146.0	2.10E-03	0.000	3.40E-03	0.000	7.50E-02	0.005	1.8	0.131
36	Boiler 36	968.5	2.10E-03	0.001	3.40E-03	0.002	7.50E-02	0.036	1.8	0.872
37	Boiler 37	968.5	2.10E-03	0.001	3.40E-03	0.002	7.50E-02	0.036	1.8	0.872
Total HAPs				**0.002**		**0.003**		**0.073**		**1.743**

EPA-AP42 Table 1.4-3 emission factors (7/98) were used for HAP calculations.
** Pilot only during normal operation

Methanol Tanks

Emission units: TK-20, TK-21, TK-27, TK-77, TK-1370
Source Description: 500 - 7050 gallon horizontal or vertical methanol tanks

General Tank Information				Plant-AGI	AGI Well			
Tank	TK-20	TK-21	TK-27	TK-77	TK-1370	Totals		
Volume	1,130	660	7,050	500	500	N/A	gallon	
Length (shell)	6.5	5.5	5.25	5.25	5.25	N/A	ft	
Diameter	5.5	4.5	4	4	4	N/A	ft	
Throughput	11300	6600	58750	208	208	77,067	gal/mo	
Throughput	135600	79200	705000	2500	2500	924,800	gal/yr	bbl/mo * 12 mo/yr
Turnovers	120.0	120.0	100.0	5.0	5.0	N/A	turnovers/yr	bbl/yr / Volume
Turnovers	144.0	144.0	120.0	6.0	6.0	N/A	maximum turnovers/yr	Turnovers x 1.2 (per 40 CFR 63.760 (subpart HH)
Throughput	445.8	260.4	2317.8	8.2	8.2	3,040	maximum gal/day	Maximum turnovers * Volume / 365 days/year

VOC Emissions						Total		
	VOCs	VOCs	VOCs	VOCs	VOCs	VOCs		
	106.1	62.0	555.9	62.3	62.3	848.58	lb/yr	TANKS 4.09 d
	0.05	0.03	0.28	0.03	0.03	0.42	tpy	tpy = lb/hr x [(8760hr/yr) / (2000lb/ton)])
	N/A	N/A	N/A	N/A	N/A	N/A	tpy	No flashing losses from these tanks at atmospheric conditions
Total VOCs	0.05	0.03	0.28	0.03	0.03	0.42	tpy	Working and Breathing + Flash
	0.01	0.01	0.06	0.01	0.01	0.10	lb/hr	tpy * 2000 lb/ton / 8760 hrs/yr

HAP Emissions						Total		
	HAPs	HAPs	HAPs	HAPs	HAPs	HAPs		
	106.1	62.0	555.9	62.3	62.3	848.58	lb/yr	TANKS 4.09 d
	0.05	0.03	0.28	0.03	0.03	0.42	tpy	tpy = lb/hr x [(8760hr/yr) / (2000lb/ton)])
	N/A	N/A	N/A	N/A	N/A	N/A	tpy	No flashing losses from these tanks at atmospheric conditions
Total HAPs	0.05	0.03	0.28	0.03	0.03	0.42	tpy	Working and Breathing + Flash
	0.01	0.01	0.06	0.01	0.01	0.10	lb/hr	tpy * 2000 lb/ton / 8760 hrs/yr

revised 10/23/08

Fugitive Emission Calculations

This section contains the fugitive emission calculations based on component counts and the corresponding EPA emissions factors. The information presented here, with the exception of fugitves from the current project, has been submitted in previous permit applications, but the NMED has not included these emissions in subsequently issued permits.

Total Fugitive Emissions

DCP Midstream, LP
Linam Ranch Gas Plant

Stream	VOC Fugitive Emissions (lb/hr)	VOC Fugitive Emissions (tpy)
Inlet Gas	2.238	9.799
Fuel Gas	0.675	2.957
Sweet Gas	0.453	1.255
Dry Gas	0.39	1.711
Residue Gas	0.353	1.531
Y-Grade Liquids	0.305	1.339
Natural Gas Liquids	2.59	11.345
Condensate	3.838	16.809
Refrigerant	3.876	16.975
Rich Amine	0	0
Project	4.32	18.94
TOTALS	**19.038**	**82.661**

DCP Midstream, LP
Linam Ranch Gas Plant

Short-Term VOC Fugitive HAPs						
Stream	**Hexane (lb/hr)**	**Benzene (lb/hr)**	**Toluene (lb/hr)**	**Ethylbenzene (lb/hr)**	**Xylenes (lb/hr)**	**Total VOC Fugitive HAPs (lb/hr)**
Inlet Gas	0.198	0.002	0.004	0.000	0.001	0.205
Fuel Gas	0.000	0.001	0.002	0.000	0.001	0.004
Sweet Gas	0.040	0.000	0.001	0.000	0.000	0.042
Dry Gas	0.034	0.000	0.001	0.000	0.000	0.035
Residue Gas	0.000	0.001	0.001	0.000	0.000	0.002
Y-Grade Liquids	0.027	0.000	0.000	0.000	0.000	0.027
Natural Gas Liquids	1.054	0.001	0.001	0.000	0.000	1.056
Condensate	2.705	0.001	0.002	0.000	0.000	2.708
Refrigerant	0.000	0.000	0.000	0.000	0.000	0.000
Rich Amine	0.000	0.000	0.000	0.000	0.000	0.000
Project	1.260	0.001	0.000	0.000	0.000	1.262
TOTALS	**5.319**	**0.008**	**0.011**	**0.001**	**0.003**	**5.341**

Long-term VOC Fugitive HAPs						
Stream	**Hexane (tpy)**	**Benzene (tpy)**	**Toluene (tpy)**	**Ethylbenzene (tpy)**	**Xylenes (tpy)**	**Total VOC Fugitive HAPs (tpy)**
Inlet Gas	0.869	0.009	0.015	0.001	0.004	0.898
Fuel Gas	0.000	0.006	0.010	0.001	0.003	0.019
Sweet Gas	0.176	0.002	0.003	0.000	0.001	0.182
Dry Gas	0.150	0.002	0.003	0.000	0.001	0.155
Residue Gas	0.000	0.003	0.005	0.000	0.001	0.010
Y-Grade Liquids	0.116	0.001	0.001	0.000	0.000	0.119
Natural Gas Liquids	4.617	0.003	0.004	0.000	0.001	4.626
Condensate	11.848	0.004	0.007	0.000	0.002	11.861
Refrigerant	0.000	0.000	0.000	0.000	0.000	0.000
Rich Amine	0.000	0.000	0.000	0.000	0.000	0.000
Project	5.519	0.006	0.001	0.000	0.000	5.526
TOTALS	**23.296**	**0.034**	**0.049**	**0.003**	**0.013**	**23.395**

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Inlet Gas Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	680	0.0045	6.732	29.486
Flanges/Connectors	1771	0.00039	1.520	6.655
Relief Valves	31	0.0088	0.600	2.629
Sample Points	2	0.002	0.009	0.039
Pump Seals	1	0.0024	0.005	0.023
Compressor Seals	8	0.0088	0.155	0.678
TOTALS	**2493**		**9.021**	**39.510**

Inlet Gas Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0.7	16	11.200	47.73	4.305	18.857
Ethane	0.12	30.1	3.612	15.39	1.388	6.081
Propane	0.067	44.1	2.955	12.59	1.136	4.975
Butanes	0.028	58.1	1.627	6.93	0.625	2.739
Pentanes	0.01	72.2	0.722	3.08	0.278	1.216
Hexanes+	0.006	86.2	0.517	2.20	0.199	0.871
Hydrogen Sulfide	0.007	34.1	0.239	1.02	0.092	0.402
Other (Non-HC)	0.059	44	2.596	11.06	0.998	4.371
TOTALS	**1.00**	**384.80**	**23.47**	**100**	**9.021**	**39.510**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate =9.021-(4.305+1.388+0.092+0.998) = **2.238 lb/hr**
Annual Emission Rate = 39.510-(18.857+6.081+0.402+4.371) = **9.799 tpy**

Inlet Gas Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	2.2	0.198	0.869
Benzene	0.023	0.002	0.009
Toluene	0.039	0.004	0.015
Ethyl Benzene	0.002	0.000	0.001
Xylenes	0.01	0.001	0.004
TOTALS	**2.274**	**0.205**	**0.898**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Fuel Gas Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	377	0.0045	3.732	16.347
Flanges/Connectors	1256	0.00039	1.078	4.720
Relief Valves	38	0.0088	0.736	3.222
Sample Points	2	0.002	0.009	0.039
Pump Seals	0	0.0024	0.000	0.000
Compressor Seals	10	0.0088	0.194	0.848
TOTALS	**1683**		**5.748**	**25.176**

Fuel Gas Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0.86	16	13.760	70.27	4.039	17.691
Ethane	0.079	30.1	2.378	12.14	0.698	3.057
Propane	0.005	44.1	0.221	1.13	0.065	0.283
Butanes	0.001	58.1	0.058	0.30	0.017	0.075
Pentanes	0.028	72.2	2.022	10.32	0.593	2.599
Hexanes+	0	86.2	0.000	0.00	0.000	0.000
Hydrogen Sulfide	0	34.1	0.000	0.00	0.000	0.000
Other (Non-HC)	0.026	44	1.144	5.84	0.336	1.471
TOTALS	**1.00**	**384.80**	**19.58**	**100**	**5.748**	**25.176**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate =5.748-(4.039+0.698+0+0.336) = **0.675 lb/hr**
Annual Emission Rate = 25.176-(17.691+3.057+0+1.471) = **2.957 tpy**

Fuel Gas Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	0	0.000	0.000
Benzene	0.023	0.001	0.006
Toluene	0.039	0.002	0.010
Ethyl Benzene	0.002	0.000	0.001
Xylenes	0.01	0.001	0.003
TOTALS	**0.074**	**0.004**	**0.019**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Sweet Gas Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	156	0.0045	1.544	6.764
Flanges/Connectors	318	0.00039	0.273	1.195
Relief Valves	0	0.0088	0.000	0.000
Sample Points	2	0.002	0.009	0.039
Pump Seals	0	0.0024	0.000	0.000
Compressor Seals	0	0.0088	0.000	0.000
TOTALS	**476**		**1.826**	**7.998**

Sweet Gas Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0.7	16	11.200	47.73	0.871	3.817
Ethane	0.12	30.1	3.612	15.39	0.281	1.231
Propane	0.067	44.1	2.955	12.59	0.230	1.007
Butanes	0.028	58.1	1.627	6.93	0.127	0.554
Pentanes	0.01	72.2	0.722	3.08	0.056	0.246
Hexanes+	0.006	86.2	0.517	2.20	0.040	0.176
Hydrogen Sulfide	0.007	34.1	0.239	1.02	0.019	0.081
Other (Non-HC)	0.059	44	2.596	11.06	0.202	0.885
TOTALS	**1.00**	**384.80**	**23.47**	**100**	**1.826**	**7.998**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate =1.826-(0.871+0.281+0.019+0.202) = **0.453 lb/hr**
Annual Emission Rate = 7.998-(3.817+1.231+0.081+0.885) = **1.255 tpy**

Sweet Gas Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	2.2	0.040	0.176
Benzene	0.023	0.000	0.002
Toluene	0.039	0.001	0.003
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.001
TOTALS	**2.274**	**0.042**	**0.182**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Dry Gas Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	135	0.0045	1.337	5.854
Flanges/Connectors	261	0.00039	0.224	0.981
Relief Valves	0	0.0088	0.000	0.000
Sample Points	0	0.002	0.000	0.000
Pump Seals	0	0.0024	0.000	0.000
Compressor Seals	0	0.0088	0.000	0.000
TOTALS	**396**		**1.560**	**6.835**

Dry Gas Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0.71	16	11.360	48.48	0.756	3.313
Ethane	0.12	30.1	3.612	15.41	0.241	1.054
Propane	0.068	44.1	2.999	12.80	0.200	0.875
Butanes	0.028	58.1	1.627	6.94	0.108	0.474
Pentanes	0.01	72.2	0.722	3.08	0.048	0.211
Hexanes+	0.006	86.2	0.517	2.21	0.034	0.151
Hydrogen Sulfide	0	34.1	0.000	0.00	0.000	0.000
Other (Non-HC)	0.059	44	2.596	11.08	0.173	0.757
TOTALS	**1.00**	**384.80**	**23.43**	**100**	**1.560**	**6.835**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate =1.56-(0.756+0.241+0+0.173) = **0.39 lb/hr**
Annual Emission Rate = 6.835-(3.313+1.054+0+0.757) = **1.711 tpy**

Dry Gas Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	2.2	0.034	0.150
Benzene	0.023	0.000	0.002
Toluene	0.039	0.001	0.003
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.001
TOTALS	**2.274**	**0.035**	**0.155**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Residue Gas Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	200	0.0045	1.980	8.672
Flanges/Connectors	694	0.00039	0.595	2.608
Relief Valves	18	0.0088	0.348	1.526
Sample Points	5	0.002	0.022	0.096
Pump Seals	0	0.0024	0.000	0.000
Compressor Seals	3	0.0088	0.058	0.254
TOTALS	**920**		**3.004**	**13.158**

Residue Gas Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0.86	16	13.760	70.27	2.111	9.246
Ethane	0.079	30.1	2.378	12.14	0.365	1.598
Propane	0.005	44.1	0.221	1.13	0.034	0.148
Butanes	0.001	58.1	0.058	0.30	0.009	0.039
Pentanes	0.028	72.2	2.022	10.32	0.310	1.358
Hexanes+	0	86.2	0.000	0.00	0.000	0.000
Hydrogen Sulfide	0	34.1	0.000	0.00	0.000	0.000
Other (Non-HC)	0.026	44	1.144	5.84	0.175	0.769
TOTALS	**1.00**	**384.80**	**19.58**	**100**	**3.004**	**13.158**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate = 3.004-(2.111+0.365+0+0.175) = **0.353 lb/hr**
Annual Emission Rate = 13.158-(9.246+1.598+0+0.769) = **1.531 tpy**

Residue Gas Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	0	0.000	0.000
Benzene	0.023	0.001	0.003
Toluene	0.039	0.001	0.005
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.001
TOTALS	**0.074**	**0.002**	**0.010**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Y-Grade Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	95	0.0025	0.523	2.289
Flanges/Connectors	135	0.00021	0.062	0.273
Relief Valves	3	0.0075	0.050	0.217
Sample Points	6	0.00014	0.002	0.008
Pump Seals	0	0.013	0.000	0.000
Compressor Seals	0	0.0075	0.000	0.000
TOTALS	**239**		**0.636**	**2.787**

Y-Grade Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0	16	0.000	0.00	0.000	0.000
Ethane	0.41	30.1	12.341	29.89	0.190	0.833
Propane	0.23	44.1	10.143	24.56	0.156	0.685
Butanes	0.095	58.1	5.520	13.37	0.085	0.372
Pentanes	0.034	72.2	2.455	5.94	0.038	0.166
Hexanes+	0.02	86.2	1.724	4.18	0.027	0.116
Hydrogen Sulfide	0.022	34.1	0.750	1.82	0.012	0.051
Other (Non-HC)	0.19	44	8.360	20.25	0.129	0.564
TOTALS	**1.00**	**384.80**	**41.29**	**100**	**0.636**	**2.787**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)
Hourly Emission Rate =0.636-(0+0.190+0.012+0.129) = **0.305 lb/hr**
Annual Emission Rate = 2.787-(0+0.833+0.051+0.564) = **1.339 tpy**

Y-Grade Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	4.18	0.027	0.116
Benzene	0.023	0.000	0.001
Toluene	0.039	0.000	0.001
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.000
TOTALS	**4.254**	**0.027**	**0.119**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet
Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Natural Gas Liquids Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	340	0.0025	1.870	8.191
Flanges/Connectors	767	0.00021	0.354	1.552
Relief Valves	9	0.0075	0.149	0.650
Sample Points	4	0.00014	0.001	0.005
Pump Seals	8	0.013	0.229	1.002
Compressor Seals	0	0.0075	0.000	0.000
TOTALS	**1128**		**2.603**	**11.401**

Natural Gas Liquids Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0	16	0.000	0.00	0.000	0.000
Ethane	0.01	30.1	0.301	0.49	0.013	0.056
Propane	0.4	44.1	17.640	28.55	0.743	3.255
Butanes	0.2	58.1	11.620	18.81	0.490	2.144
Pentanes	0.1	72.2	7.220	11.69	0.304	1.332
Hexanes+	0.29	86.2	24.998	40.46	1.053	4.613
Hydrogen Sulfide	0	34.1	0.000	0.00	0.000	0.000
Other (Non-HC)	0	44	0.000	0.00	0.000	0.000
TOTALS	**1.00**	**384.80**	**61.78**	**100**	**2.603**	**11.401**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)

Hourly Emission Rate = 2.603-(0+0.013+0+0) = **2.59 lb/hr**

Annual Emission Rate = 11.401-(0+0.056+0+0) = **11.345 tpy**

Natural Gas Liquids Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	40.5	1.054	4.617
Benzene	0.023	0.001	0.003
Toluene	0.039	0.001	0.004
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.001
TOTALS	**40.574**	**1.056**	**4.626**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet

Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Condensate Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	419	0.0025	2.305	10.094
Flanges/Connectors	1172	0.00021	0.541	2.372
Relief Valves	12	0.0075	0.198	0.867
Sample Points	10	0.00014	0.003	0.013
Pump Seals	28	0.013	0.801	3.508
Compressor Seals		0.0075	0.000	0.000
TOTALS	**1641**		**3.848**	**16.854**

Condensate Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Methane	0	16	0.000	0.00	0.000	0.000
Ethane	0.007	30.1	0.211	0.27	0.010	0.045
Propane	0.031	44.1	1.367	1.75	0.067	0.294
Butanes	0.11	58.1	6.391	8.16	0.314	1.376
Pentanes	0.21	72.2	15.162	19.36	0.745	3.264
Hexanes+	0.64	86.2	55.168	70.46	2.711	11.875
Hydrogen Sulfide	0	34.1	0.000	0.00	0.000	0.000
Other (Non-HC)	0	44	0.000	0.00	0.000	0.000
TOTALS	**1.00**	**384.80**	**78.30**	**100**	**3.848**	**16.854**

VOC Emissions = Total Emissions-(Methane+Ethane+Hydrogen Sulfide+Other)

Hourly Emission Rate = 3.848-(0+0.010+0+0) = **3.838 lb/hr**

Annual Emission Rate = 16.854-(0+0.045+0+0) = **16.809 tpy**

Condensate Fugitive HAPs			
HAP Component	**Wt. % of Stream**	**HAP Fugitive Emissions (lb/hr)**	**HAP Fugitive Emissions (tpy)**
Hexane	70.3	2.705	11.848
Benzene	0.023	0.001	0.004
Toluene	0.039	0.002	0.007
Ethyl Benzene	0.002	0.000	0.000
Xylenes	0.01	0.000	0.002
TOTALS	**70.374**	**2.708**	**11.861**

Note 1: Hexane content estimated from fugitive speciation in previous spreadsheet

Note 2: BTEX Content of inlet gas stream from Table 4-6 GRI-HAP Calc Manual for NG. Speciation based on API/GRI bag study

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Amine Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	419	0.0025	2.305	10.094
Flanges/Connectors	1172	0.00021	0.541	2.372
Relief Valves	12	0.0075	0.198	0.867
Sample Points	10	0.0014	0.031	0.135
Pump Seals	28	0.013	0.801	3.508
Compressor Seals		0.0075	0.000	0.000
TOTALS	**1641**		**3.876**	**16.975**

Amine Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Propane	1	44.1	44.100	100.00	3.876	16.975
TOTALS	**1.00**	**44.10**	**44.10**	**100**	**3.876**	**16.975**

VOC Emissions = Total Emissions
Hourly Emission Rate = **3.876 lb/hr**
Annual Emission Rate = **16.975 tpy**

DCP MIDSTREAM, LP
Linam Ranch Gas Plant

Rich Amine Fugitives				
Component	**No. of Components**	**EPA Component Emission Factor (kg/hr/source)**	**THC Fugitive Emissions (lb/hr)**	**THC Fugitive Emissions (tpy)**
Valves	72	0.0025	0.396	1.734
Flanges/Connectors	2	0.00021	0.001	0.004
Relief Valves	0	0.0075	0.000	0.000
Open Ends	0	0.0014	0.000	0.000
Pump Seals	0	0.013	0.000	0.000
Compressor Seals	0	0.0075	0.000	0.000
TOTALS	**74**		**0.397**	**1.739**

Rich Amine Fugitives - Speciated						
Compound	**Mole Fraction**	**Molecular Weight**	**Weight Per Mole**	**Weight %**	**Fugitive Emissions (lb/hr)**	**Fugitive Emissions (tpy)**
Monoethanolamine	0.213	105.1	22.386	58.85	0.234	1.023
Hydrogen Sulfide	0.018	34.1	0.614	1.61	0.006	0.028
Carbon Dioxide	0.046	44.1	2.029	5.33	0.021	0.093
Water	0.723	18	13.014	34.21	0.136	0.595
TOTALS	**1.00**	**201.30**	**38.04**	**100**	**0.397**	**1.739**

Note 1: MEA is not a HAP; therefore, there are no HAP fugitives associated with the Rich Amine System.
Note 2: MEA is not significant (VP<10 mm Hg). Fugitives were calculated for rich amine only top obtain H2S emissions because H2S is significant (VP>10 mm Hg).

