

NMED AIR QUALITY INITIAL NSR APPLICATION

DELEK LOGISTICS PARTNERS, LP LARIAT COMPRESSOR STATION

Prepared By:

Adam Erenstein - Manager of Consulting Services

TRINITY CONSULTANTS

9400 Holly Ave NE
Building 3, Suite B
Albuquerque, NM 87122
(505) 266-6611

On behalf of:

Delek Logistics Partners, LP

5850 Granite Parkway
Suite 450
Plano, TX 75024
(361) 788-3307

October 2025

Project 0253201.0051





9400 Holly Ave NE, Bldg 3, Ste B, Albuquerque, NM 87122 / P 505.266.6611 / trinityconsultants.com

October 31, 2025

Permit Programs Manager
NMED Air Quality Bureau
525 Camino de los Marques, Suite 1
Santa Fe, NM 87505

*RE: Application for Initial NSR Permit
Delek Logistics Partners, LP — Lariat Compressor Station*

Dear Permit Programs Manager:

On behalf of Delek Logistics Partners, LP, we are submitting this application for an initial NSR Permit for the Lariat Compressor Station. This facility is located 22.5 miles southeast of Loco Hills, New Mexico in Lea County and compresses and dehydrates natural gas for sales. Lariat Compressor Station is currently authorized to operate under GCP-O&G Permit No. 7600-M3.

The format and content of this application are consistent with the Bureau's current policy regarding NSR applications; it is a complete application package using the most current application forms. Enclosed is one hard copy and one working copy of the application, including the original certification page, electronic files, and an application check. Please feel free to contact me at (505) 266-6611 or by email at aerenstein@trinityconsultants.com if you have any questions regarding this application. Alternatively, you may contact Jason Boothe with Delek Logistics Partners, LP, at (361) 788-3307 or by email at Jason.Boothe@deleklogistics.com.

Sincerely,

TRINITY CONSULTANTS

Adam Erenstein
Manager of Consulting Services

cc: Jason Boothe (Delek Logistics Partners, LP)

Trinity Project File 0253201.0051

HEADQUARTERS

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203



Air Permit Application Compliance History Disclosure Form

Pursuant to Subsection 74-2-7(S) of the New Mexico Air Quality Control Act ("AQCA"), NMSA §§ 74-2-1 to -17, the New Mexico Environment Department ("Department") may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant met any one of the criteria outlined below. In order for the Department to deem an air permit application administratively complete, or issue an air permit for those permits without an administrative completeness determination process, the applicant must complete this Compliance History Disclosure Form as specified in Subsection 74-2-7(P). An existing permit holder (permit issued prior to June 18, 2021) shall provide this Compliance History Disclosure Form to the Department upon request.

Permittee/Applicant Company Name		Expected Application Submittal Date
Delek Logistics Partners, LP		October 31, 2025
Permittee/Company Contact	Phone	Email
Jason Boothe	(361) 788-3307	Jason.Boothe@deleklogistics.com
Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:		
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes ☒ No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	☐ Yes ☒ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, and the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☒ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, please provide an explanation and documentation.	

661866

TRINITY CONSULTANTS, INC.
12700 PARK CENTRAL DRIVE STE. 600
DALLAS, TX 75251-1546
(972) 661-8100

Fraud Protected
by Positive Pay

JPMORGAN CHASE BANK, N.A.
DALLAS, TX

32-61/1110

August 29, 2025

CHECK DATE

Five Hundred and 00/100 Dollars

AMOUNT
\$ 500.00

Pay To The Order Of
New Mexico Environmental Department
525 Camino de los Marquez Suite 1
Air Quality Bureau
Santa Fe, NM 87505-1816



NOT VALID AFTER 90 DAYS

[Signature]
AUTHORIZED SIGNATURE

Security features. Details on back.
🔒

⑈661866⑈ ⑆111000614⑆

9319954724⑈

TRINITY CONSULTANTS, INC.

Check Date: 8/29/2025

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Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
8252532010051ARF	8/26/2025	0191149	500.00			500.00
New Mexico Environmental Department			500.00			500.00
CHASE BANK-	16	000006134	TOTAL			

TRINITY CONSULTANTS, INC.