PROJECT COMPONENTS AND NET VOC and GHG FUGITIVE EMISSIONS BY UNIT / SERVICE / COMPONENT
DCP Midstream, Linam Ranch Gas Plant

Number of Components

	Gas				Light Oil				Water / Oil			
Unit	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges
Inlet System	29	0	34	95	0	0	0	0	0	0	0	0
Dual Service	16	0	24	40	0	0	0	0	0	0	0	0
Turbine	30	0	40	110	12	6	18	30	0	0	0	0
Amine System	0	0	0	0	0	0	0	0	17	4	28	42
VRU	22	1	29	70	47	2	30	130	0	0	0	0
Turboexpander	12	0	20	40	16	2	20	40	0	0	0	0
Totals	109	1	147	355	75	10	68	200	17	4	28	42

Emission Factor (lb/hr/component)	9.99E-03	5.29E-03	1.94E-02	8.60E-04	5.51E-03	2.87E-02	1.65E-02	2.43E-04	2.16E-04	5.29E-05	3.09E-02	6.39E-06

Emission by Unit / Service / Component, lbs/hr

	Gas				Light Oil				Water / Oil			
Unit	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges
Inlet System	0.2896		0.6596	0.0817								
Dual Service	0.1598		0.4656	0.0344								
Turbine	0.2996		0.7760	0.0946	0.0661	0.1720	0.2976	0.0073				
Amine System									0.0037	0.0002	0.8642	0.0003
VRU	0.2197	0.0053	0.5626	0.0602	0.2590	0.0573	0.4960	0.0315				
Turboexpander	0.1198		0.3880	0.0344	0.0882	0.0573	0.3307	0.0097				
Total Service / Component (lb/hr)	1.0886	0.0053	2.8519	0.3052	0.4134	0.2866	1.1243	0.0485	0.0037	0.0002	0.8642	0.0003

[1] Based on information provided by DCP Midstream personnel February 2011 ("Components" spreadsheet, REV-07)

	VOC		GHG		H2S	
Unit	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**
Inlet System	0.25	**0.26**	0.75	**0.78**	0.005	**0.01**
Dual Service	0.25	**0.16**	0.75	**0.50**		
Turbine	0.25	**0.42**	0.75	**1.28**		
Amine System	1.00	**0.87**				
VRU	1.00	**1.69**			0.001	**0.002**
Turboexpander	1.00	**1.03**				
Total Service / Component (lb/hr)		**4.43**		**2.56**		**0.01**

	VOC	**GHG**	**H_2S**	
Total Net Change	**4.43**	**2.56**	**0.01**	**lb/hr**
	19.41	**11.20**	**0.03**	**tpy**

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- ☒ If manufacturer data are used, include specifications for emissions units and 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.

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer	
Job ID	
Inquiry Number	
Run By: David A Pocengal	Date Run: 7-Mar-11

Engine Model	TAURUS 60-7800S CS/MD 59F MATCH
Fuel Type: SD NATURAL GAS	Water Injection: NO
Engine Emissions Data	REV. 0.1

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
1 — 7340 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	15.18	15.41	8.82
lbm/MMBtu (Fuel LHV)	0.060	0.061	0.035
lbm/(MW-hr) (gas turbine shaft pwr)	0.63	0.64	0.37
lbm/hr	3.47	3.52	2.01
g/(Hp-hr) (gas turbine shaft pwr)	0.21	0.22	0.12
2 — 7121 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 20.0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	14.84	15.05	8.62
lbm/MMBtu (Fuel LHV)	0.060	0.061	0.035
lbm/(MW-hr) (gas turbine shaft pwr)	0.64	0.65	0.37
lbm/hr	3.39	3.44	1.97
g/(Hp-hr) (gas turbine shaft pwr)	0.22	0.22	0.13

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 65% and 100% load for liquid fuel (except for the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F and between 80% and 100% load.
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer	
Job ID	
Inquiry Number	
Run By: David A Pocengal	Date Run: 7-Mar-11

Engine Model	TAURUS 60-7800S CS/MD 59F MATCH
Fuel Type: SD NATURAL GAS	Water Injection: NO
Engine Emissions Data	REV. 0.1

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
3 — 6868 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 40.0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	14.40	14.61	8.37
lbm/MMBtu (Fuel LHV)	0.060	0.061	0.035
lbm/(MW-hr) (gas turbine shaft pwr)	0.64	0.65	0.37
lbm/hr	3.29	3.34	1.91
g/(Hp-hr) (gas turbine shaft pwr)	0.22	0.22	0.13
4 — 6520 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 60.0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	13.82	14.02	8.03
lbm/MMBtu (Fuel LHV)	0.060	0.061	0.035
lbm/(MW-hr) (gas turbine shaft pwr)	0.65	0.66	0.38
lbm/hr	3.16	3.20	1.83
g/(Hp-hr) (gas turbine shaft pwr)	0.22	0.22	0.13

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 65% and 100% load for liquid fuel (except for the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F and between 80% and 100% load.
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
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PREDICTED EMISSION PERFORMANCE

Customer	
Job ID	
Inquiry Number	
Run By: David A Pocengal	Date Run: 7-Mar-11

Engine Model	TAURUS 60-7800S CS/MD 59F MATCH
Fuel Type: SD NATURAL GAS	Water Injection: NO
Engine Emissions Data	REV. 0.1

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
5 — 6006 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 80.0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	12.98	13.17	7.54
lbm/MMBtu (Fuel LHV)	0.059	0.060	0.034
lbm/(MW-hr) (gas turbine shaft pwr)	0.66	0.67	0.38
lbm/hr	2.96	3.01	1.72
g/(Hp-hr) (gas turbine shaft pwr)	0.22	0.23	0.13
6 — 5169 HP 100.0% Load — Elev. 3647 ft — Rel. Humidity 60.0% — Temperature 110.0 Deg. F			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	11.59	11.76	6.74
lbm/MMBtu (Fuel LHV)	0.058	0.059	0.034
lbm/(MW-hr) (gas turbine shaft pwr)	0.69	0.70	0.40
lbm/hr	2.65	2.69	1.54
g/(Hp-hr) (gas turbine shaft pwr)	0.23	0.24	0.13

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 65% and 100% load for liquid fuel (except for the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F and between 80% and 100% load.
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
A Caterpillar Company

PREDICTED ENGINE PERFORMANCE

Customer	
Job ID	
Run By: David A Pocengal	Date Run: 7-Mar-11
Engine Performance Code: REV. 3.48	Engine Performance Data: REV. 0.8

Model	TAURUS 60-7800S
Package Type	CS/MD
Match	59F MATCH
Fuel System	GAS
Fuel Type	SD NATURAL GAS

DATA FOR NOMINAL PERFORMANCE

Elevation	feet	3647
Inlet Loss	in H2O	4.0
Exhaust Loss	in H2O	4.0
Accessory on GP Shaft	HP	14.0

		1	2	3	4	5	6
Engine Inlet Temperature	deg F	0	20.0	40.0	60.0	80.0	110.0
Relative Humidity	%	60.0	60.0	60.0	60.0	60.0	60.0
Driven Equipment Speed	RPM	13721	13769	13815	13846	13803	13678
Specified Load	HP	FULL	FULL	FULL	FULL	FULL	FULL
Net Output Power	HP	7340	7121	6868	6520	6006	5169
Fuel Flow	mmBtu/hr	57.66	56.39	54.84	52.84	49.99	45.70
Heat Rate	Btu/HP-hr	7855	7918	7985	8104	8324	8841
Therm Eff	%	32.391	32.133	31.864	31.397	30.569	28.781
Engine Exhaust Flow	lbm/hr	163305	158768	153869	148153	140672	128015
Exhaust Temperature	deg F	890	914	937	957	977	1013

Fuel Gas Composition (Volume Percent)

Methane (CH4)	92.79
Ethane (C2H6)	4.16
Propane (C3H8)	0.84
N-Butane (C4H10)	0.18
N-Pentane (C5H12)	0.04
Hexane (C6H14)	0.04
Carbon Dioxide (CO2)	0.44
Hydrogen Sulfide (H2S)	0.0001
Nitrogen (N2)	1.51

Fuel Gas Properties

LHV (Btu/Scf)	939.2	Specific Gravity	0.5970	Wobbe Index at 60F	1215.6

This performance was calculated with a basic inlet and exhaust system. Special equipment such as low noise silencers, special filters, heat recovery systems or cooling devices will affect engine performance. Performance shown is "Expected" performance at the pressure drops stated, not guaranteed.

Particulate Matter Emission Estimates

Leslie Witherspoon
Solar Turbines Incorporated

PURPOSE

Since particulate matter is a regulated pollutant, most air permitting agencies require customers to provide particulate matter emission estimates during the air permitting process. In addition, many air permit agencies require dispersion modeling analyses for particulate matter. More and more often, regulatory agencies are including a particulate matter compliance testing requirement in the air permit.

This document summarizes Solar's recommended $PM_{10/2.5}$ emission levels for our combustion turbines. The recommended levels are based on an analysis of emissions tests collected from customer sites.

Particulate Matter Definition

National Ambient Air Quality Standards (NAAQS) for particulate matter were first set in 1971. Total suspended particulate (TSP) was the first indicator used to represent suspended particles in the ambient air. Since July 1, 1987, the Environmental Protection Agency (EPA) has used the indicator PM_{10}, which includes only the particles with aerodynamic diameter smaller than 10 micrometers. PM_{10} (coarse particles) come from sources such as windblown dust from the desert or agricultural fields and dust kicked up on unpaved roads by vehicle traffic.

The EPA added a $PM_{2.5}$ ambient air standard in 1997. $PM_{2.5}$ includes particles with an aerodynamic diameter less than 2.5 micrometers. $PM_{2.5}$ (fine particles) are generally emitted from activities such as industrial and residential combustion and from vehicle exhaust. Fine particles are also formed in the atmosphere when gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds, emitted by combustion activities, are transformed by chemical reactions.

Nearly all particulate matter from gas turbine exhaust is less than one micrometer (micron) in diameter. Thus the emission rates of TSP, PM_{10}, and $PM_{2.5}$ from gas turbines are theoretically equivalent although source testing will show significant variation due to test method detection levels and processes.

TESTING FOR PARTICULATE MATTER

The turbine combustion process has little effect on the particulate matter generated and measured. The largest contributor to particulate matter emissions for gas and liquid fired combustion turbines is measurement technique and error. Other, minor contributing, sources of particulate matter emissions include carbon, ash, fuel-bound sulfur, artifact sulfate formation, compressor/lubricating oils, and inlet air.

Historical customer particulate matter source test data show that there is significant variability from test to test. The source test results support the common industry argument that particulate matter from natural gas fired combustion sources is difficult to measure accurately. The reference test methods for particulate matter were developed primarily for measuring emissions from coal-fired power plants and other major emitters of particulates. Particulate concentrations from gas turbine can be 100 to 10,000 times lower than the "traditional" particulate sources. The test methods were not developed or verified for low emission levels. There

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are interferences, insignificant at higher exhaust particulate matter concentrations that result in emissions greater than the actual emissions from gas turbines. New methods are being developed to address this problem.

Due to measurement and procedural errors, the measured results, in most cases, may not be representative of actual particulate matter emitted. There are many potential error sources in measuring particulate matter. Most of these have to do with contamination of the samples, material from the sampling apparatus getting into the samples, and general sloppiness in samples and analysis.

Recommended Particulate Matter Emission Factors

When necessary to support the air permitting process Solar recommends using a $PM_{10/2.5}$ emission factor of 0.021 lb/MMBtu fuel input (HHV) for natural gas. For landfill gas, the recommended emission factor is 0.03 lb/MMBtu fuel input (HHV). For liquid fuel, the recommended emission factor is 0.06 lb/MMBtu fuel input (HHV). The liquid fuel emission factor assumes fuel sulfur content is <500 ppm and ash content is <0.005% by wt.

The emission levels cited above are only for engine operation with the fuels listed. Other fuels many not yield similar results.

At this time, Solar does not recommend using AP-42 (EPA AP-42 "Compilation of Air Pollutant Emission Factors.") AP-42. While some source tests have had similar results to AP-42, others are higher.

Test Method Recommendation

For customers who conduct emission source tests for particulate matter, Solar recommends that EPA Methods 201/201A[1] be used to measure the "front half". "Front half" represents filterable particulate matter.

EPA Method 202[2] (with nitrogen purge and field blanks) should be used to measure the "back half". "Back half" measurements represent the condensable portion of particulate matter.

EPA Method 5[3], which measures the front and back halves may be substituted (e.g. where exhaust temperatures do not allow the use of Method 202).

Testing should include three test runs of 4 hours each.

Solar recommends using the aforementioned test methods until more representative test methods are developed and made commercially available.

References

[1] EPA Method 201, Determination of PM10 Emissions, Exhaust Gas Recycle Procedure. EPA Method 201A, Determination of PM10 Emissions, Constant Sampling Rate Procedure, 40 CFR 60, Part 60, Appendix A.

[2] EPA Method 202, Determination of Condensible Particulate Emissions from Stationary Sources, 40 CFR 60, Part 60, Appendix A.

[3] EPA Method 5, Determination of Particulate Emissions from Stationary Sources, 40 CFR 60, Part 60, Appendix

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Volatile Organic Compound, Sulfur Dioxide, and Formaldehyde Emission Estimates

Leslie Witherspoon
Solar Turbines Incorporated

PURPOSE

This Product Information Letter summarizes methods that are available to estimate emissions of volatile organic compounds (VOC), sulfur dioxide (SO_2), and formaldehyde from gas turbines. Most customers are required to estimate emissions of these pollutants during the air permitting process.

INTRODUCTION

In absence of site-specific or representative source test data, Solar refers customers to a United States Environmental Protection Agency (EPA) document titled "AP-42" or other appropriate EPA reference documents. AP-42 is a collection of emission factors for different emission sources. The emission factors found in AP-42 provide a generally accepted way of estimating emissions when more representative data are not available. The most recent version of AP-42 (dated April 2000) can be found at:

http://www.epa.gov/ttn/chief/ap42/ch03/index.html

Solar does not typically warranty the emission rates for VOC, SO_2 or formaldehyde.

Volatile Organic Compounds

Most permitting agencies require gas turbine users to estimate emissions of VOC, a subpart of the unburned hydrocarbon (UHC) emissions, during the air permitting process. Volatile organic compounds, non-methane hydrocarbons (NMHC), and reactive organic gases (ROG) are some of the many ways of referring to the non-methane (and non-ethane) portion of an "unburned hydrocarbon" emission estimate.

For natural gas fuel, most of Solar's customers use 10-20% of the UHC emission rate to represent VOC emissions. The estimate of 10-20% is based on a ratio of total non-methane hydrocarbons to total organic compounds. The use of 10 up to 20% provides a conservative estimate of VOC emissions. The balance of the UHC is assumed to be primarily methane.

For liquid fuel, it is appropriate to estimate that 100% of the UHC emission estimate is VOC.

Sulfur Dioxide

Sulfur dioxide emissions are produced by conversion of sulfur in the fuel to SO_2. Since Solar does not control the amount of sulfur in the fuel, we are unable to generically predict SO_2 emissions. Customers generally estimate SO_2 emissions with a mass balance calculation by assuming that any sulfur in the fuel will convert to SO_2. For reference, the typical mass balance equation is shown below.

Variables: wt % of sulfur in fuel
Btu/lb fuel (LHV*)
MMBtu/hr fuel flow (LHV)

$$\frac{\text{lb } SO_2}{\text{hr}} = \left(\frac{\text{wt\% Sulfur}}{100}\right)\left(\frac{\text{lb fuel}}{\text{Btu}}\right)\left(\frac{10^6 \text{ Btu}}{\text{MMBtu}}\right)\left(\frac{\text{MMBtu fuel}}{\text{hr}}\right)\left(\frac{\text{MW } SO_2}{\text{MW Sulfur}}\right)$$

As an alternative to a mass balance calculation, EPA's AP-42 document can be used. AP-42 (Table 3.1-2a, April 2000) suggests emission factors of 0.0034 lb/MMBtu for gas fuel (HHV*) and 0.033 lb/MMBtu for liquid fuel (HHV).

*LHV = Lower Heating Value; HHV = Higher Heating Value

Formaldehyde

In gas turbines, formaldehyde emissions are a result of incomplete combustion. Formaldehyde in the exhaust stream is unstable and very difficult to measure. In addition to turbine characteristics including combustor design, size, maintenance history, and load profile, the formaldehyde emission level is also affected by:

- Ambient temperature
- Humidity
- Atmospheric pressure
- Fuel quality
- Formaldehyde concentration in the ambient air
- Test method measurement variability
- Operational factors

The emission factor data in Table 1 is an excerpt from an EPA memo: "Revised HAP Emission Factors for Stationary Combustion Turbines, 8/22/03." The memo presents hazardous air pollutant (HAP) emission factor data in several categories including: mean, median, maximum, and minimum. The emission factors in the memo are a compilation of the HAP data EPA collected during the Maximum Achievable Control Technology (MACT) standard development process. The emission factor documentation shows there is a high degree of variability in formaldehyde emissions from gas turbines, depending on the manufacturer, rating size of equipment, combustor design, and testing events. To estimate formaldehyde emissions from gas turbines, users should use the emission factor(s) that best represent the gas turbines actual / planned operating profile. Refer to the memo for alternative emission factors.

Table 1. EPA's Total HAP and Formaldehyde Emission Factors for <50 MW Lean-Premix Gas Turbines burning Natural Gas

(Source: Revised HAP Emission Factors for Stationary Combustion Turbines, OAR-2002-0060, IV-B-09, 8/22/03)

Pollutant	Engine Load	95% Upper Confidence of Mean, lb/MMBtu HHV	95% Upper Confidence of Data, lb/MMBtu HHV	Memo Reference
Total HAP	> 90%	0.00144	0.00258	Table 19
Total HAP	All	0.00160	0.00305	Table 16
Formaldehyde	> 90%	0.00127	0.00241	Table 19
Formaldehyde	All	0.00143	0.00288	Table 16

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Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $1b/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION[a]

Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
CO_2[b]	120,000	A
Lead	0.0005	D
N_2O (Uncontrolled)	2.2	E
N_2O (Controlled-low-NO_X burner)	0.64	E
PM (Total)[c]	7.6	D
PM (Condensable)[c]	5.7	D
PM (Filterable)[c]	1.9	B
SO_2[d]	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $lb/10^6$ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 \text{ scf}] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2×10^4 $lb/10^6$ scf.

[c] All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM_{10}, $PM_{2.5}$ or PM_1 emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content is natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION[a]

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene[b, c]	2.4E-05	D
56-49-5	3-Methylchloranthrene[b, c]	<1.8E-06	E
	7,12-Dimethylbenz(a)anthracene[b,c]	<1.6E-05	E
83-32-9	Acenaphthene[b,c]	<1.8E-06	E
203-96-8	Acenaphthylene[b,c]	<1.8E-06	E
120-12-7	Anthracene[b,c]	<2.4E-06	E
56-55-3	Benz(a)anthracene[b,c]	<1.8E-06	E
71-43-2	Benzene[b]	2.1E-03	B
50-32-8	Benzo(a)pyrene[b,c]	<1.2E-06	E
205-99-2	Benzo(b)fluoranthene[b,c]	<1.8E-06	E
191-24-2	Benzo(g,h,i)perylene[b,c]	<1.2E-06	E
205-82-3	Benzo(k)fluoranthene[b,c]	<1.8E-06	E
106-97-8	Butane	2.1E+00	E
218-01-9	Chrysene[b,c]	<1.8E-06	E
53-70-3	Dibenzo(a,h)anthracene[b,c]	<1.2E-06	E
25321-22-6	Dichlorobenzene[b]	1.2E-03	E
74-84-0	Ethane	3.1E+00	E
206-44-0	Fluoranthene[b,c]	3.0E-06	E
86-73-7	Fluorene[b,c]	2.8E-06	E
50-00-0	Formaldehyde[b]	7.5E-02	B
110-54-3	Hexane[b]	1.8E+00	E
193-39-5	Indeno(1,2,3-cd)pyrene[b,c]	<1.8E-06	E
91-20-3	Naphthalene[b]	6.1E-04	E
109-66-0	Pentane	2.6E+00	E
85-01-8	Phenanathrene[b,c]	1.7E-05	D

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION (Continued)

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
74-98-6	Propane	1.6E+00	E
129-00-0	Pyrene[b, c]	5.0E-06	E
108-88-3	Toluene[b]	3.4E-03	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $1b/10^6$ scf to lb/MMBtu, divide by 1,020. Emission Factors preceeded with a less-than symbol are based on method detection limits.

[b] Hazardous Air Pollutant (HAP) as defined by Section 112(b) of the Clean Air Act.

[c] HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act.

[d] The sum of individual organic compounds may exceed the VOC and TOC emission factors due to differences in test methods and the availability of test data for each pollutant.

Table 3.1-3. EMISSION FACTORS FOR HAZARDOUS AIR POLLUTANTS FROM NATURAL GAS-FIRED STATIONARY GAS TURBINES[a]

Emission Factors[b] - Uncontrolled		
Pollutant	Emission Factor (lb/MMBtu)[c]	Emission Factor Rating
1,3-Butadiene[d]	< 4.3 E-07	D
Acetaldehyde	4.0 E-05	C
Acrolein	6.4 E-06	C
Benzene[e]	1.2 E-05	A
Ethylbenzene	3.2 E-05	C
Formaldehyde[f]	7.1 E-04	A
Naphthalene	1.3 E-06	C
PAH	2.2 E-06	C
Propylene Oxide[d]	< 2.9 E-05	D
Toluene	1.3 E-04	C
Xylenes	6.4 E-05	C

[a] SCC for natural gas-fired turbines include 2-01-002-01, 2-02-002-01, 2-02-002-03, 2-03-002-02, and 2-03-002-03. Hazardous Air Pollutants as defined in Section 112 (b) of the *Clean Air Act*.

[b] Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief".

[c] Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by 1020. These emission factors can be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this heating value.

[d] Compound was not detected. The presented emission value is based on one-half of the detection limit.

[e] Benzene with SCONOX catalyst is 9.1 E-07, rating of D.

[f] Formaldehyde with SCONOX catalyst is 2.0 E-05, rating of D.

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES

Emission Factors[a] - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines[b]		Distillate Oil-Fired Turbines[d]	
	(lb/MMBtu)[c] (Fuel Input)	Emission Factor Rating	(lb/MMBtu)[e] (Fuel Input)	Emission Factor Rating
CO_2[f]	110	A	157	A
N_2O	0.003[g]	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO_2	0.94S[h]	B	1.01S[h]	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04[j]	E
TOC[k]	1.1 E-02	B	4.0 E-03[l]	C
PM (condensible)	4.7 E-03[l]	C	7.2 E-03[l]	C
PM (filterable)	1.9 E-03[l]	C	4.3 E-03[l]	C
PM (total)	6.6 E-03[l]	C	1.2 E-02[l]	C

[a] Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief". ND = No Data, NA = Not Applicable.

[b] SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

[c] Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

[d] SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

[e] Emission factors based on an average distillate oil heating value of 139 MMBtu/10^3 gallons. To convert from (lb/MMBtu) to (lb/10^3 gallons), multiply by 139.

[f] Based on 99.5% conversion of fuel carbon to CO_2 for natural gas and 99% conversion of fuel carbon to CO_2 for distillate oil. CO_2 (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10^6scf. For distillate oil, CO_2 (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

[g] Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

[h] All sulfur in the fuel is assumed to be converted to SO_2. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

[j] VOC emissions are assumed equal to the sum of organic emissions.

[k] Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

[l] Emission factors are based on combustion turbines using water-steam injection.

TABLE 3.2-1 UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES[a]
(SCC 2-02-002-52)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	3.17 E+00	A
NO_x[c] <90% Load	1.94 E+00	A
CO[c] 90 - 105% Load	3.86 E-01	A
CO[c] <90% Load	3.53 E-01	A
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	1.64 E+00	A
Methane[g]	1.45 E+00	C
VOC[h]	1.20 E-01	C
PM10 (filterable)[i]	3.84 E-02	C
PM2.5 (filterable)[i]	3.84 E-02	C
PM Condensable[j]	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[k]	6.63 E-05	C
1,1,2-Trichloroethane[k]	5.27 E-05	C
1,1-Dichloroethane	3.91 E-05	C
1,2,3-Trimethylbenzene	3.54 E-05	D
1,2,4-Trimethylbenzene	1.11 E-04	C
1,2-Dichloroethane	4.22 E-05	D
1,2-Dichloropropane	4.46 E-05	C
1,3,5-Trimethylbenzene	1.80 E-05	D
1,3-Butadiene[k]	8.20 E-04	D
1,3-Dichloropropene[k]	4.38 E-05	C
2,2,4-Trimethylpentane[k]	8.46 E-04	B
2-Methylnaphthalene[k]	2.14 E-05	C
Acenaphthene[k]	1.33 E-06	C

Table 3.2-1. UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES

(Continued)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Acenaphthylene[k]	3.17 E-06	C
Acetaldehyde[k,l]	7.76 E-03	A
Acrolein[k,l]	7.78 E-03	A
Anthracene[k]	7.18 E-07	C
Benz(a)anthracene[k]	3.36 E-07	C
Benzene[k]	1.94 E-03	A
Benzo(a)pyrene[k]	5.68 E-09	D
Benzo(b)fluoranthene[k]	8.51 E-09	D
Benzo(e)pyrene[k]	2.34 E-08	D
Benzo(g,h,i)perylene[k]	2.48 E-08	D
Benzo(k)fluoranthene[k]	4.26 E-09	D
Biphenyl[k]	3.95 E-06	C
Butane	4.75 E-03	C
Butyr/Isobutyraldehyde	4.37 E-04	C
Carbon Tetrachloride[k]	6.07 E-05	C
Chlorobenzene[k]	4.44 E-05	C
Chloroform[k]	4.71 E-05	C
Chrysene[k]	6.72 E-07	C
Cyclohexane	3.08 E-04	C
Cyclopentane	9.47 E-05	C
Ethane	7.09 E-02	A
Ethylbenzene[k]	1.08 E-04	B
Ethylene Dibromide[k]	7.34 E-05	C
Fluoranthene[k]	3.61 E-07	C
Fluorene[k]	1.69 E-06	C
Formaldehyde[k,l]	5.52 E-02	A

Table 3.2-1. UNCONTROLLED EMISSION FACTORS FOR 2-STROKE LEAN-BURN ENGINES (Concluded)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Indeno(1,2,3-c,d)pyrene[k]	9.93 E-09	D
Isobutane	3.75 E-03	C
Methanol[k]	2.48 E-03	A
Methylcyclohexane	3.38 E-04	C
Methylene Chloride[k]	1.47 E-04	C
n-Hexane[k]	4.45 E-04	C
n-Nonane	3.08 E-05	C
n-Octane	7.44 E-05	C
n-Pentane	1.53 E-03	C
Naphthalene[k]	9.63 E-05	C
PAH[k]	1.34 E-04	D
Perylene[k]	4.97 E-09	D
Phenanthrene[k]	3.53 E-06	C
Phenol[k]	4.21 E-05	C
Propane	2.87 E-02	C
Pyrene[k]	5.84 E-07	C
Styrene[k]	5.48 E-05	A
Toluene[k]	9.63 E-04	A
Vinyl Chloride[k]	2.47 E-05	C
Xylene[k]	2.68 E-04	A

[a] Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM10, "uncontrolled" means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, "uncontrolled" means no oxidation control; the data set may include units with control techniques used for NOx control, such as PCC and SCR for lean burn engines, and PSC for rich burn engines. Factors are based on large population of engines. Factors are for engines at all loads, except as indicated. SCC = Source Classification Code. TOC = Total Organic Compounds. PM10 = Particulate Matter ≤ 10 microns (μm) aerodynamic diameter. A "<" sign in front of a factor means that the corresponding emission factor is based on one-half of the method detection limit.

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA

Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

$$\text{lb/hp-hr} = (\text{lb/MMBtu})\ (\text{heat input, MMBtu/hr})\ (1/\text{operating HP, 1/hp})$$

[c] Emission tests with unreported load conditions were not included in the data set.

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and h = heating value of natural gas (assume 1020 Btu/scf at 60°F).

[e] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6 scf.

[f] Emission factor for TOC is based on measured emission levels of 43 tests.

[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.48 lb/MMBtu vs. 1.45 lb/MMBtu, respectively.

[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.

[i] Considered $\leq 1\ \mu$m in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).

[j] No data were available for condensable PM emissions. The presented emission factor reflects emissions from 4SLB engines.

[k] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.

[l] For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.

Gas Analysis: Meter #M0501-00 Linam total inlet West from PGAS dated 4/22/05

Gas Constituent	Mol. Wt. (lb/lbmole)	Mole % (Vol %)	**Weight (lb/lbmole Gas)**	Wt. % (Wt %)
Methane	16.0	78.957	12.63	60.83
Ethane	30.0	9.477	2.84	13.69
Hydrogen Sulfide	**34.1**	**0.661**	**0.23**	**1.08**
Propane	44.0	4.757	2.09	10.08
i-Butane	58.0	0.678	0.39	1.89
n-Butane	58.0	1.390	0.81	3.88
i-Pentane	72.0	0.301	0.22	1.04
n-Pentane	72.0	0.284	0.20	0.98
Hexanes+	86.0	0.270	0.23	1.12
n-Hexane	86.0	0.000	0.00	0.00
Carbon Dioxide	44.0	1.359	0.60	2.88
Helium	4.0	0.000	0.00	0.00
Nitrogen	28.0	1.866	0.52	2.52
Total		**100.00**	**20.77**	**100.0**

Gas Analysis: Meter #M0500-00 Linam total inlet East from PGAS dated 7/27/05

Gas Constituent	Mol. Wt. (lb/lbmole)	Mole % (Vol %)	**Weight (lb/lbmole Gas)**	Wt. % (Wt %)
Methane	16.0	79.337	12.69	61.12
Ethane	30.0	9.553	2.87	13.80
Hydrogen Sulfide	**34.1**	**0.300**	**0.10**	**0.49**
Propane	44.0	4.578	2.01	9.70
i-Butane	58.0	0.596	0.35	1.66
n-Butane	58.0	1.314	0.76	3.67
i-Pentane	72.0	0.363	0.26	1.26
n-Pentane	72.0	0.363	0.26	1.26
Hexanes+	86.0	0.549	0.47	2.27
n-Hexane	86.0	0.000	0.00	0.00
Carbon Dioxide	44.0	1.280	0.56	2.71
Helium	4.0	0.000	0.00	0.00
Nitrogen	28.0	1.767	0.49	2.38
Total		**100.00**	**20.84**	**100.3**

Averaged Gas Analysis

Gas Constituent	Mol. Wt. (lb/lbmole)	Mole % (Vol %)	**Weight b/lbmole Ga**	Wt. % (Wt %)
Methane	16.0	79.147	12.66	60.98
Ethane	30.0	9.515	2.85	13.74
Hydrogen Sulfide	**34.1**	0.481	**0.16**	**0.79**
Propane	44.0	4.668	2.05	9.89
i-Butane	58.0	0.637	0.37	1.78
n-Butane	58.0	1.352	0.78	3.78
i-Pentane	72.0	0.332	0.24	1.15
n-Pentane	72.0	0.324	0.23	1.12
Hexanes+	86.0	0.410	0.35	1.70
n-Hexane	86.0	0.000	0.00	0.00
Carbon Dioxide	44.0	1.320	0.58	2.80
Helium	4.0	0.000	0.00	0.00
Nitrogen	28.0	1.817	0.51	2.45
Total		**100.00**	**20.80**	**100.2**
Total VOC		7.722		

225	MMSCf/d	Pl throughput
380	scf/lb-mol	
20.80	lb/lb-mol gas	
12,317,225	lb/day gas	
0.0079	wt fraction H2S	
97,121	lb/day H2S	
4,047	lb/hr H2S	
3965.8	lb/hr H2S	98% to be converted
7416.0	lb/hr SO2	1.87 lb SO2/lb H2S
0.00481	mol fraction H2S	of inlet gas
1.1	MMSCF/d H2S	(Pl throughput*mol frac H2S)
4.5	MMSCF/d	Tail gas throughput
0.24025	mol fraction H2S	of Tail gas throughput
24.025	mol % H2S	
26.4	with 10% margin	

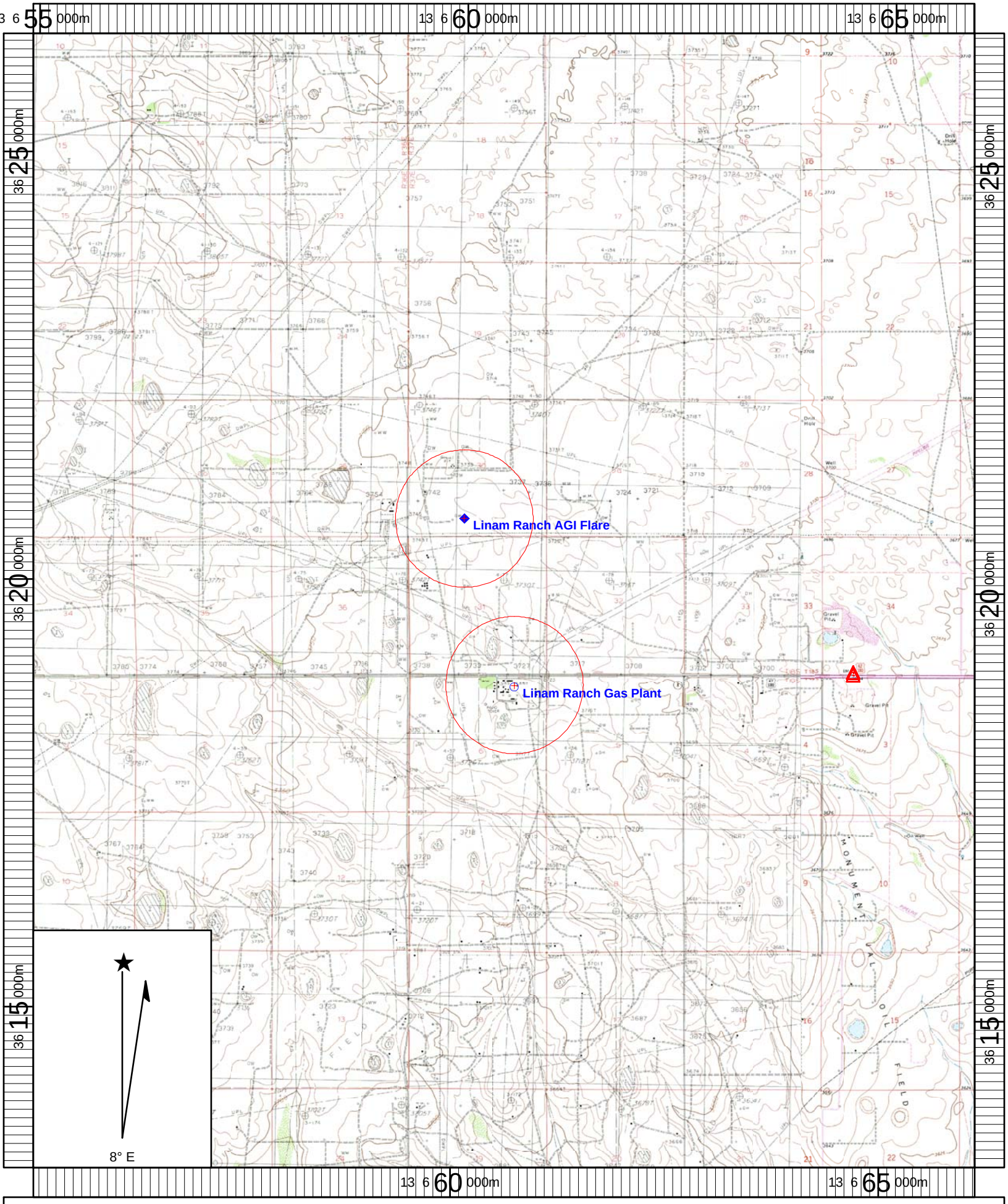
95	MMSCf/d	Worst case plant upset to flare
380	scf/lb-mol	
20.80	lb/lb-mol gas	
5,200,606	lb/day gas	
0.0079	wt fraction H2S	
41,007	lb/day H2S	
1,709	lb/hr H2S	
1674.4	lb/hr H2S	98% to be converted
3131.2	lb/hr SO2	1.87 lb SO2/lb H2S
0.00481	mol fraction H2S	of inlet gas
0.5	MMSCF/d H2S	(Pl throughput*mol frac H2S)
95.0	MMSCF/d	Tail gas throughput
0.004805	mol fraction H2S	of Tail gas throughput
0.4805	mol % H2S	
0.53	with 10% margin	

Section 8

Map(s)

A map 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	



Name: MONUMENT NORTH
Date: 8/11/2008
Scale: 1 inch equals 4545 feet

Location: 13 0660523 E 3619841 N
Caption: Site Location
DCP Linam Ranch Gas Plant
DCP Linam Ranch AGI Flare

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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. ☒ 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. ☒ 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 classified or legal 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 display 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.

Section 9
DCP Linam Ranch Gas Plant
From the Lea County Assesors Office - eMaps Plus

Owners of Record					
Pamela Kaye Howard	Calin Properties LLC	PO Box 188	Monument	NM	88265
New Mexico State Land Office		PO Box 1148	Santa Fe	NM	87504

Municipalities and Counties					
City of Hobbs	City Manager	200 E. Broadway	Hobbs	NM	88240
City of Monument	No identifyable city government				
Lea County	County Manager	100 N. Main, Suite 4	Lovington	NM	88260

There are no Indian tribes within a 10 mile radius of the facility.

March 24, 2011 **BY CERTIFIED MAIL**

To whom it may concern:

DCP Midstream LP announces its intent to apply to the New Mexico Environment Department to revise air quality permit 0039-M5for Linam Ranch Gas Plant. The anticipated date of application submittal to the Air Quality Bureau is March, 31 2011. This notice is a requirement according to New Mexico air quality regulations.

This facility is a natural gas processing plant that operates 24 hours a day, 7 days a week. It is located approximately 7 miles west of Hobbs, New Mexico in Section 6, Range 37E, Township 19S in Lea County. To reach the facility from Hobbs, travel west on State Highway 62/180 for approximately 7 miles. The facility is adjacent to the highway on your left. The proposed revision includes modifications to allow processing of natural gas at rates of up to 225 million standard cubic feet per day.

DCP estimates the maximum quantities of any regulated air contaminant to be approximately as follows:

Air Emissions

Pollutant	Pounds per Hour	Tons per Year
Oxides of Nitrogen (NOx)	220	955
Carbon Monoxide (CO)	125	540
Volatile Organic Compounds (VOC)	60	100
Sulfur Dioxide (SO_2)	5	15
Particulate Matter (TSP, PM_{10}, $PM_{2.5}$)	8	33
Formaldehyde	4	15
Benzene	0.2	0.5
Toluene	0.2	0.5
Xylenes	0.1	0.2
N-Hexane	0.6	2.5
Acetaldehyde	0.6	2.7
Acrolein	0.6	2.7
Methanol	0.4	1.8
Total HAPS	6	24

The owner/operator of this facility is:

DCP Midstream, Limited Partnership
370 17th Street Suite 2500
Denver, CO 80202

Questions and comments regarding this notice may be directed to:

Program Manager, Permit Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507
(505) 476-4300 FAX (505) 476-4375

Other comments and questions may be submitted verbally. Please refer to the company name and site name, as used in this notice or send a copy of this notice along with your comments to help identify the facility being commented on, since the Department may not have received the permit application at the time of this notice. Once the Department has performed a preliminary review of the application and its air quality impacts, another notice from the Department will be published in the legal section of the newspaper.