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Mail Application To: New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		For Department use only:
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Universal Air Quality Permit Application

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

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

This application is submitted as (check all that apply): ☐ Request for a No Permit Required Determination (no fee)
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
 Construction Status: ☐ Not Constructed ☒ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
 Minor Source: ☐ a NOI 20.2.73 NMAC ☒ 20.2.72 NMAC application or revision ☐ 20.2.72.300 NMAC Streamline application
 Title V Source: ☐ Title V (new) ☐ Title V renewal ☐ TV minor mod. ☐ TV significant mod. TV Acid Rain: ☐ New ☐ Renewal
 PSD Major Source: ☐ PSD major source (new) ☐ minor modification to a PSD source ☐ a PSD major modification

Acknowledgements:

- ☒ I acknowledge that a pre-application meeting is available to me upon request. ☐ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.
- ☒ \$500 NSR application Filing Fee enclosed **OR** ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).
- ☒ Check No.: 661732 in the amount of \$500
- ☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.
- ☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.
- ☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full \$500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

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

Section 1 – Facility Information

Section 1-A: Company Information		AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.): 882	Updating Permit/NOI #: 7600M3
1	Facility Name: Lariat Compressor Station	Plant primary SIC Code (4 digits): 1311	
		Plant NAIC code (6 digits): 21113	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): Located in Township 21 South, Range 34 East, Section 15, approximately 22.5 miles southeast of Loco Hills, New Mexico in Lea County.		
2	Plant Operator Company Name: DKL Delaware Operating – NM LLC	Phone/Fax: (409) 553-1480 / N/A	
a	Plant Operator Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 5501695		

3	Plant Owner(s) name(s): Delek Logistics New Mexico	Phone/Fax: (409) 553-1480 / N/A
a	Plant Owner(s) Mailing Address(s): 5850 Granite Parkway, Ste. 450, Plano, TX 75024	
4	Bill To (Company): Delek Logistics New Mexico	Phone/Fax: (409) 553-1480 / N/A
a	Mailing Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024	E-mail: Jason.Boothe@deleklogistics.com
5	☐ Preparer: ☒ Consultant: Trinity Consultants / Adam Erenstein	Phone/Fax: (505) 266-6611
a	Mailing Address: 9400 Holly Ave NE, Bldg 3, Ste B, Albuquerque, NM 87122	E-mail: aerenstein@trinityconsultants.com
6	Plant Operator Contact: Justin Beall	Phone/Fax: (432) 202-1246 / N/A
a	Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024	E-mail: Justin.Beall@deleklogistics.com
7	Air Permit Contact: Jason Boothe	Title: Environmental Manager
a	E-mail: Jason.Boothe@deleklogistics.com	Phone/Fax: (361) 788-3307
b	Mailing Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☒ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☒ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submitting this application? ☐ Yes ☒ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submitting this application? ☒ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☒ No	If yes, give month and year of shut down (MM/YY): N/A
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☒ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☒ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is: N/A
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☒ Yes ☐ No	If yes, the permit No. is: 7600M3
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the register 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: 2.08 MMscf	Daily: 50 MMscf	Annually: 18250 MMscf
b	Proposed	Hourly: 5.83 MMscf	Daily: 140 MMscf	Annually: 51100 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: 2.08 MMscf	Daily: 50 MMscf	Annually: 18250 MMscf
b	Proposed	Hourly: 5.83 MMscf	Daily: 140 MMscf	Annually: 51100 MMscf

Section 1-D: Facility Location Information

1	Section: 15	Range: 33E	Township: 19S	County: Lea	Elevation (ft): 3,574
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 625,015 m E			UTM N (in meters, to nearest 10 meters): 3,610,685 m N	
b	AND Latitude (deg., min., sec.): 32° 37' 35.20" N			Longitude (deg., min., sec.): 103° 40' 01.42" W	
3	Name and zip code of nearest New Mexico town: Loco Hills, 88240				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of Monument Hwy and New Mexico Highway 8 in Monument, NM, head south on New Mexico Highway 8 S for 10.7 miles. Turn right onto New Mexico Highway 176 W and continue for 9.3 miles. Turn left onto Co Rd 30 and continue for 0.3 miles. Turn right and continue for 2.8 miles. Turn right onto Delaware Basin Rd and in 430 ft the facility will be on the left.				
5	The facility is 15.7 miles west-southwest of Monument, NM.				
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: Lea County, NM. Eunice Municipality.				
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.env.nm.gov/air-quality/modeling-publications/)? ☐ Yes ☒ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers:				
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): 82 km				
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: 460 meters				
12	Method(s) used to delineate the Restricted Area: Continuous Fencing "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 identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☒ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with 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 ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8,760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? 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: N/A
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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 or modeling waiver being submitted with this application? ☒ Yes ☐ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, 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)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☒ Yes ☐ No		
a	If yes, include the name of company providing commercial electric power to the facility: <u>Xcel Energy</u> Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

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

1	☐ I have filled out Section 18, "Addendum for Streamline Applications." ☒ N/A (This is not a Streamline application.)
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Section 1-H: Current Title V Information - Required for all applications from TV Sources

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

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Michael Odigie		Phone: (972) 367-3736
a	R.O. Title: Senior Vice President, DKL	R.O. e-mail: Michael.Odigie@delekus.com	
b	R. O. Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Justin Beall		Phone: (432) 202-1246
a	A. R.O. Title: Sr. Director of Operations	A. R.O. e-mail: Justin.Beall@deleklogistics.com	
b	A. R. O. Address: 5850 Granite Parkway, Ste. 450, Plano, TX 75024		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): N/A		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): Delek Logistics Partners, LP		
a	Address of Parent Company: 5850 Granite Parkway, Ste. 450, Plano, TX 75024		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Jason Boothe (361) 788-3307		
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: States: Texas (97.31 km)		

Section 1-I – Submittal Requirements

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

Hard Copy Submittal Requirements:

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

Electronic files sent by (check one):

☐ CD/DVD attached to paper application

☒ secure electronic transfer. Air Permit Contact Name Adam Erenstein, Email aerenstein@trinityconsultants.com
Phone number (505) 266-6611.