Sincerely,

DCP Midstream, LP, 370 17th St., Suite 2500
Denver, CO 80202

DCP MIDSTREAM LP
5718 WESTHEIMER SUITE 1900
HOUSTON , TX 77057

T19S
R37E
S6

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MONUMENT , NM 88265

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R 37E
S 5

T 18S
R 37E
S 31

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ARTICLE NUMBER
7155 5474 4100 9706 2111

FEES

Postage per piece	$0.44
Certified Fee	2.80
Total Postage & Fees:	$3.24

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City Manager
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Hobbs NM 88240-8425

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Top of the Page

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U.S. Postal Service
Certified Mail Receipt

ARTICLE NUMBER
7155 5474 4100 9706 2128

ARTICLE ADDRESS TO:
Lea County Manager
100 N. Main Ave Suite 4C
Lovington NM 88260-4000

FEES

Postage per piece	$0.44
Certified Fee	2.80
Total Postage & Fees:	$3.24

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PS Form 3800,2/04

Sender:

CERTIFIED MAIL 7155 5474 4100 9706 2128

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X

B. Received By: *(Please Print Clearly)*

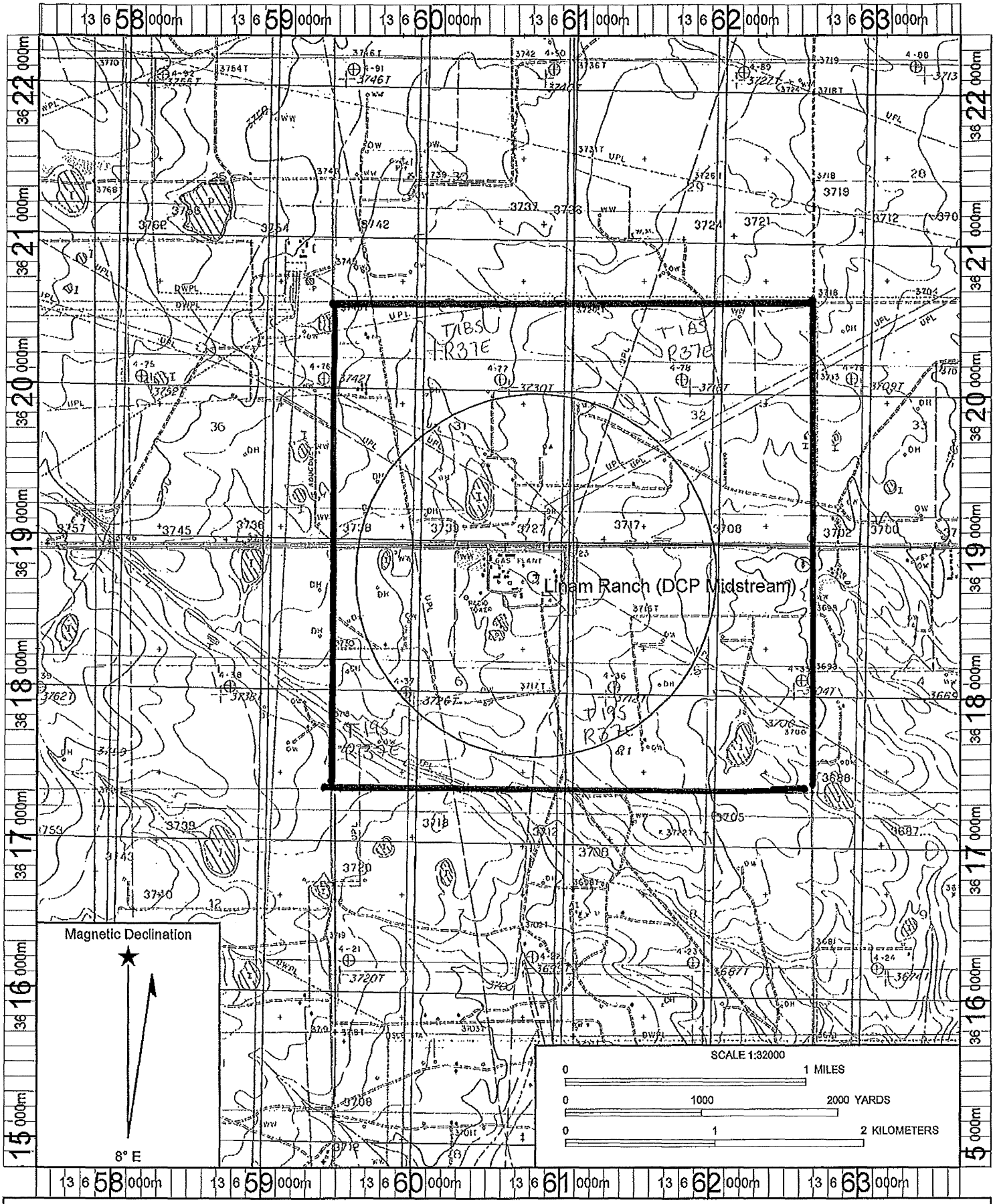
C. Date of Delivery

D. Addressee's Address *(If Different From Address Used by Sender.)*

Secondary A ... uite / Apt. / Floor *(Please Print Clearly)*

Delivery Address

City State ZIP + 4 Code



Name: MONUMENT NORTH
Date: 3/24/2011
Scale: 1 inch equals 2667 feet

Location: 13 0660533 E 3618598 N WGS84
Caption: DCP Midstream LP
Linam Ranch
Public Notice

Datum: WGS84

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March 25, 2011

KPER 95.7
Hobbs, New Mexico
(575) 393-4310 FAX

RE: Public Service Announcement

As part of the air quality permit process, New Mexico requires applicants to submit a public service announcement identifying the proposed permit action and providing information as to how the public can comment on this action.

Attached is such an announcement. Would you air it as a PSA?

Thank you,

Georgette Reeves
Trinity Consultants
8220 Louisiana Blvd NE, Suite A
Albuquerque NM 87113
(505) 266-6611
FAX (505) 266-7731
jromero@trinityconsultants.com

Radio Public Service Announcement

NOTICE OF AIR QUALITY PERMIT APPLICATION

DCP Midstream LP announces its intent to apply to the New Mexico Environment Department for modification to air quality permit 0039-M5 for Linam Ranch Gas Plant. The anticipated date of application submittal to the Air Quality Bureau is March 31, 2011. This notice is a requirement according to New Mexico air quality regulations.

This facility is a natural gas processing plant that operates 24 hours a day, 7 days a week. It is located roughly 7 miles west of Hobbs, New Mexico in Section 6, Range 37E, Township 19S in Lea County. To reach the facility from Hobbs, travel west on State Highway 62/180 for approximately 7 miles. The facility will be adjacent to the highway on your left. The proposed revision includes modifications to allow processing of natural gas at rates of up to 225 million standard cubic feet per day.. With this change, the facility remains a Title V major source.

Public notice of this modification is being posted at the facility, at the Hobbs City Hall, the Lea County Courthouse and the Hobbs Public Library.

If you have any questions regarding this application, please contact Program Manager, Permit Section, New Mexico Environment Department, Air Quality Bureau, 1301 Siler Road Building B, Santa Fe, New Mexico 87507. Their phone number is (505) 827-1494.

NOTICE

DCP Midstream LP announces its intent to apply to the New Mexico Environment Department to revise air quality permit 0039-M5 for Linam Ranch Gas Plant. The anticipated date of application submittal to the Air Quality Bureau is March 31, 2011. This notice is a requirement according to New Mexico air quality regulations.

This facility is a natural gas processing plant that operates 24 hours a day, 7 days a week. It is located approximately 7 miles west of Hobbs, New Mexico in Section 6, Range 37E, Township 19S in Lea County. To reach the facility from Hobbs, travel west on State Highway 62/180 for approximately 7 miles. The facility is adjacent to the highway on your left. The proposed revision includes modifications to allow processing of natural gas at rates of up to 225 million standard cubic feet per day.

DCP estimates the maximum quantities of any regulated air contaminant to be approximately as follows:

Air Emissions

Pollutant	Pounds per Hour	Tons per Year
Oxides of Nitrogen (NOx)	220	955
Carbon Monoxide (CO)	125	540
Volatile Organic Compounds (VOC)	60	100
Sulfur Dioxide (SO_2)	5	15
Particulate Matter (TSP, PM_{10}, $PM_{2.5}$)	8	33
Formaldehyde	4	16
Benzene	0.2	0.5
Toluene	0.2	0.5
Xylenes	0.1	0.2
N-Hexane	0.6	2.5
Acetaldehyde	0.6	2.7
Acrolein	0.6	2.7
Methanol	0.4	1.8
Total HAPS	6	24

The owner/operator of this facility is:

DCP Midstream, Limited Partnership
370 17th Street Suite 2500
Denver, CO 80202

Questions and comments regarding this notice may be directed to:

Program Manager, Permit Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507
(505) 476-4300 FAX (505) 476-4375

Other comments and questions may be submitted verbally. Please refer to the company name and site name, as used in this notice or send a copy of this notice along with your comments to help identify the facility being commented on, since the Department may not have received the permit application at the time of this notice. Once the Department has performed a preliminary review of the application and its air quality impacts, another notice from the Department will be published in the legal section of the newspaper.

General Posting of Notices – Certification

I, Johnnie Bradford, the undersigned, certify that on **March 28, 2011**, I posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in or near the City of **Hobbs**, Lea County, State of New Mexico on the following dates:

1. DCP Midstream LP
   Linam Ranch Gas Plant facility entrance
   139 West US Hwy 62/180
   Hobbs, NM 88240
   03/28/2011
2. Lea County Courthouse
   100 North Main
   Lovington, NM 88260-4030
   03/28/2011
3. Hobbs City Hall
   200 East Broadway
   Hobbs, NM 88240
   03/28/2011
4. Hobbs Public Library
   509 North Shipp Street
   Hobbs, NM 88240
   03/28/2011

Signed this 28th day of March, 2011,

Johnnie Bradford
Signature

03/28/2011
Date

Johnnie Bradford
Printed Name

Sr. Environmental Specialist
Title

NOTICE

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370 17th Street Suite 2500
Denver, CO 80202

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New Mexico Environment Department
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LEGAL NOTICE
MARCH 27, 2011

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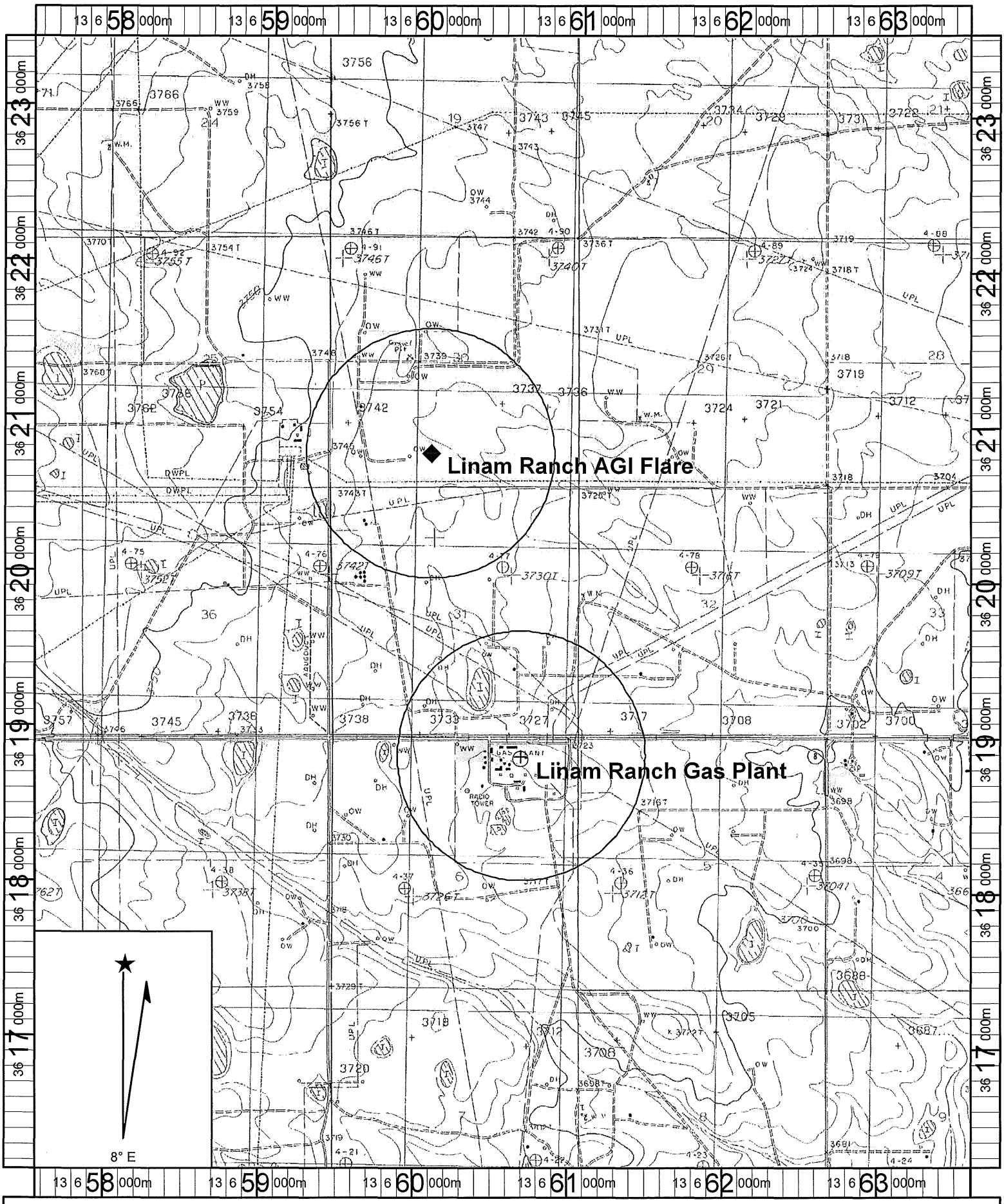
#26449



Name: MONUMENT NORTH
Date: 8/11/2008
Scale: 1 inch equals 2500 feet

Location: 13 0660523 E 3619841 N
Caption: Public Notice
DCP Linam Ranch Gas Plant
DCP Linam Ranch AGI Flare

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Hobbs

CITY OF HOBBS

CAREER OPPORTUNITIES
Excellent Benefit Plans - 20 to 25 year Retirement

Regular Full Time Positions
Library Director
($28.67 - $32.97)
Motor Vehicle Assistant
($11.85 - $13.63)
Parks Maintenance Worker
($11.38 - $13.09)
Pesticide Technician
($13.10 - $15.07)
Pump Operator
($13.10 - $26.00)

Temporary/Seasonal Positions
Cemetery Maintenance Worker
($11.38 - $13.09)
Golf Course Maintenance Worker
($11.38 - $13.09)
Golf General Laborer
($8.50 – $9.85)
Wastewater General Laborer
($8.50 – $9.85)

Fire Department
Academy Cadet
($11.00)
Assistant Fire Chief
($29.71 - $34.17)
Certified Firefighter/Paramedic
($12.76 - $14.67)
EMS Specialist
($12.04 - $13.85)

Police Department
Certified Police Officer
($22.28 – $25.62)
Certified Police Officer - SRO
($22.28 - $25.62)
Detention Officer
($15.59 - $17.93)

Seasonal Recreation Positions
Varies Seasonal Position
Hourly Rate Varies

Dollar amounts shown are hiring ranges only.

Apply:
Human Resources Department
200 E. Broadway
Hobbs, NM 88240
EOE/drug and smoke free workplace
Phone: (575) 397-9230
Resumes will not be accepted in lieu of applications
e-mail: personnel@hobbsnm.org
www.hobbsnm.org

McCOY'S BUILDING SUPPLY

McCoy's Building Supply, a successful family-owned lumber and building supply retail chain with 83 retail stores located throughout Texas, Oklahoma, New Mexico, Mississippi and Arkansas, is seeking qualified candidates for the following positions at our Hobbs, New Mexico retail location.

Part-Time:
Retail Cashiers (3 positions available)
Retail Floor Sales (5 positions available)

Full-Time:
Retail Delivery Coordinator
Retail 2nd Assistant Manager

Qualified candidates should be able to work effectively with people, have prior retail work experience and prior experience operating a cash register. Candidates for the Floor Sales and Delivery Coordinator positions should have prior lumber and/or building supply experience. Please see all of the respective job postings for more information on each position. If you are interested in pursuing an opportunity in this fast-paced, hard-working, retail building supply environment, please apply online at:

www.mccoys.com/why-mccoys/careers

Drug Screens and Background Checks Required
EOE, AAP, D, F, VA

Performance is Key

Key Energy Services has the following opportunities available:

Rig Services - Artesia, NM
Rig Supervisor

Rig Services - Hobbs, NM
Winch Truck Driver
Requires a current CDL-A and a valid driver's license.

Hot Oil Operator
Requires a current CDL-A and at least one year experience.

Trans/Vac Truck Driver
We are currently seeking experienced Trans/Vac Drivers and inexperienced CDL-A drivers willing to be trained in oilfield services.

We offer a very competitive compensation and benefits package. Employee safety is a priority at Key Energy Services. For information, please call **Bryan** at **(432) 571-7337**, email **bhernandez@keyenergy.com** or you may apply online at **keyenergy.com**.

Key Energy Services

Key Energy Services is a Drug Free workplace EOE.

keyenergy.com

Farm Auction
11 th Annual Seminole Area Farmers
Saturday April 2, 2011 Time: 10 am CST
Seminole, Texas

Directions to the Old Pioneer Gin Yard: From Seminole Texas go 9 miles West on Hwy. 62/180 to FM 1757, turn North and go 4 Miles, Or from Hobbs, New Mexico go 19 miles East on Hwy. 62/180 to FM 1757, Turn North 4 Miles.

Case IH 7130 MFWD tractor, JD 4320 tractor, Crust Buster Module Builder, 2-Wylie 16 row spray rigs, 2-Baker switch plows, Disc's, Plows, Listers, Grain Drills, Hamby 8-row tool bars, Redball 420 hooded 8-row sprayer, Pickups, Fuel trailers, 4-Chevy Grain Trucks, Sprinkler pipe, V-ripper, JD 885 Cultivator, Tillage tools, AG related items, Hyd bumper pull 5 ton dump trailer, Peanut Carts, Fuel tanks, 1998 diesel step side panel van-food vendor truck, Portable hyd. Hunting blind, Electric motors, Shop equipment, Tool bar make-up, Large live one-site auction!

Consignments Welcome---Look at the web site for photos:

WWW.BMJAUCTION.COM
Ben Jenkins Auctioneers
Ben M Jenkins Auctioneer------TX9728------575-361-5901
Ben H Royston Auctioneer------TX15425-----432-788-7879

Ferraro, first female VP candidate, dies at 75

BOSTON (AP) — Geraldine Ferraro was a relatively obscure congresswoman from the New York City borough of Queens in 1984 when she was tapped by Democratic presidential nominee Walter Mondale to join his ticket.

Her vice presidential bid, the first for a woman on a major party ticket, emboldened women across the country to seek public office and helped lay the groundwork for Hillary Rodham Clinton's presidential candidacy in 2008 and John McCain's choice of his running mate, Sarah Palin, that year.

Ferraro died Saturday in Boston, where the 75-year-old was being treated for complications of blood cancer. She died just before 10 a.m., said Amanda Fuchs Miller, a family friend who worked for Ferraro in her 1998 Senate bid and was acting as a spokeswoman for the family.

Mondale's campaign had struggled to gain traction and his selection of Ferraro, at least momentarily, revived his momentum and energized millions of women who were thrilled to see one of their own on a national ticket.

LEGAL LEGAL

LEGAL NOTICE
MARCH 20, 27, 2011
INVITATION FOR BIDS FOR 2011 GROUP SEAL COAT PROJECT

The Cities of Cities Of Abernathy, Big Spring, Borger, Brownfield, Dimmitt, Floydada, Hale Center, Hart, Hereford, Howard College, Idalou, Levelland, Littlefield, Morton, Muleshoe, Olney, Post, Ralls, Sudan, Sundown, Wheeler, Lubbock Reese Redevelopment Alliance, Texas and Hobbs, New Mexico are soliciting sealed bid proposals for construction of approximately 1,466,381 square yardsof seal coating city streets that will be bid by overall gallons of asphalt and cubic yards of rock. Bid opening will be at Parkhill, Smith & Cooper, Inc. 4222 85th Street Lubbock, Texas 79423 at 2:00 p.m. on Tuesday, April 5, 2011. Bid security in the amount of five percent of the bid submitted is required. Bidders are expected to inspect the site of the work and to inform themselves of all local conditions. Payment and performance bonds will be required in accordance with Article 5160, V.A.T.C.S., as amended by House Bill 344 passed by the 56th Legislature, Regular Session 1959 and Experience Record or equivalent New Mexico Article. Copies of the plans, specifications and contract documents may be obtained from Parkhill, Smith & Cooper, Inc., 4222 85th Street, Lubbock, Texas 79423 upon a refundable deposit of $30.00 for each set of documents.
#26444

LEGAL NOTICE
MARCH 27, 2011

The Administrative Office of the Courts (AOC) is soliciting proposals for one or more contractors to provide safe exchange and supervised visitation services in the First, Third, Fifth, Ninth, Eleventh, and Thirteenth Judicial Districts to provide services in the following counties: Los Alamos, Rio Arriba, Santa Fe, Doña Ana, Chaves, Eddy, Lea, Curry, Roosevelt, San Juan, Cibola, Sandoval, and Valencia Counties), pursuant to State law Section 40-12-5.1 (NMSA 1978). According to the statute, "a judicial district may create a 'safe exchange and supervised visitation program' by local court rule approved by the Supreme Court. . . . In a safe exchange and supervised visitation program, the district court may employ or contract with a person (1) with whom a child may be left by one parent for a short period while waiting to be picked up by the other parent; or (2) to supervise visits among one or both parents and the child." **The AOC must receive proposals no later than Friday, April 29, 2011 at 3:00 p.m. MST.** To receive the RFP packet, contact Kathy Spurgin at (505) 827-4808 at the Administrative Office of the Courts (AOC), 325 Don Gaspar, Room 100, Santa Fe, NM 87501 or check AOC's website at http://www.nmcourts.gov/newface/rfp/index.php. RFP packets will not be faxed. The Procurement Code, Sections 13-1-1 to 13-1-199 (NMSA 1978), imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for illegal bribes, gratuities, and kickbacks.
#26412

Briefs

Mega Millions ticket worth $319 million sold in New York

ALBANY, N.Y. (AP) — Just down the hill from where New York's leaders are wrestling with a $10 billion deficit, a tiny variety store in downtown Albany was abuzz Saturday with talk of a financial windfall.

The winning ticket for Friday night's $319 million Mega Millions lottery jackpot was sold at Coulson's News Center, just blocks from the New York Capitol building, a lottery official announced.

The phone rang non-stop Saturday morning, and a steady stream of customers passed through the newsstand and magazine shop to get coffee, the daily paper and, of course, lottery tickets, as word spread that the store sold the fifth-largest jackpot in Mega Millions history.

Store manager Steve Gallucci said lottery sales were up this week with the skyrocketing jackpot, but he didn't know yet who won. He expects to find out Monday from gaming officials.

"A lot of office people come in," he said. "A lot of regulars."

Coulson's, which opened in 1895, sits on a broad avenue across the street from the massive Gothic-style D&H Railroad's former headquarters and just around the corner from Jack's Oyster House, a storied restaurant where Albany's power brokers have for decades wandered down the hill from the ornate Capitol to cut deals over dinner and drinks.

The newsstand, with an unremarkable storefront adorned with signs advertising beer, cigarettes and other standard convenience store fare, is a regular stop for state employees who dominate the work force here.

Gallucci said the store had a $3.5 million state Lotto winner before, but nothing this big.

He said he has no preference who he hoped would win.

"I just hope it is somebody who's going to use the money in a good way," he said.

The final sales numbers pushed the annuity value of the prize to $319 million, with a cash value of $202.9 million, for the drawing that includes 41 states, the District of Columbia and the U.S. Virgin Islands.

The largest jackpot in Mega Millions history was $390 million in March 2007, and there have been three others higher than Friday's prize.

Air raids force Gadhafi retreat, rebels seize east

AJDABIYA, Libya (AP) — Libyan rebels clinched their hold on the east and seized back a key city on Saturday after decisive international airstrikes sent Moammar Gadhafi's forces into retreat, shedding their uniforms and ammunition as they fled.

Ajdabiya's initial loss to Gadhafi may have ultimately been what saved the rebels from imminent defeat, propelling the U.S. and its allies to swiftly pull together the air campaign now crippling Gadhafi's military. Its recapture gives President Barack Obama a tangible victory just as he faces criticism for bringing the United States into yet another war.

In Ajdabiya, drivers honked in celebration and flew the tricolor rebel flag. Others in the city fired guns into the air and danced on burned-out tanks that littered the road.

Their hold on the east secure again, the rebels promised to resume their march westward that had been reversed by Gadhafi's overwhelming firepower. Rebel fighters already had pushed forward to the outskirts of the oil port of Brega and were hoping to retake the city on Sunday, opposition spokeswoman Iman Bughaigis said, citing rebel military commanders.

"Without the planes we couldn't have done this. Gadhafi's weapons are at a different level than ours," said Ahmed Faraj, 38, a rebel fighter from Ajdabiya. "With the help of the planes we are going to push onward to Tripoli, God willing."

LEGAL LEGAL LEGAL

LEGAL NOTICE
MARCH 27, 2011

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This facility is a natural gas processing plant that operates 24 hours a day, 7 days a week. It is located approximately 7 miles west of Hobbs, New Mexico in Section 6, Range 37E, Township 19S in Lea County. To reach the facility from Hobbs, travel west on State Highway 62/180 for approximately 7 miles. The facility is adjacent to the highway on your left. The proposed revision includes modifications to allow processing of natural gas at rates of up to 225 million standard cubic feet per day.

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The owner/operator of this facility is:
DCP Midstream, Limited Partnership
370 17th Street Suite 2500
Denver, CO 80202

Questions and comments regarding this notice may be directed to:
Program Manager, Permit Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507
(505) 476-4300 FAX (505) 476-4375

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#26449

MONDAY PRIMETIME MAR. 28

	H	LV	EJ	6 P.M.	6:30	7 P.M.	7:30	8 P.M.	8:30	9 P.M.	9:30	10 P.M.	10:30	11 P.M.
3 KENW	3	3	3	PBS NewsHour (N) (S) (cc)		Antiques Roadshow (cc)		Mark Twain Finances Race Comes to Volume				Tracks Ahead	Smart Travels	Antiques
2 KMID	4	-	4	Dancing With the Stars (S Live) (cc)				(8:01) Castle Juror dies during a high-profile trial. (N)		KMID ABC2 News at 10	(9:35) Nightline (N)	Jimmy Kimmel Live (S) (cc)		(11:07) Extra (N) (S) (cc)
7 KOSA	5	-	7	How I Met	Mad Love	Two/Half Men	Mike & Molly	Hawaii Five-0 (S) (cc)		CBS 7 News	Late Show W/Letterman		Late Late Show/Ferguson	
12 KASA	6	-	-	Extra (N) (S) (cc)	TMZ (N) (S) (cc)	House Cuddy asks House to baby-sit. (S) (PA) (cc)		The Chicago Code "Pilot" (S) (cc)		KRQE News 13 on Fox 2	KRQE News 13 on Fox 2	The Simpsons (cc)	South Park (cc)	Cash Cab (cc)
14 KOAT	7	7	-	News	Entertainment Tonight (N)	Dancing With the Stars (Same-day Tape) (S) (cc)				(9:01) Castle Juror dies during a high-profile trial. (N)		Action 7 News Live at 10 (N) (cc)		Nightline (N) (cc)
6 KOBR	8	6	-	Eyewitness News 4 at 6	Eyewitness News 4	All Together Now: A Celebration of Service (N) (S) (cc)		The Event "Face Off" Sophia triggers a national disaster.		Harry's Law Adam tries to speak up ... (N) (S)		Eyewitness News 4 at 10	(10:35) The Tonight Show With Jay Leno (N) (S) (cc)	
9 KWES	9	9	9	All Together Now		The Event "Face Off" (N)		Harry's Law (N) (S) (cc)		News (S)	Tonight Show With Jay Leno		Late Night/Jimmy Fallon	
10 KBIM	10	12	10	Jeopardy! (N) (cc)	Wheel of Fortune (N)	How I Met Your Mother	Mad Love (N) (S) (cc)	Two and a Half Men	(8:31) Mike & Molly (cc)	Hawaii Five-0 McGarrett's father's killer resurfaces. (S)		KRQE News 13 at 10 (N)	(10:35) Late Show With David Letterman (N) (cc)	
24 KUPT	11	-	-	Law & Order: Criminal Intent		Law & Order: Criminal Intent		Jim	Friends (S)	Law & Order: SVU		Simpsons	King of Hill	Star Trek
41 KJTV	12	10	-	House (S) (PA) (cc)		The Chicago Code "Pilot"		FOX34 News at 9 (N)		How I Met	Two/Half Men	Raymond	Name Is Earl	Frasier
59 KASY	13	2	-	Family Feud	Family Feud	Law & Order: Criminal Intent		Law & Order: Criminal Intent		Cold Case Files (S) (cc)		Law & Order: SVU		King of Hill
16 KTEL	14	18	-	Caso Cerrado: Edición		Aurora (S) (SS)		Los Herederos del Monte		La Reina del Sur (E) (SS)		Noticiero	El Cartel	
TBS	20	40	16	Family Guy	Family Guy	Family Guy	Family Guy	Family Guy	Family Guy	Conan (N)		Lopez Tonight (N)		Conan
KWGO	21	52	-	Two and a Half Men	Two and a Half Men	90210 Emily tries to get close to Liam. (S) (cc)		Gossip Girl Blair is given a challenging assignment. (S)		The Office (S) (cc)	The Office (S) (cc)	Family Guy (S) (cc)	Family Guy (S) (cc)	Seinfeld "The Hot Tub"
KCHF	23	-	-	Issues	Supernatural	Place for Miracles Hour (cc)		God Answers Prayer		The Connect	Life Today	Precepts Life	Manna-Fest	Wretched
MTV	27	27	37	Jersey Shore	Jersey Shore (S) (cc)		RJ Berger	RJ Berger	MTV Special	RJ Berger	RJ Berger	The Real World (S) (cc)		True Life (S)
FOXS	28	32	51	Action Sports World Tour		World Poker Tour: Season 9		Best of	D-backs Live at Fan Fest		10th Inning	My Words	Best of	Sun Devils
USA	29	24	22	NCIS "Heart Break" (cc)		WWE Monday Night RAW (S Live) (cc)				Law & Order: SVU		(10:05) Chaos ★★★ (2005) Jason Statham.		
HIST	30	45	-	Pawn Stars	Pawn Stars	American Pickers (N) (cc)		Pawn Stars	Pawn Stars	American Pickers (cc)		Pawn Stars	Pawn Stars	Amer. Pickers
TLC	31	30	11	Cake Boss (S) (cc)		Cake Boss	Cake Boss	19 Kids-Count	Cake Boss	Cake Boss (S) (cc)		Cake Boss	Cake Boss	19 Kids-Count
SPIKE	32	25	26	UFC Unleashed (S)		The Punisher ★★ (2004, Action) Thomas Jane, John Travolta. (S) 'R'					Jail (cc)	UFC Fight Night (S)		
ESPN	34	4	21	Women's College Basketball		Women's College Basketball				SportsCenter (Live) (cc)		Baseball Ton.	NFL Live (N)	SportsCenter
ESPN2	35	5	47	High School Basketball		NBA Coast to Coast (Live) (cc)				Elite 24 (N)		NASCAR Now (cc)		NBA Tonight
NICK	36	33	35	My Wife-Kids	My Wife-Kids	Hates Chris	Hates Chris	George	George	The Nanny	The Nanny	The Nanny	The Nanny	George
CNN	37	14	23	In the Arena (N)		Piers Morgan Tonight (N)		Anderson Cooper 360 (N) (cc)				Piers Morgan Tonight		Cooper 360
A&E	38	35	40	Intervention "Jimmy" (cc)		Intervention "Jenos" (cc)		Heavy "Sallie; Chad" (cc)		Heavy "Mark; Patty" (cc)		(10:01) Intervention (cc)		Intervention
DISN	40	41	-	Fish Hooks	Fish Hooks	Good-Charlie	Good-Charlie	Suite/Deck	Suite/Deck	The Suite Life Movie (2011) Dylan Sprouse.			Suite/Deck	Suite/Deck
FAM	41	31	33	Secret-Teen		Secret-Teen		Secret-Teen		Secret-Teen		Make It or Break It (N)		Secret-Teen
LIFE	42	38	15	(5) Bridget Jones's Diary 'R'		Dave ★★★ (1993, Comedy) Kevin Kline, Sigourney Weaver. 'PG-13' (cc)					How I Met	Old Christine	How I Met	Will & Grace
DISC	43	37	29	Cash Cab	Cash Cab	Cash Cab	Cash-Chicago	Untamed Alaska		Monsters in Alaska		Deadliest Catch (S) (cc)		Alaska: Ext.
VH1	44	26	39	Wedding Wars (S)		Wedding Wars (S)		Beverly Hills	Love, Hip Hop	Wedding Wars (S)		Beverly Hills	Love, Hip Hop	Wedding
CMTV	45	29	42	Shut Up and Sing ★ (2006) David Alan Basche. (S) 'R' (cc)				(8:15) The Singing Bee (S)		(9:15) [illegible]	CMT Music	Smarter	Smarter	Hazzard
E!	46	38	52	(5) Something's Gotta Give ★★★ (2003) Jack Nicholson.				E! News (N)		Sex and-City	Sex and-City	Kourtney	Kourtney	After Lately
FX	47	-	19	(5:30) Forgetting Sarah Marshall ★★★ (2008) Jason Segel.				Two/Half Men	Two/Half Men	XXX: State of the Union ★★ (2005, Action) Ice Cube. 'PG-13'				
PLEX	48	-	-	(5:15) The Least of These (S)		Perry Mason Mystery: Jealous Jokester			(8:35) Dragonfly ★★ (2002) Kevin Costner. (S) 'PG-13' (cc)				(10:20) Legal Eagles ★★ (S)	
AMC	49	34	18	GoodFellas ★★★★ (1990, Crime Drama) Robert De Niro, Ray Liotta, Joe Pesci. 'R' (cc)						(9:15) GoodFellas ★★★★ (1990, Crime Drama) Robert De Niro. 'R' (cc)				
MSNBC	50	22	-	The Last Word		The Rachel Maddow Show		The Ed Show (N)		The Last Word		The Rachel Maddow Show		The Ed Show
HSN	51	-	-	(5) Stately Steel Jewelry		On the Go, Margano		Dr. Susan Ev.	Couture	On the Go	Body Solu.	Curations With Stefani Greenfield		
TOON	52	32	25	Garfield Show	Codename	Codename	Total Drama	Johnny Test	Johnny Test	Advent. Time	Regular Show	King of Hill	King of Hill	American Dad
ANPL	53	42	35	I Shouldn't Be Alive (cc)		I Shouldn't Be Alive (cc)		River Monsters: Unhooked		I Shouldn't Be Alive (cc)		I Shouldn't Be Alive (cc)		Monsters
TVLAND	54	-	43	Sanford	Sanford	Four Weddings and a Funeral ★★★ (1994) Hugh Grant. 'R'				Roseanne	Roseanne	Roseanne	Roseanne	The Nanny
SYFY	56	48	-	Being Human "Dog Eat Dog"		Being Human "Going Dutch"		Stargate Universe "Hope"		Being Human "Going Dutch"		Stargate Universe "Hope"		Fact or Faked
HGTV	57	43	-	Property	Property	House	Hunters Int'l	House	Hunters Int'l	First Place	First Place	House	Hunters Int'l	House
FOXN	58	46	34	The O'Reilly Factor (N) (cc)		Hannity (N)		Greta Van Susteren		The O'Reilly Factor (N) (cc)		Hannity		Record
SPEED	64	-	213	Pinks - All Out		The 10	The 10	Car Warriors "73 Camaro"		Pinks - All Out		The 10	The 10	Car Warriors
OXY	68	-	-	The Bad Girls Club (cc)		The Bad Girls Club (N)		All About Aubrey (N) (cc)		The Bad Girls Club (cc)		All About Aubrey (cc)		Bad Girls
FOOD	70	-	45	Unwrapped	Candy Store	Diners, Drive	Diners, Drive	Meat	Best Thing	Ice Brigade	Good Eats (N)	Diners, Drive	Diners, Drive	Meat
HALL	71	-	30	Touched by an Angel (cc)		Touched by an Angel (cc)		Touched by an Angel (cc)		Golden Girls	Golden Girls	Golden Girls	Golden Girls	Cheers (S)
NGC	72	106	44	Death Fog		The Whale That Ate Jaws		Explorer		Death Fog		The Whale That Ate Jaws		Explorer
SOAP	73	-	-	All My Children (S) (cc)		One Life to Live (S) (cc)		General Hospital (S) (cc)		Days of our Lives (S) (cc)		The Young and the Restless		All Children
EWTN	74	-	-	The Journey Home		First Love	Holy Rosary	The World Over		Rome	Women of	Daily Mass: Our Lady		Journey
BET	75	49	-	The Five Heartbeats ★★ (1991, Comedy-Drama) Robert Townsend. 'R'					The Game	The Mo'Nique Show (cc)		The Wendy Williams Show		Baby 2
COM	77	-	-	(6) Hot Rod ★★ (2007) (cc)		Always Sunny	Always Sunny	Always Sunny	Always Sunny	Daily Show	Colbert Rep	Ralphie May: Girth of-Nation		Futurama
TNT	78	28	20	Bones (S) (cc)		Bones (S) (cc)		The Closer "Heart Attack"		HawthoRNe (cc)		CSI: NY "Past Imperfect"		CSI: NY (S)
CNBC	80	21	36	The Truth About Shoplifting		Biography on CNBC		Biography on CNBC		Mad Money		Biography on CNBC		Biography
WGN-A	-	25	28	Old Christine	Old Christine	Amer. Funniest Home Videos		WGN News at Nine (N) (cc)		Scrubs (S)	Scrubs (S)	South Park	South Park	Entourage

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NEIGHBORS PAGE

Announcements, thank-you letters, photographs and other items for the Neighbors Page must be submitted by 5 p.m. Thursday and can be sent by mail to P.O. Box 850, Hobbs, N.M. 88241, by fax to 393-5724, by e-mail to editor@hobbsnews.com or they can be delivered to the News-Sun newsroom at 201 N. Thorp St. in Hobbs.

Announcements should be brief and must include time, date and location of the event as well as contact information if applicable. They will be edited for grammar, style and length.

Questions regarding the Neighbors Page should be addressed to editor Daniel Russell.

SUBMITTED PHOTO

Piano recital

On Feb. 27, the piano students of Michele Walton were presented in recital at First United Methodist Church in Hobbs. Students participating in the recital were: Saniya Ornelas, Layton Camplain, Cutter Cruz, Logan Camplain, Alaina Stevenson, Katie Rempel, Thalia Miller, Ashlyn Salazar, Isaac Trusty, Sarah Ericksen, Taylor Robertson, Kaleb Hobbs, Bryce Cruz, Holly Lindley, Claire Newey, Kleana Serna, Julia Morales, Erin Hines, Justin Rempel, Diana Darling, Suzanne Driskill, Madison Webb, Zakaya Benge, Abby Crowe, Sarah Driskill, Kaitlyn Stevenson, Jenny Bublis, Lauren Tinley, Brooklyn Stevenson and Dustin Spalding.

Calendar

from PAGE 16

ORIGINAL GROUP, noon and 8 p.m., 218 W. Dunnam. Open non-smoking big book study, then open meeting.

AL-ANON, support group for friends and family of alcoholics, 8 p.m., 218 W. Dunnam.

DOWNTOWN LIONS CLUB, noon, Western Sizzlin' Restaurant. Public welcomed.

NARCOTICS ANONYMOUS, 8-9 p.m., 501 N. Shipp.

PALMER DRUG ABUSE PROGRAM, 5:30 p.m., 500 N. Dalmont. 397-6333 or 397-6237.

ALATEEN, a group for children who have parents with drug and alcohol problems, meets from 7:30-8 p.m. Mondays and Wednesdays at 218 W. Dunnam.

OPEN RECOVERY 12-step meeting, 8 p.m. every Wednesday and Thursday, Opportunity House, 206 N. Turner.

THURSDAY

HOBBS CANCER SUPPORT GROUP meets at 5-6 p.m. every first Thursday at 200 E. Park, Senior Center Room 126.

THE AMERICAN LEGION Argonne Post 26 meets the last Thursday of the month at 6:30 p.m. at 319 E. Dunnam St. 393-6818.

VFW LADIES AUXILIARY Post 3274, third Thursday, 6:30 p.m., VFW Post, 604 W. Alto, Shawna Rosa , presdient, 393-3555.

DEMOCRATIC PARTY OF LEA COUNTY, 6:30 p.m., first Thursday of the month, Democratic Headquarters, 604 W. Broadway.

ALCOHOLICS ANONYMOUS, NEW LIFE GROUP, noon and 8 p.m, 121 W. Broadway. Discussion meeting.

ALCOHOLICS ANONYMOUS, HOBBS ORIGINAL GROUP, 8 p.m., 218 S. Dunnam. Closed non-smoking meeting.

ALCOHOLICS ANONYMOUS, LOVINGTON GROUP, 8 p.m., St. Mary's Episcopal Church.

LEA COUNTY REPUBLICAN WOMEN, fourth Thursday, 11:30 a.m.-1 p.m., Western Sizzlin' Restaurant; call Vivian at 393-4447.

CANCER SUPPORT GROUP, 6 p.m., third Thursday, Agnes Kastner Head building; call Virginia Meekins 393-2639.

SOUTHEASTERN NEW MEXICO AVIATION ASSOCIATION (SENMAA), 7 p.m., first Thursday, second floor meeting room, Lea County Regional Airport. Public invited.

HOBBS KENNEL CLUB, first Thursday, 7 p.m., 2337 N. Jefferson. Jane Neithercut, 393-8171.

FOMISA, a support group for families of mentally ill and/or substance abusers, 7-8 p.m., 117 W. Dunnam. Use side door on Shipp Street.

DOUBLE TROUBLE IN RECOVERY GROUP, a 12-step program for people with a physical or mental illness coupled with a substance (alcohol or drug) abuse, 5:30-6:30 p.m., 117 W. Dunnam. Use side door on Shipp Street.

HOBBS MOOSE LODGE will have bingo at 6 p.m. every Thursday. Call Burney Dillard, 391-8446.

HEPATITIS SUPPORT GROUP meets the first Thursday of every month from 6-8 p.m. at the Hobbs Public Library. Call Dr. Ruiz, 392-8593.

HOBBS JAYCEES meet the second Thursday of each month at noon at Western Sizzlin'. For more information call Holly Taylor at 397-3201.

PIECEMAKER QUILT ASSOCIATION meets the second Thursday of the month at 6:30 p.m. at Agnes Kastner Head Community Center. For more information call Arleen Coleson at 391-8365 or Wilma Clampitt at 392-3020.

OPEN RECOVERY 12-step meeting, 8 p.m. every Wednesday and Thursday, Opportunity House, 206 N. Turner.

AL-ANON meets at 7 p.m. the first and third Thursday of every month at Belvue Baptist Church, 1701 N. Coleman.

LEA COUNTY REPUBLICAN WOMEN meet at 11:45 a.m. the fourth Thursday of every month at Western Sizzlin'. For more information, call Dee Robinson at 392-5835.

LEA COUNTY REPUBLICAN PARTY meets at 6:30 p.m. the fourth Thursday of every month at its headquarters, 1776 N. Turner. For information, call Ann Batson, 393-6020.

THE LOVINGTON GIRL SCOUTS community meeting is at 5:30 p.m. the second Thursday of every month at Lovington Public Library. The public is invited to attend.

ONE DAY AT A TIME (AA meeting), 8-9 p.m., The Greater Way Building on Main Street, Eunice. George, 631-6492.

WOMEN'S SUBSTANCE ABUSE group meets at 4 p.m. Thursday at 401 E. Castle Ave. For more information, call 391-7885.

THE CHRISTIAN MOTORCYCLE ASSOCIATION meets the second Thursday of each month at the Agnes Kastner Head Senior Center. For more information, contact Gary James at 631-6987.

FRIDAY

ALCOHOLICS ANONYMOUS, NEW LIFE GROUP, noon and 8 p.m., 121 W. Broadway. Discussion meeting, then speaker meeting. Nightly speaker, first Friday; birthday night, last Friday.

ALCOHOLICS ANONYMOUS, HOBBS ORIGINAL GROUP, 8 p.m., 218 W. Dunnam. Open meeting.

NARCOTICS ANONYMOUS, 6:30-7:30 p.m., 501 N. Shipp.

LEA COUNTY WOMEN'S NETWORK, third Friday, noon, Black Gold Casino Steak House.

PALMER DRUG ABUSE PROGRAM, 7:30 p.m., 500 N. Dalmont. 397-6333 or 397-6237.

WEIGH TO GO, a weight loss group, meets every Friday, 8:30-10 a.m., Agnes Kastner Head Center, Rm. 125. 393-5498 or 392-8066.

THANK YOU

Lovington thanks inmate painters

The City of Lovington Recreation Department would like to send our sincerest thanks to the Lea County Correctional Facility for allowing inmates to paint the Harold Runnels Softball Complex this past week. Corrections officer David Martinez was especially helpful in overseeing the job done by the inmates involved in this project.

Jesse Munoz
Recreation
Superintendent

Prize winners

The winners of the Coach purse and wallet set from Sister's Boutique were Sandra Marin and her daughter, Alexandra Marin, from Denver City.

ANNOUNCEMENTS

Parental skills targeted during Child Abuse Prevention Month

April is National Child Abuse Prevention Month.

This month and throughout the year, the Community Drug Coalition of Lea County encourages all individuals and organizations to play a role in making Lea County a better place for families. By ensuring that parents have the knowledge, skills and resources the need to care for their children, we can help prevent child abuse and neglect by strengthening families and communities.

The impact of child maltreatment can be profound. Research shows that child maltreatment is associated with adverse health and mental health outcomes in children and families, and those negative effects can last a lifetime. The long-term effects can be physical, psychological, or behavioral. A history of child abuse or neglect has been associated with increased risk of substance abuse, metal illness, teen pregnancy, alcohol and drug use and so much more.

For more information you may contact the CDC at 39171301, on Facebook or at 1601 N. Turner Suite 207.

SUBSCRIBE TODAY!
393-2123

MILITARY

Daniel Booker

Army Spec. Daniel J. Booker has graduated from Basic Combat Training at Fort Sill, Lawton, Okla.

During the nine weeks of training, the soldier studied the Army mission and received instruction and training exercises in drill and ceremonies, Army history, core values and traditions, military courtesy, military justice, physical fitness, first aid, rifle marksmanship, weapons use, map reading and land navigation, foot marches, armed and unarmed combat, and field maneuvers and tactics.

He is the son of Marsha and Lloyd R. Booker of Hobbs.

Booker graduated in 2002 from Hobbs High School, and received a bachelor's degree in 2006 from Eastern New Mexico University in Portales.

NOTICE

DCP Midstream LP announces its intent to apply to the New Mexico Environment Department to revise air quality permit 0039-M5for Linam Ranch Gas Plant. The anticipated date of application submittal to the Air Quality Bureau is March 31, 2011. This notice is a requirement according to New Mexico air quality regulations. This facility is a natural gas processing plant that operates 24 hours a day, 7 days a week. It is located approximately 7 miles west of Hobbs, New Mexico in Section 6, Range 37E, Township 19S in Lea County. To reach the facility from Hobbs, travel west on State Highway 62/180 for approximately 7 miles. The facility is adjacent to the highway on your left. The proposed revision includes modifications to allow processing of natural gas at rates of up to 225 million standard cubic feet per day. DCP estimates the maximum quantities of any regulated air contaminant to be approximately as follows:Air Emissions

Air Emissions

Pollutant	Pounds per Hour	Tons per Year
Oxides of Nitrogen (NOx)	220	955
Carbon Monoxide (CO)	125	540
Volatile Organic Compounds (VOC)	60	100
Sulfur Dioxide (SO2)	5	15
Particulate Matter (TSP, PM_{10}, $PM_{2.5}$)	8	33
Formaldehyde	4	16
Benzene	0.2	0.5
Toluene	0.2	0.5
Xylenes	0.1	0.2
N-Hexane	0.6	2.5
Acetaldehyde	0.6	2.7
Acrolein	0.6	2.7
Methanol	0.4	1.8
Total HAPs	6	24

The owner/operator of this facility is:

DCP Midstream, Limited Partnership
370 17th Street Suite 2500
Denver, CO 80202

Questions and comments regarding this notice may be directed to:
Program Manager, Permit Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507
(505) 476-4300 FAX (505) 476-4375

Other comments and questions may be submitted verbally. Please refer to the company name and site name, as used in this notice or send a copy of this notice along with your comments to help identify the facility being commented on, since the Department may not have received the permit application at the time of this notice. Once the Department has performed a preliminary review of the application and its air quality impacts, another notice from the Department will be published in the legal section of the newspaper.

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Section 10

Written Description of the Routine Operations of the Facility

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A written description of the routine operations of the facility. 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 Plant is a natural gas processing plant permitted to process up to 225 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 H2S and CO2 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 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 H2S and CO2, which react with the amine to form an amine sulfide complex and carbonate, i.e., the amine absorbs the H2S and CO2 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 H2S.

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, H2S and CO2 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. H2S, and CO2, known as “acid gases”, 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 acid gas 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.

Sulfur Recovery Unit (SRU):

The SRU is not in service. The following description is retained since the SRU incinerator is listed as a regulated unit.

This unit converts these acid gases into liquid sulfur. The Linam Ranch Plant SRU is a modified split-flow Claus process that uses four activated alumina catalyst beds in a series. "Acid Gas" fed to the SRU varies in content, but usually contains

approximately 30% H2S, 63% CO2, and 7% hydrocarbons and water vapor. Approximately 40% of the inlet acid gas stream flows to the reaction furnace where a specific quantity of air is introduced to produce SO2. Hydrocarbons must be kept at a minimum to prevent contamination of the catalyst beds.

The proportions of acid gas and air (air-to-gas ratio) fed to the reactor furnace are controlled to minimize the amount of excess air entering the process. The stream leaving the reactor furnace then recombines with the balance of the acid gas feed stream before entering the #1 50 # steam condenser. The acid gases are preheated in the #1 Reheater (Aux Burner) and then flows through the #1 Catalyst bed and to the #2 - 45# condenser. This process continues through the #2, #3, #4 Steam Reheaters, and the #2, #3, #4 Catalyst beds and #3, #4, #5 condensers to a final sulfur separator and thence to the Thermal Oxidizer. The Catalyst used with this process is not consumed but loses reactivity with age and contamination.

The SRU process uses the following chemical reactions to convert hydrogen sulfide to elemental sulfur.

$$H_2S + 1\tfrac{1}{2}\, O_2 = SO_2 + H_20$$
$$2\, H_2S + SO_2 = 3/n\, S_n + 2\, H_20$$

The chemical reactions that take place inside the system are highly exothermic. Operating temperatures as high as 700 °F are normal. If excess air is fed to the system, a runaway reaction can result in temperatures as high as 3000 °F in the catalyst beds. To control the unit's operating temperatures, the hot gas streams are cooled by water/steam to condense the sulfur vapor. The liquid molten sulfur product then flows to an underground storage tank and is maintained at approximately 270 °F. Cooling the catalyst bed outlets with water produces 45-psig utility steam while the reactor furnace boiler produces 250-psig steam. Produced liquid sulfur is trucked off-site in specially insulated trucks.

Waste Heat Recovery Units and Boilers:
The Linam Ranch Plant (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. Lastly the SRU Reaction Furnace Waste Heat Recovery Unit produces 250# Steam. 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. The source of 45# steam is off the Exhaust of Steam Driven Turbines and 45# Steam Condensers in the SRU. A 45# steam makeup valve is also ready to supply any excess requirements by reducing 250# steam pressure through the motor valve. The 45# Steam is used as heat supply for the DGA reboiler and heat tracing.

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 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. Liquids are dumped to the stabilized condensate storage tanks and are pumped to a sales pipeline or shipped by truck.

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 H2S. This trace contaminant of H2S 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 adsorb 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 adsorb 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°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 thence the gas goes to 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 stream enters the Demethanizer Reboiler, which is a multiple stream, brazed aluminum plate-fin exchanger. 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. In the event that 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 on 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 are sourced from the 40# steam system. A stand-alone Reverse Osmosis water treatment system was installed as part of this project to provide 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.

Section 11

Source Determination

Source submitting under 20.2.70, 20.2.72, 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, Single Source Determination Guidance, 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, 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)**:**
Linam Ranch Gas Plant

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

SIC Code: 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**

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

☒ **Yes** ☐ **No**

Contiguous or Adjacent: 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, 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, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 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

Section 12.A
PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74 NMAC 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 EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- ☐ **a minor source before and after this modification (if so, delete C and D below).**
- ☐ **a major 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 those listed 20.2.74.501 Table I – PSD Source Categories. The "project" emissions for this modification are significant. The proposed action results in increases in the pollutants shown below. The "project" emissions listed below do only result from changes described in this permit application, thus no emissions from other revisions or modifications, past or future, to this facility are included. This project results in "de-bottlenecking", resulting in higher emissions. The project emissions (before netting) for this project are as follows:

	Scenario A	Scenario B
a.	NOx: 233.4 TPY	NOx: 166.6 TPY
b.	CO: 137.9 TPY	CO: 104.2 TPY
c.	VOC: 61.7 TPY	VOC: 56.5 TPY
d.	SOx: 4.0 TPY	SOx: 4.0 TPY
e.	PM: 10.9 TPY	PM: 9.4 TPY
f.	PM_{10} 10.9 TPY	PM_{10} 9.4 TPY

Scenarios A and B are described in Section 15 of this application.

C. Netting is required for CO, NOx and VOC for both Scenario A and Scenario B; see below.

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

E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications in the last two years were related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.

The Linam Ranch Gas Plant is a PSD major source because it has the potential to emit (PTE) of greater than 250 tpy of NO_x.

While each project proposed in Section 3 of this application, if considered individually, may not debottleneck the facility, the changes taken together do have the effect of increasing the physical capacity of the facility considering the current physical constraints. In order to appropriately determine PSD applicability for a PSD major source, the significant emissions increase

and the significant net emissions increase must be determined for any physical change or change in the method of operation. The changes being proposed here would qualify as physical changes or changes in the method of operation and, thus, would be subject to this review.

To determine the emissions change associated with the overall project, a comparison of baseline actual emissions to potential emissions upon completion of the project was made. Baseline actual emissions are defined as (paraphrased) the highest consecutive 24-month period of ACTUAL annual emissions in the past 10 years. Potential emissions are defined as (paraphrased) the annual emissions rate of a source at its maximum capacity to emit a regulated pollutant under its physical or operational design, including any enforceable limits on emissions. The following tables (Tables 12-2 through 12-13) show project emissions and netting calculations for CO, NOx, VOC, PM, PM_{10} and CO_2e for both Scenarios A and B. As shown in these tables, only CO, NOx and VOC show significant project emissions but in neither case is a PSD modification triggered since the net increase are less than significant emission rate.

An analysis of permit modifications made in the last two years is shown in Table 12-1. There were no previous permit modifications with emission increases that could be considered a single project with the changes proposed in this permit application.

Table 12-1: Permit Modifications in the Last Two Years

NSR Permit Number	Effective Date	Permit Type	Description	Related to This Action	Could be Considered Single Project with this action
0039-M5	12/15/2008	Significant Revision	Install an acid gas injection well.	No	No

Table 12-2: CO Significant and Net Emission Increase Calculation (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	15.4	15.4
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	86.9	86.9
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	63.7	86.9	23.2
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	36.7	41.5	4.8
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	38.1	39.5	1.4
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	20.7	21.6	0.9
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	18.3	19.2	0.9
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	1.7	6.1	4.4
								Total Project Increase:	137.9
								PSD SER:	100.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	206.2	103.0	-103.2
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	34.6
								PSD SER:	100.0
								PSD Review Required?	No

Table 12-3 : NO_X Significant and Net Emission Increase Calculation (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	15.2	15.2
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	172.1	172.1
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	148.3	172.1	23.8
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	45.8	51.8	6.0
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	47.7	49.3	1.6
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	108.6	114.0	5.4
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	95.3	103.9	8.6
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	6.7	7.3	0.6
								Total Project Increase:	233.4
								PSD SER:	40.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	416.4	208.0	-208.4
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	25.1
								PSD SER:	40.0
								PSD Review Required?	No

Table 12-4: VOC Significant and Net Emission Increase Calculation (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
FUG	New fugitive leaks	N/A	N/A	N/A	N/A	All	0.0	18.9	18.9
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	8.8	8.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	13.4	13.4
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	11.9	13.4	1.5
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.3	1.4	0.1
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	1.3	1.4	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.5	1.5	0.0
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	0.7	10.9	10.2
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.2	2.7	2.5
TK-VRU	Condensate Tanks	N/A	N/A	N/A	N/A	Condensate	0.0	5.0	5.0
DH-10	Dehydration	N/A	N/A	N/A	N/A	Dehydration	0.0	1.2	1.2
								Total Project Increase:	61.7
								PSD SER:	40.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	56.6	28.3	-28.3
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	33.4
								PSD SER:	40.0
								PSD Review Required?	No

Table 12-5: PM Significant Emission Rate Determination and Netting Analysis (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	5.8	5.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	3.8	3.8
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	3.4	3.8	0.4
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.8	2.2	0.4
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	2.0	2.1	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.0	1.1	0.1
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	1.0	1.1	0.1
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.5	0.6	0.1
								Total Project Increase:	10.9
								PSD SER:	25.0
								PSD Netting Required?	No

Table 12-6: PM_{10} Significant Emission Increase Calculation (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	5.8	5.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	3.8	3.8
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	3.4	3.8	0.4
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.8	2.2	0.4
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	2.0	2.1	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.0	1.1	0.1
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	1.0	1.1	0.1
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.5	0.6	0.1
								Total Project Increase:	10.9
								PSD SER:	15.0
								PSD Netting Required?	No

Table 12-7: CO_2e Significant Emission Increase Calculation (Scenario A)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Potential Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
FUG	New fugitive leaks	N/A	N/A	N/A	N/A	All	0.0	245.1	245.1
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	30,442.9	30,442.9
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet/Residue Compression	0.0	9,079.7	9,079.7
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet/Residue Compression	8,086.5	9,079.7	993.3
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet/Residue Compression	4,052.1	6,071.9	2,019.8
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet/Residue Compression			
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	35,189.1	39,744.3	4,555.2
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	36,541.9	37,900.5	1,358.5
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	23,483.7	24,635.3	1,151.6
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	17,343.4	18,182.0	838.5
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	4,159.6	7,682.5	3,522.9
TK-VRU	Condensate Tanks	N/A	N/A	N/A	N/A	Condensate	0.0	0.1	0.1
DH-10	Dehydration	N/A	N/A	N/A	N/A	Dehydration	0.0	12.9	12.9
								Total Project Increase:	54,220.5
								PSD SER:	75,000.0
								PSD Netting Required?	No

Table 12-8: CO Significant and Net Emission Increase Calculation (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	15.4	15.4
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	53.2	53.2
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	63.7	86.9	23.2
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	36.7	41.5	4.8
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	38.1	39.5	1.4
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	20.7	21.6	0.9
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	18.3	19.2	0.9
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	1.7	6.1	4.4
								Total Project Increase:	104.2
								PSD SER:	100.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	206.2	143.0	-63.3
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	40.9
								PSD SER:	100.0
								PSD Review Required?	No

Table 12-9 : NO_X Significant and Net Emission Increase Calculation (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	15.2	15.2
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	105.3	105.3
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	148.3	172.1	23.8
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	45.8	51.8	6.0
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	47.7	49.3	1.6
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	108.6	114.0	5.4
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	95.3	103.9	8.6
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	6.7	7.3	0.6
								Total Project Increase:	166.6
								PSD SER:	40.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	416.4	288.7	-127.6
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	39.0
								PSD SER:	40.0
								PSD Review Required?	No

Table 12-10: VOC Significant and Net Emission Increase Calculation (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
FUG	New fugitive leaks	N/A	N/A	N/A	N/A	All	0.0	18.9	18.9
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	8.8	8.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	8.2	8.2
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	11.9	13.4	1.5
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.3	1.4	0.1
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	1.3	1.4	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.5	1.5	0.0
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	0.7	10.9	10.2
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.2	2.7	2.5
TK-VRU	Condensate Tanks	N/A	N/A	N/A	N/A	Condensate	0.0	5.0	5.0
DH-10	Dehydration	N/A	N/A	N/A	N/A	Dehydration	0.0	1.2	1.2
								Total Project Increase:	56.5
								PSD SER:	40.0
								PSD Netting Required?	Yes
Contemporaneous Decreases									
8	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression	56.6	39.3	-17.3
9	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet / Residue Compression			
Other									
No prior contemporaneous changes that increased emissions for this pollutant. Except for the changes noted above, the permitted source list and emissions were in effect more than five years prior to the change proposed with this project.									
								Net Emissions Increase:	39.2
								PSD SER:	40.0
								PSD Review Required?	No

Table 12-11: PM Significant Emission Rate Determination and Netting Analysis (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	5.8	5.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	2.3	2.3
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	3.4	3.8	0.4
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.8	2.2	0.4
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	2.0	2.1	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.0	1.1	0.1
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	1.0	1.1	0.1
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.5	0.6	0.1
								Total Project Increase:	9.4
								PSD SER:	25.0
								PSD Netting Required?	No

Table 12-12: PM_{10} Significant Emission Increase Calculation (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Permit Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	5.8	5.8
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	0.0	2.3	2.3
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet / Residue Compression	3.4	3.8	0.4
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	1.8	2.2	0.4
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	2.0	2.1	0.1
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	1.0	1.1	0.1
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	1.0	1.1	0.1
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	0.5	0.6	0.1
								Total Project Increase:	9.4
								PSD SER:	15.0
								PSD Netting Required?	No

Table 12-13: CO_2e Significant Emission Increase Calculation (Scenario B)

Unit ID	Description	Mfr	Model	Capacity	Capacity Units	Service	2006-2007 Baseline (tpy)	Potential Emissions (tpy)	Project Emissions Increase (tpy)
New Units									
FUG	New fugitive leaks	N/A	N/A	N/A	N/A	All	0.0	245.1	245.1
28	Natural Gas Fired Turbine	Solar	T60-7800S	7,340	hp	Inlet Compression	0.0	30,442.9	30,442.9
Existing Units									
6	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet/Residue Compression	0.0	5,555.6	5,555.6
7	Natural Gas Fired Engine	Clark	TLA-6	2,000	hp	Inlet/Residue Compression	8,086.5	9,079.7	993.3
10	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet/Residue Compression	4,052.1	6,071.9	2,019.8
11	Natural Gas Fired Engine	Clark	HBA-6	1,267	hp	Inlet/Residue Compression			
29	Natural Gas Fired Turbine	Solar	T70-10302S	77.6	MMBtu/hr	Inlet Compression	35,189.1	39,744.3	4,555.2
30	Natural Gas Fired Turbine	Solar	T70-9702S	74	MMBtu/hr	Residue Compression	36,541.9	37,900.5	1,358.5
31	Natural Gas Fired Turbine	Solar	T-4700	48.1	MMBtu/hr	Residue Compression	23,483.7	24,635.3	1,151.6
32	Natural Gas Fired Turbine	Solar	T-4000	35.5	MMBtu/hr	Refrigeration Compression	17,343.4	18,182.0	838.5
34	Natural Gas Fired Heater	Unknown	Unknown	15	MMBtu/hr	Regeneration	4,159.6	7,682.5	3,522.9
TK-VRU	Condensate Tanks	N/A	N/A	N/A	N/A	Condensate	0.0	0.1	0.1
DH-10	Dehydration	N/A	N/A	N/A	N/A	Dehydration	0.0	12.9	12.9
								Total Project Increase:	50,696.4
								PSD SER:	75,000.0
								PSD Netting Required?	No

Appendix to Section 12: Supporting Calculations for Scenario A

Tables 2-2 through 2-7

Projected NO_X Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**416.4**	**208.0**	***-208.4***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**148.3**	**172.1**	***23.8***
28	T60-7800S (New turbine)	**0.0**	**15.2**	***15.2***
29	Turbine T-70 (10302S)	**45.8**	**51.8**	***6.0***
				-163.4

* Baseline emissions for all emission units are based on 2006-2007 EIQs. In preparation for this project, DCP determined the actual 2006-2007 horsepower operating rate was 896 hp for the HBA engines and 1,931 hp for the TLA engines. The EIQs were based on the permitted processing rates of 1,267 hp for the HBAs and 2,000 hp for the TLAs. Therefore, the baseline emissions have been adjusted downward by 896/1,267 for the HBAs and 1,931/2,000 for the TLAs to account for the originally conservative estimate. This adjustment was not required for the other units because they are expected to have operated at full horsepower when operating.

Projected NO_X Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**172.1**	***172.1***
30	Turbine T-70 (9702S)	**47.7**	**49.3**	***1.65***
31	Turbine T-47	**108.6**	**114.0**	***5.43***
32	Turbine T-40	**95.3**	**103.9**	***8.62***
				187.8

Projected NO_X Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**6.7**	**7.3**	***0.65***

Total NOX Change	**25.06**
PSD Significant Emission Rate	**40.00**

Projected CO Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**206.2**	**103.0**	***-103.2***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**63.7**	**86.9**	***23.2***
28	T60-7800S (New turbine)	**0.0**	**15.4**	***15.4***
29	Turbine T-70 (10302S)	**36.7**	**41.5**	***4.8***
				-59.9

Projected CO Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**86.9**	***86.9***
30	Turbine T-70 (9702S)	**38.1**	**39.5**	***1.42***
31	Turbine T-47	**20.7**	**21.6**	***0.87***
32	Turbine T-40	**18.3**	**19.2**	***0.91***
				90.1

* In review of the EIQ data for CO emissions from EU32, DCP determined EU31's emissions basis of 5.0 lb/hr was used instead of EU32's 4.4 lb/hr. Baseline emissions have been adjusted accordingly here by the ratio of 4.4/5.0.

Projected CO Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**1.7**	**6.1**	***4.43***

Total CO Change	**34.6**
PSD Significant Emission Rate	**100.00**

Projected VOC Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	56.6	28.3	*-28.3*
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	11.9	13.4	*1.5*
28	T60-7800S (New turbine)	0.0	8.8	*8.8*
29	Turbine T-70 (10302S)	1.3	1.4	*0.1*
				-17.9

Projected VOC Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	0.0	13.4	*13.4*
30	Turbine T-70 (9702S)	1.3	1.4	*0.07*
31	Turbine T-47	1.5	1.5	*0.00*
32	Turbine T-40	0.7	10.9	*10.17*
				23.6

Projected VOC Emissions Change for Regeneration Heater

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	0.2	2.7	*2.47*

Projected VOC Emissions Change for Fugitives, Condensate Storage, and Dehydration Unit

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
FUG	New Fugitive Leaks			*18.94*
TK-VRU	Condensate Tanks	0.0	4.97	*4.97*
DH-10	Dehydration Unit	0.0	1.2	*1.21*

Total VOC Change	**33.4**
PSD Significant Emission Rate	**40.00**

1. Emissions from condensate receiving, handling, and truck loading are not included in the current TV permit; therefore, baseline emissions could be at most 0.5 tpy (i.e., the NMED NSR permitting threshold).

Projected PM Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**5.0**	**2.5**	***-2.5***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**3.4**	**3.8**	***0.4***
28	T60-7800S (New turbine)	**0.0**	**5.8**	***5.8***
29	Turbine T-70 (10302S)	**1.8**	**2.2**	***0.4***
				4.2

* Particulate matter emissions were reported in 2007 for the turbines (EU29-EU32), but were not reported in 2006. DCP is estimating 2006 emissions based on 2007 emissions multiplied by the ratio of NOX emissions from 2006 to 2007.

Projected PM Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**3.8**	***3.8***
30	Turbine T-70 (9702S)	**2.0**	**2.1**	***0.15***
31	Turbine T-47	**1.0**	**1.1**	***0.09***
32	Turbine T-40	**1.0**	**1.1**	***0.10***
				4.1

Projected PM Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**0.5**	**0.6**	***0.06***

Total PM Change	**8.36**
PSD Significant Emission Rate	**15.00**

Projected CO_2e Emissions Change for Inlet Compression

EU	Description	Estimated Baseline Processing Rate (hp)	Permitted Processing Rate (hp)	2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Compression Energy (hp-hr/yr)	Potential Compression Energy (hp-hr/yr)	CO_2e EF (g/hp-hr)	CO_2e EF (g/hp-hr)	**2006-2007 Baseline Emissions (tpy)**	**Potential Emissions (tpy)**	***Emissions Change (tpy)***
8	Clark HBA #1	896	0	8,267	7,406,933	0	496.3	496.3	**4,052.1**	**0.0**	***-4,052.1***
9	Clark HBA #2	896	0	8,267	7,406,933	0	496.3	496.3	**4,052.1**	**0.0**	***-4,052.1***
11	Clark HBA #4	0	0	0	0	0					
28	T60-7800S (New turbine)	0	7,340	0	0	64,298,400		429.5	**0.0**	**30,442.9**	***30,442.9***
6	Clark TLA #5	0	2,000	0	0	17,520,000	470.2	470.2	**0.0**	**9,079.7**	***9,079.7***
7	Clark TLA #6	1,931	2,000	8,081	15,603,446	17,520,000	470.2	470.2	**8,086.5**	**9,079.7**	***993.3***
29	Turbine T-70*	78	78	7,756	601,866	679,776	116.9	116.9	**35,189.1**	**39,744.3**	***4,555.2***
											36,966.8

* CO_2e emissions from the turbines EU29-32 are based on the heat input rating given in terms of MMBtu/hr instead of hp and emission factors are lb/MMBtu instead of g/hp-hr. CO_2e emissions factors are converted from 53.041 kg/MMBtu (40 CFR 98, Subpart C, $CO_2 + CH_4$) to g/hp-hr based on 9,357 Btu/hp-hr for the HBAs, 8,864 Btu/hp-hr for the TLAs, and 8,098 Btu/hp-hr for the T-60 turbine.

Projected CO_2e Emissions Change for Residue/Refrigeration Compression

EU	Description	Estimated Basline Processing Rate (MMBtu/hr)	Permitted Processing Rate (hp)	2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Compression Energy (MMBtu/yr)	Projected Compression Energy (MMBtu/yr)	CO_2e EF (lb/MMBtu)	CO_2e EF (lb/MMBtu)	**2006-2007 Baseline Emissions (tpy)**	**Projected Actual Emissions (tpy)**	***Emissions Change (tpy)***
10	Clark HBA #3	896	1,267	8,267	7,406,933	11,098,920	496.3	496.3	**4,052.1**	**6,071.9**	***2,019.8***
30	Turbine T-70	74.0		8,446	625,004	648,240	116.9	116.9	**36,541.9**	**37,900.5**	***1,358.5***
31	Turbine T-47	48.1		8,351	401,659	421,356	116.9	116.9	**23,483.7**	**24,635.3**	***1,151.6***
32	Turbine T-40	35.5		8,356	296,638	310,980	116.9	116.9	**17,343.4**	**18,182.0**	***838.5***
											5,368.5

Projected CO_2e Emissions Change for Regeneration Heater

EU		Processing Rate (MMBtu/hr)		2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Energy (MMBtu/yr)	Projected Energy Consumption (MMBtu/yr)	CO_2e EF (lb/MMBtu)		**2006-2007 Baseline Emissions (tpy)**	**Projected Actual Emissions (tpy)**	***Emissions Change (tpy)***
34	Regeneration Htr	15		4,743	71,145	131,400	116.933		**4,159.6**	**7,682.5**	***3,522.91***

Projected CO_2e Emissions Change for Fugitives, Condensate Storage, and Dehydration Unit

EU	Description								**2006-2007 Baseline Emissions (tpy)**	**Proposed Potential Emissions (tpy)**	***Emissions Change (tpy)***
FUG	New Fugitive Leaks								**0.00**	**245.09**	***245.09***
TK-VRU	Condensate Tanks								**0.00**	**0.09**	***0.09***
DH-10	Dehydration Unit								**0.00**	**12.87**	***12.87***

Total CO_2e Change	**46,116.2**
PSD Significant Emission Rate	**75,000.0**

Appendix to Section 12: Supporting Calculations for Scenario B

Tables 2-8 through 2-13

Projected NO_X Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**416.4**	**288.7**	***-127.6***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**148.3**	**172.1**	***23.8***
28	T60-7800S (New turbine)	**0.0**	**15.2**	***15.2***
29	Turbine T-70 (10302S)	**45.8**	**51.8**	***6.0***
				-82.6

* Baseline emissions for all emission units are based on 2006-2007 EIQs. In preparation for this project, DCP determined the actual 2006-2007 horsepower operating rate was 896 hp for the HBA engines and 1,931 hp for the TLA engines. The EIQs were based on the permitted processing rates of 1,267 hp for the HBAs and 2,000 hp for the TLAs. Therefore, the baseline emissions have been adjusted downward by 896/1,267 for the HBAs and 1,931/2,000 for the TLAs to account for the originally conservative estimate. This adjustment was not required for the other units because they are expected to have operated at full horsepower when operating.

** Potential emissions from the HBAs for Scenario 2 are estimated based on one HBA operating full time and a second HBA operating 3,400 hours per year only during times when one TLA is operating.

Projected NO_X Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**105.3**	***105.3***
30	Turbine T-70 (9702S)	**47.7**	**49.3**	***1.65***
31	Turbine T-47	**108.6**	**114.0**	***5.43***
32	Turbine T-40	**95.3**	**103.9**	***8.62***
				121.0

Projected NO_X Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**6.7**	**7.3**	***0.65***

Total NOX Change	**38.99**
PSD Significant Emission Rate	**40.00**

Projected CO Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**206.2**	**143.0**	***-63.3***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**63.7**	**86.9**	***23.2***
28	T60-7800S (New turbine)	**0.0**	**15.4**	***15.4***
29	Turbine T-70 (10302S)	**36.7**	**41.5**	***4.8***
				-19.9

Projected CO Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**53.2**	***53.2***
30	Turbine T-70 (9702S)	**38.1**	**39.5**	***1.42***
31	Turbine T-47	**20.7**	**21.6**	***0.87***
32	Turbine T-40	**18.3**	**19.2**	***0.91***
				56.4

* In review of the EIQ data for CO emissions from EU32, DCP determined EU31's emissions basis of 5.0 lb/hr was used instead of EU32's 4.4 lb/hr. Baseline emissions have been adjusted accordingly here by the ratio of 4.4/5.0.

Projected CO Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**1.7**	**6.1**	***4.43***

Total CO Change	**40.9**
PSD Significant Emission Rate	**100.00**

Projected VOC Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**56.6**	**39.3**	***-17.3***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**11.9**	**13.4**	***1.5***
28	T60-7800S (New turbine)	**0.0**	**8.8**	***8.8***
29	Turbine T-70 (10302S)	**1.3**	**1.4**	***0.1***
				-6.9

Projected VOC Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**8.2**	***8.2***
30	Turbine T-70 (9702S)	**1.3**	**1.4**	***0.07***
31	Turbine T-47	**1.5**	**1.5**	***0.00***
32	Turbine T-40	**0.7**	**10.9**	***10.17***
				18.4

Projected VOC Emissions Change for Regeneration Heater

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**0.2**	**2.7**	***2.47***

Projected VOC Emissions Change for Fugitives, Condensate Storage, and Dehydration Unit

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
FUG	New Fugitive Leaks			***18.94***
TK-VRU	Condensate Tanks	**0.0**	**4.97**	***4.97***
DH-10	Dehydration Unit	**0.0**	**1.2**	***1.21***

Total VOC Change	**39.2**
PSD Significant Emission Rate	**40.00**

1. Emissions from condensate receiving, handling, and truck loading are not included in the current TV permit; therefore, baseline emissions could be at most 0.5 tpy (i.e., the NMED NSR permitting threshold).

Projected PM Emissions Change for Inlet Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
8	Clark HBA #1	**5.0**	**3.5**	***-1.6***
9	Clark HBA #2			
10	Clark HBA #3			
11	Clark HBA #4			
7	Clark TLA #6	**3.4**	**3.8**	***0.4***
28	T60-7800S (New turbine)	**0.0**	**5.8**	***5.8***
29	Turbine T-70 (10302S)	**1.8**	**2.2**	***0.4***
				5.1

* Particulate matter emissions were reported in 2007 for the turbines (EU29-EU32), but were not reported in 2006. DCP is estimating 2006 emissions based on 2007 emissions multiplied by the ratio of NOX emissions from 2006 to 2007.

Projected PM Emissions Change for Residue/Refrigeration Compression

EU	Description	2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
6	Clark TLA #5	**0.0**	**2.3**	***2.3***
30	Turbine T-70 (9702S)	**2.0**	**2.1**	***0.15***
31	Turbine T-47	**1.0**	**1.1**	***0.09***
32	Turbine T-40	**1.0**	**1.1**	***0.10***
				2.7

Projected PM Emissions Change for Regeneration Heater

EU		2006-2007 Baseline Emissions (tpy)	Permit Emissions (tpy)	*Emissions Change (tpy)*
34	Regeneration Htr	**0.5**	**0.6**	***0.06***

Total PM Change	**7.85**
PSD Significant Emission Rate	**15.00**

Projected CO_2e Emissions Change for Inlet Compression

EU	Description	Estimated Baseline Processing Rate (hp)	Permitted Processing Rate (hp)	2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Compression Energy (hp-hr/yr)	Potential Compression Energy (hp-hr/yr)	CO_2e EF (g/hp-hr)	CO_2e EF (g/hp-hr)	**2006-2007 Baseline Emissions (tpy)**	**Potential Emissions (tpy)**	***Emissions Change (tpy)***
8	Clark HBA #1	896	0	8,267	7,406,933	0	496.3	496.3	**4,052.1**	**0.0**	***-4,052.1***
9	Clark HBA #2	896	1,267	8,267	7,406,933	4,307,800	496.3	496.3	**4,052.1**	**2,356.7**	***-1,695.5***
11	Clark HBA #4	0	0	0	0	0					
28	T60-7800S (New turbine)	0	7,340	0	0	64,298,400		429.5	**0.0**	**30,442.9**	***30,442.9***
6	Clark TLA #5	0	2,000	0	0	10,720,000	470.2	470.2	**0.0**	**5,555.6**	***5,555.6***
7	Clark TLA #6	1,931	2,000	8,081	15,603,446	17,520,000	470.2	470.2	**8,086.5**	**9,079.7**	***993.3***
29	Turbine T-70*	78	78	7,756	601,866	679,776	116.9	116.9	**35,189.1**	**39,744.3**	***4,555.2***
											35,799.4

* CO_2e emissions from the turbines EU29-32 are based on the heat input rating given in terms of MMBtu/hr instead of hp and emission factors are lb/MMBtu instead of g/hp-hr. CO_2e emissions factors are converted from 53.041 kg/MMBtu (40 CFR 98, Subpart C, $CO_2 + CH_4$) to g/hp-hr based on 9,357 Btu/hp-hr for the HBAs, 8,864 Btu/hp-hr for the TLAs, and 8,098 Btu/hp-hr for the T-60 turbine.

Projected CO_2e Emissions Change for Residue/Refrigeration Compression

EU	Description	Estimated Basline Processing Rate (MMBtu/hr)	Permitted Processing Rate (hp)	2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Compression Energy (MMBtu/yr)	Projected Compression Energy (MMBtu/yr)	CO_2e EF (lb/MMBtu)	CO_2e EF (lb/MMBtu)	**2006-2007 Baseline Emissions (tpy)**	**Projected Actual Emissions (tpy)**	***Emissions Change (tpy)***
10	Clark HBA #3	896	1,267	8,267	7,406,933	11,098,920	496.3	496.3	**4,052.1**	**6,071.9**	***2,019.8***
30	Turbine T-70	74.0		8,446	625,004	648,240	116.9	116.9	**36,541.9**	**37,900.5**	***1,358.5***
31	Turbine T-47	48.1		8,351	401,659	421,356	116.9	116.9	**23,483.7**	**24,635.3**	***1,151.6***
32	Turbine T-40	35.5		8,356	296,638	310,980	116.9	116.9	**17,343.4**	**18,182.0**	***838.5***
											5,368.5

Projected CO_2e Emissions Change for Regeneration Heater

EU		Processing Rate (MMBtu/hr)		2006-2007 Baseline Hours (hr/yr)	2006-2007 Baseline Energy (MMBtu/yr)	Projected Energy Consumption (MMBtu/yr)	CO_2e EF (lb/MMBtu)		**2006-2007 Baseline Emissions (tpy)**	**Projected Actual Emissions (tpy)**	***Emissions Change (tpy)***
34	Regeneration Htr	15		4,743	71,145	131,400	116.933		**4,159.6**	**7,682.5**	***3,522.91***

Projected CO_2e Emissions Change for Fugitives, Condensate Storage, and Dehydration Unit

EU	Description								**2006-2007 Baseline Emissions (tpy)**	**Proposed Potential Emissions (tpy)**	***Emissions Change (tpy)***
FUG	New Fugitive Leaks								**0.00**	**245.09**	***245.09***
TK-VRU	Condensate Tanks								**0.00**	**0.09**	***0.09***
DH-10	Dehydration Unit								**0.00**	**12.87**	***12.87***

Total CO_2e Change	**44,948.8**
PSD Significant Emission Rate	**75,000.0**

COMPONENTS AND NET VOC and GHG FUGITIVE EMISSIONS BY UNIT / SERVICE / COMPONENT
DCP Midstream, Linam Ranch Gas Plant

Number of Components

	Gas				Light Oil				Water / Oil			
Unit	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges
Inlet System	29	0	34	95	0	0	0	0	0	0	0	0
Dual Service	16	0	24	40	0	0	0	0	0	0	0	0
Turbine	30	0	40	110	12	6	18	30	0	0	0	0
Amine System	0	0	0	0	0	0	0	0	17	4	28	42
VRU	22	1	29	70	47	2	30	130	0	0	0	0
Turboexpander	12	0	20	40	16	2	20	40	0	0	0	0
Totals	109	1	147	355	75	10	68	200	17	4	28	42

Emission Factor (lb/hr/component)	9.99E-03	5.29E-03	1.94E-02	8.60E-04	5.51E-03	2.87E-02	1.65E-02	2.43E-04	2.16E-04	5.29E-05	3.09E-02	6.39E-06

Emission by Unit / Service / Component, lbs/hr

	Gas				Light Oil				Water / Oil			
Unit	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges	Valves	Pumps	Others	Flanges
Inlet System	0.2896		0.6596	0.0817								
Dual Service	0.1598		0.4656	0.0344								
Turbine	0.2996		0.7760	0.0946	0.0661	0.1720	0.2976	0.0073				
Amine System									0.0037	0.0002	0.8642	0.0003
VRU	0.2197	0.0053	0.5626	0.0602	0.2590	0.0573	0.4960	0.0315				
Turboexpander	0.1198		0.3880	0.0344	0.0882	0.0573	0.3307	0.0097				
Total Service / Component (lb/hr)	1.0886	0.0053	2.8519	0.3052	0.4134	0.2866	1.1243	0.0485	0.0037	0.0002	0.8642	0.0003

[1] Based on information provided by DCP Midstream personnel February 2011 ("Components" spreadsheet, REV-07)

	VOC		GHG		H2S		Hexane		Benzene		Toluene		Ethylbenzene	
Unit	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**	**fraction**	**lb/hr**
Inlet System	0.25	**0.26**	0.75	**0.78**	0.005	**0.005**	0.022	**0.023**	0.00023	**2.37E-04**	0.00039	**4.02E-04**	0.00002	**2.06E-05**
Dual Service	0.25	**0.16**	0.75	**0.50**	0.005	**0.003**	0.022	**0.015**	0.00023	**1.52E-04**	0.00039	**2.57E-04**	0.00002	**1.32E-05**
Turbine	0.25	**0.29**	0.75	**0.88**	0.005	**0.009**	0.022	**0.038**	0.00023	**3.94E-04**	0.00039	**6.68E-04**	0.00002	**3.43E-05**
Turbine - Lube Oil	1.00	**0.54**												
Amine System	1.00	**0.87**			0.016	**0.014**								
VRU	1.00	**1.69**			0.001	**0.002**	0.703	**1.189**	0.00023	**3.89E-04**	0.00039	**6.60E-04**	0.00002	**3.38E-05**
Turboexpander - Lube Oil	1.00	**0.49**												
Turboexpander	0.05	**0.03**	0.95	**0.52**					0.00023	**1.25E-04**	0.00039	**2.11E-04**	0.00002	**1.08E-05**
Total Service / Component (lb/hr)		**4.32**		**2.66**		**0.03**		**1.26**		**1.30E-03**		**2.20E-03**		**1.13E-04**

	VOC	**GHG**	**H_2S**	
Total Net Change	**4.32**	**2.66**	**0.03**	**lb/hr**
	18.94	**11.67**	**0.14**	**tpy**

Section 13

Discussion Demonstrating Compliance With Each Applicable State & Federal Regulation

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Provide a discussion demonstrating compliance with applicable state & federal regulation. If there is a state or federal regulation (other than those listed here) for your facility's source category that does not apply to your facility, but seems on the surface that it should apply, add the regulation to the appropriate table below and provide the analysis. Examples of regulatory requirements that may or may not apply to your facility include 40 CFR 60 Subpart OOO (crushers), 40 CFR 63 Subpart HHH (HAPs), or 20.2.74 NMAC (PSD major sources). We don't want a discussion of every non-applicable regulation, but if there is questionable applicability, explain why it does not apply. All input cells should be filled in, even if the response is 'No' or 'N/A'.

In the "Justification" column, identify the criteria that are critical to the applicability determination, numbering each. For each unit listed in the "Applies to Unit No(s)" column, after each listed unit, include the number(s) of the criteria that made the regulation applicable. For example, TK-1 & TK-2 would be listed as: TK-1 (1, 3, 4), TK-2 (1, 2, 4). Doing so will provide the applicability criteria for each unit, while also minimizing the length of these tables.

As this table will become part of the SOB, please do not change the any formatting in the table, especially the width of the table.

If this application includes any proposed exemptions from otherwise applicable requirements, provide a narrative explanation of these proposed exemptions. These exemptions are from specific applicable requirements, which are spelled out in the requirements themselves, not exemptions from 20.2.70 NMAC or 20.2.72 NMAC.

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

Applicable STATE REGULATIONS:

STATE REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	x	All	x		20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. Title V applications, see exemption at 20.2.3.9 NMAC
20.2.7 NMAC	Excess Emissions	x		x		All Title V major sources are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject to the requirements of this regulation. Also listed as applicable in NSR Permit 0039-M5.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide				x	This facility does not have existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit
20.2.34 NMAC	Oil Burning Equipment: NO_2				x	This facility does not have oil burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	x		x		Portions of this facility (those modified after July 1, 1974) are subject to the requirements of NMAC 2.35 for "New Natural **Gas Processing** Plants for which a modification commenced on or after July 1, 1974.
20.2.37 NMAC	Petroleum Processing Facilities	x		x		Portions of this facility are subject to the requirements of NMAC 2.37 for "New Natural **Gas Processing** Plants for which a modification commenced on or after July 1, 1974.
20.2.38 NMAC	Hydrocarbon Storage Facil.				**x**	Portions of this facility are potentially subject to Section 109 of NMAC 2.38. The tanks TK-39 through TK-41, TK-44 through TK-48 and TK0-54 are pressurized vessels and are compliant with this section.

20.2.39 NMAC	Sulfur Recovery Plant - Sulfur				**x**	This rule does not apply because it is superseded by 20.2.35 NMAC that applies to the SRU as part of a natural gas processing plant.
20.2.61.109 NMAC	Smoke & Visible Emissions				x	Not applicable because his regulations is superseded by 20.2.37 NMAC.
20.2.70 NMAC	Operating Permits	x	All	x		This facility is a major source for the following criteria pollutants: NO_x, CO, SO_2, and VOC. This facility is a major source for formaladehyde. The facility has been issued an Operating Permit P094-M2.
20.2.71 NMAC	Operating Permit Fees	x	All	x		Yes, this facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	x	All	x		This facility is subject to 20.2.72 NMAC and NSR Permit number: 0039-M5
20.2.73 NMAC	NOI & Emissions Inventory Requirements	x	All	x		Applicable because the facility is a major source and must submit an annual emission inventory (EIQ)
20.2.74 NMAC	Permits – PSD	x	All	x	N/A	Applicable because the facility has PTE in excess of 250 tpy for NOx, CO, and SO2; however, this permitting action does not trigger PSD requirements.
20.2.75 NMAC	Construction Permit Fees				x	Annual fees are not applicable because the facility is subject to 20.2.71 NMAC.
20.2.77 NMAC	New Source Performance		4, 28, 29, 30, 31 32B, 34, 36, 37	x		This is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended through January 31, 2009.
20.2.78 NMAC	Emission Standards for HAPS	x (potentially)		x		Does not apply in normal operation. Under demolition, this facility could potentially emit asbestos which is subject to the requirements of 40 CFR Part 61, as amended through January 31, 2009.
20.2.79 NMAC	Permits – Nonattainment Areas				x	This facility is not located in a nonattainment area.
20.2.80 NMAC	Stack Heights				x	Not applicable to stacks at this facility.
20.2.82 NMAC	MACT Standards for source categories of HAPS	x		x		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 31, 2009.

Applicable FEDERAL REGULATIONS

FEDERAL REGU-LATIONS CITATION	Title	Applies to **Entire Facility**	Applies to **Unit No(s).**	**Federally Enforce-able**	**Does Not Apply**	**JUSTIFICATION:**
40 CFR 50	NAAQS	x	All	x		Defined as applicable at 20.2.70.7.E.11, Any national ambient air quality standard
NSPS 40 CFR 60, Subpart A	General Provisions		4, 28, 29, 30, 31 32B, 34, 36, 37	x		Applies because other NSPS subparts apply.
NSPS 40 CFR60.40 a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**				x	The facility does not have units to which this regulation applies..
NSPS 40 CFR60.40b Subpart Db	**Electric Utility Steam Generating Units**				x	The facility does not have units to which this regulation applies.
NSPS 40 CFR60.40b Subpart Dc	**Small Industrial-Commercial-Institutional Steam Generating Units**		34, 36, and 37	x		These units burn natural gas fuel and are subject to the recordkeeping requirements of this subpart..
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for **Storage Vessels for Petroleum Liquids** for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and **Prior** to July 23, 1984				x	The facility does not have units to which this regulation applies.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	TK-VRU potentially		X potentially		This facility has storage vessels with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. However TK39-41, TK44-48 and TK53,54 are pressure vessels and pursuant to§60.110b(d)(2) are not subject to this subpart. TK-VRU is an emission source that consists of five (5) 120 m^3 tanks. If the condensate stored in these tanks is determined to be prior to custody transfer then, either as individual vessels or collectively, pursuant to §60.110b(d)(4) these vessels would not be subject to this subpart. If these vessels are subject to this part because the stored condensate is determined to be post-custody transfer, then TK-VRU is compliant with this subpart because VOL emissions are routed to a VRU with 95% efficiency.

FEDERAL REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION:
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**		28,29,30, 31 and 32B	x		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.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	x		x		Linam Ranch is subject to the requirements of this subpart and has instituted a Leak Detection and Repair program and submits reports twice each year.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions				x	The sweetening units produce acid gas that is completely reinjected 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 JJJJ					x	The SI RICE at this facility were constructed before June 12, 2006. This subpart does not apply to these units.
NSPS 40 CFR Part 60 Subpart KKKK	Standards of Performance for **Stationary Combustion Turbines**		28	x		Unit 28 will commence construction after February 18, 2005; this subpart applies to this unit.
NESHAP 40 CFR 61 Subpart A	General Provisions	x (potentially)				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 **Mercury**				x	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
NESHAP 40 CFR 61 Subpart M	National Emission Standards for **Asbestos**	x Potentially		x		Although this standard does not apply to this facility under routine operating conditions, in the case of asbestos demolition, Subpart M would apply.
MACT 40 CFR 63, Subpart A	General Provisions	x		x		Applies because 40 CFR Part 63, Subpart HH applies.
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	x		x		This facility is subject to the requirements of 40 CFR 63 Subpart HH. Affected units include ancillary equipment and compressors in vHAP service . The glycol dehydrator is an affected source with benzene emissions that are less than 0.90 megagrams per year. Pursuant to §63.765(a), the standards for glycol dehydration process vents do not apply to this unit.
MACT 40 CFR 63 Subpart HHH					x	This is not a transmission and storage facility.
MACT 40 CFR 63 Subpart YYYY	NESHAP for Stationary Combustion Turbines		28 (potentially)			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

FEDERAL REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION:
						turbine. Pursuant to §63.6095(d), this unit is subject to the initial notification requirements set forth in §63.6145 but need not comply with any other requirement of Subpart YYYY until final action on compliance by the EPA is taken.

MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)				x	The SI RICE at Linam Ranch are existing 2SLB RICE with power > 500 hp. Pursuant to §63.6590(b)(3)(i) these units do not have any requirements under this subpart or under subpart A.
NESHAP 40 CFR 64	**Compliance Assurance Monitoring**				x	With the removal of Unit 5 (sulfur recovery unit), this facility is not subject to CAM.
NESHAP 40 CFR 68	**Chemical Accident Prevention**	x		x		This facility has quantities of materials regulated by this requirement that are in excess of the triggering threshold.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**				x	This facility is not regulated by the acid rain program
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions				x	This facility is not regulated by the acid rain program
Title IV – Acid Rain 40 CFR 76	**Acid Rain** Nitrogen Oxides **Emission Reduction Program**				x	This facility is not regulated by the acid rain program
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	x		x		DCP Midstream owns appliances containing CFCs and is therefore subject to this requirement. DCP Midstream 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)				x		Chemical Accident Prevention Provisions

Section 14

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 **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** 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 **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** 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.

DCP maintains the required planning and excess emission mitigation documents at the Linam Ranch Gas Plant.

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.

Scenario A

This is the primary operating scenario. Under Scenario A of one (1) of the four (4) HBAs 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, this application seeks to allow operation of two (2) of the four (4) HBAs when one of the TLA engines is down. In order to preserve the PSD netting result for NOx and VOC, the number of hours this scenario is allowed to run 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 and TLA. The sum of each of the HBA and TLA 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:

$$\frac{[\text{Permit Limit (lb/hr)}] \times [\text{Rolling 12-month hours of operation (hr)}] \times [\text{ Actual power (hp)} \div \text{Permitted power (hp)}]}{2000 \text{ (lb/ton)}}$$

Then, for NOx and VOC, calculate the sum:

Unit 6 + Unit 7 + Unit 8 + Unit 9 +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

NSR (20.2.72 NMAC) and PSD (20.2.74 NMAC) Modeling: Provide an air quality **dispersion modeling** demonstration (if applicable) as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines. If air dispersion modeling has been waived for this permit application, attach the AQB Modeling Section modeling waiver documentation.

SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions 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 (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.

Title V (20.2.70 NMAC) Modeling: Title V applications must specify the NSR Permit number for which air quality dispersion modeling was last submitted. Additionally, Title V facilities reporting new SSM emissions require modeling or a modeling waiver to demonstrate compliance with standards.

Air dispersion modeling was submitted with the application for NSR Permit 0039-M5; it was shown at that time that the facility did not exceed any applicable air quality standard. A modeling waiver was requested for the current action; this waiver was granted and shown below.

New Mexico Environment Department
Air Quality Bureau
Modeling Section
1301 Siler Road, Building B
Santa Fe, NM 87507-3113

Phone: (505) 476-4300
Fax: (505) 476-4375
www.nmenv.state.nm.us/aqb

For Department use only:

Approved: **X Yes** ☐ **No**

Date: 2-25-11

Approved by: David Heath

Air Dispersion Modeling Waiver Request Form

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

If a permit is required, modeling is normally required for all pollutants, including state air toxics. In some cases, the demonstration that ambient air quality standards and 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 limit the new modeling that is submitted with an application. A waiver may be requested by e-mailing the completed form to the modeling manager, sufi.mustafa@state.nm.us. Permitting staff must approve the total emission rates during the permitting process for this waiver to be valid.

Contact and facility information:

Contact name	George Iwaszek
E-mail Address:	giwaszek@trinityconsultants.com
Phone	505.266.6611
Facility Name	DCP Midstream Services, LP Linam Ranch Gas Plant
Air Quality Permit Number(s)	NSR 0039-M5; P094R1M1
AI Number (if known)	

General Comments: DCP proposes to retire two RICE and install one axial rotation turbine. These units are natural gas fueled and are used to drive units for natural gas compression. Though overall emissions are decreased, the proposed changes will require a significant revision of the current NSR permit. The attached tables from the NMED AQB permit application formset show the current allowable emission rates and requested allowable emission if the proposed action is approved.

Section 1: Toxic air pollutants
Not applicable; facility is not a source of toxic air pollutants.

Section 2: Pollutants with very low emission rates
Not applicable; no very low emission rate pollutants.

Section 3: Pollutants that have previously been modeled at equal or higher emission rates

Table 3: List of previously modeled pollutants (facility-wide PTE)

Pollutant[1]	Averaging period	Previously modeled emission rate (pounds/hour)	Proposed emission rate (pounds/hour)	Modeled minus proposed emissions (lb/hr)	Modeled percent of standard or increment[1]
CO	8 hr	158.08	115.57	42.5	Not significant
CO	1 hr	158.08	115.57	42.5	Not significant
NO_2	Annual	308.65	217.15	91.5	83%
NO_2	24 hr	308.65	217.15	91.5	88%
NO_2	Annual PSD				71%
$PM_{2.5}$	Annual	6.2	6.9	-0.7	59%
$PM_{2.5}$	24 hr	6.2	6.9	-0.7	39%
TSP and PM10	Annual and 24hr	6.2	6.9	-0.7	Not significant
SO_2	Annual	401.31	402.21	-0.9	20%
SO_2	24 hr	401.31	402.21	-0.9	16%
SO_2	3 hr	401.31	402.21	-0.9	11%
SO_2	Annual PSD				86%
SO_2	24 hr PSD				42%
SO_2	3 hr PSD				25%

[1] Modeled impacts include all facility and surrounding sources.

Question			Yes	No
Was modeling performed within the past four years? Yes	Date of modeling report	September 2008	X	
Was AERMOD used to model the facility?			X	
Did previous modeling predict concentrations less than 95% of each air quality standard and PSD increment?			X	
Were all averaging periods modeled that apply to the pollutants listed above?			X	
Were all applicable startup/shutdown/maintenance scenarios modeled? >>> The purpose of the previous modeling was to examine upset impacts.			X	
Did modeling include all sources within 1000 meters of the facility fence line that now exist?			X	
Did modeling include background concentrations at least as high as current background concentrations? *Other than $PM_{2.5}$,background concentrations were not required for* NO_2 *or* SO_2 *at the time of the last modeling.*				X
If a source is changing or being replaced, is the following equation true for all pollutants for which the waiver is requested? EXISTING SOURCE REPLACMENT SOURCE $\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} <= \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$ Where g = gravitational constant = 32.2 ft/sec^2 h1 = existing stack height, feet v1 = exhaust velocity, existing 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			X	

T2 = absolute temperature of exhaust, replacement source = degree F + 460
q2 = emission rate, replacement source, lbs/hour

h1	v1	T1		h2	v2	T2
74	122	650		36	154.9	890

N1	10006		N2	13405	
q1 CO	47	pph	q2 CO	3.52	pph
q1 Nox	95	pph	q2 Nox	3.47	pph

	Existing	Replacement
CO	213	3808
Nox	105	3863

Are all replacement stacks either the same direction as the replaced stack or vertical?	X	

If you checked "no" for any of the questions, provide an explanation for why you think the previous modeling may still be valid anyway.

The slight increase to impacts (~ 10%) as a result of adding current background levels to the previous modeled results would be eliminated by the overall decrease to impacts from the 38% reduction in the NOx emissions after the proposed change. The reduction in impacts is furthered by the extremely favorable stack parameters after the proposed change. The net result of the proposed change would be impacts at most the same, or most likely lower, than the previous modeled results for NOx.

In the case of SO_2 and $PM_{2.5}$, substantial margin exists between the previously modeled impacts and the standards.

Section 4: Discussions of scaled emission rates and scaled concentrations

Not applicable.

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

Type of emissions	Modeling is waived if emissions of a pollutant for the entire facility (including haul roads) are below the amount:
Point source	0.1 lb/hr of H_2S or reduced sulfur, 1.0 lb/hr for other pollutants
Fugitive sources	0.01 lb/hr of H_2S or reduced sulfur, 0.1 lb/hr for other pollutants

RE: Linam Ranch waiver question
Heath, David, NMENV
to:
George Iwaszek
02/25/2011 12:05 PM
Cc:
"Mustafa, Sufi A., NMENV"
Show Details

History: This message has been replied to and forwarded.

George,

Attached is an approved modeling waiver for the Linam Ranch Gas Plant. A copy of this should be included with the permit application. A copy is also stored in our modeling archives for internal use.

Dave

David Heath
Modeling Scientist
NMED / AQB

Section 17

Compliance Test History

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

PLEASE PROVIDE A COMPLETE HISTORY OF COMPLIANCE TEST RESULTS FOR ALL APPLICABLE UNITS.

Compliance Test History Table

Unit No.	Test Description	Test Date

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.

No other information is being submitted at this time.

Section 22: Certification

Company Name: DCP Midstream

I, Peter Stevenson, 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 31 day of March, 2011, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature

Date 3/31/11

Printed Name Peter Stevenson

Title Manager Air Permitting

Scribed and sworn before me on this 31 day of March, 2011.

My authorization as a notary of the State of NM expires on the 20th day of Feb., 2015.

Notary's Signature Alice M. Johnson

Date 3-31-11

Notary's Printed Name Alice M. Johnson

OFFICIAL SEAL
Alice M. Johnson
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: Feb. 20 2015

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AD NMAC.