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

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

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

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

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically):

i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

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

Table of Contents

Section 1:	General Facility Information
Section 2:	Tables
Section 3:	Application Summary
Section 4:	Process Flow Sheet
Section 5:	Plot Plan Drawn to Scale
Section 6:	All Calculations
Section 7:	Information Used to Determine Emissions
Section 8:	Map(s)
Section 9:	Proof of Public Notice
Section 10:	Written Description of the Routine Operations of the Facility
Section 11:	Source Determination
Section 12:	PSD Applicability Determination for All Sources & Special Requirements for a PSD Application
Section 13:	Discussion Demonstrating Compliance with Each Applicable State & Federal Regulation
Section 14:	Operational Plan to Mitigate Emissions
Section 15:	Alternative Operating Scenarios
Section 16:	Air Dispersion Modeling
Section 17:	Compliance Test History
Section 18:	Addendum for Streamline Applications (streamline applications only)
Section 19:	Requirements for the Title V (20.2.70 NMAC) Program (Title V applications only)
Section 20:	Other Relevant Information
Section 21:	Addendum for Landfill Applications
Section 22:	Certification Page

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	Make	Model #	Serial #	Manufacturer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 2SLB) ⁴	Replacing Unit No.
							Date of Construction/Reconstruction ²	Emissions vented to Stack #				
2310	Compressor Engine	Caterpillar	G3516	N6E00549	1380 hp	1380 hp	1/15/2018	CAT-1	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							2/18/2024	2310				
2320	Compressor Engine	Caterpillar	G3516	N6E00550	1380 hp	1380 hp	1/17/2015	CAT-2	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							2/18/2024	2320				
2330	Compressor Engine	Caterpillar	G3516	JEF01640	1380 hp	1380 hp	11/26/2014	CAT-3	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							5/2/2022	2330				
2340	Compressor Engine	Caterpillar	G3516	JEF02224	1380 hp	1380 hp	4/5/2013	CAT-4	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							8/16/2023	2340				
2350	Compressor Engine	Caterpillar	G3516	N6W01626	1380 hp	1380 hp	6/9/2023	CAT-5	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							4/5/2025	2350				
2360	Compressor Engine	Caterpillar	G3516	JEF01419	1380 hp	1380 hp	11/28/2011	CAT-6	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							10/16/2024	2360				
2370	Compressor Engine	Waukesha	7044GSIS5	5283705931	1875 hp	1875 hp	3/13/2019	CAT-7	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							4/24/2025	2370				
2380	Compressor Engine	Caterpillar	G3606A3	JFE016559	1875 hp	1875 hp	10/1/2019	CAT-8	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SLB	N/A
							4/9/2025	2380				
2390	Compressor Engine	Caterpillar	G3606A3	JFE01504	1900 hp	1900 hp	6/1/2019	CAT-9	20200253	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☒ To Be Modified ☐ To be Replaced	4SRB	N/A
							4/9/2025	2390				
2400	Compressor Engine	Caterpillar	G3606A4	TBD	1875 hp	1875 hp	1/1/2024	CAT-10	20200254	☐ Existing (unchanged) ☐ To be Removed ☒ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
							1/1/2024	2400				
2410	Compressor Engine	Caterpillar	G3606A4	TBD	1875 hp	1875 hp	1/1/2024	CAT-11	20200253	☐ Existing (unchanged) ☐ To be Removed ☒ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
							1/1/2024	2410				
2420	Compressor Engine	Caterpillar	G3606A4	TBD	1875 hp	1875 hp	1/1/2024	CAT-12	20200254	☐ Existing (unchanged) ☐ To be Removed ☒ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
							1/1/2024	2420				
2430	Compressor Engine	Caterpillar	G3606A4	TBD	1875 hp	1875 hp	1/1/2024	CAT-13	20200253	☐ Existing (unchanged) ☐ To be Removed ☒ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
							1/1/2024	2430				

2440	Compressor Engine	Caterpillar	G3608A4	TBD	2750 hp	2750 hp	1/1/2024	CAT-14	20200254	☐ Existing (unchanged)	☐ To be Removed	4SLB	N/A
							1/1/2024	2440		☒ New/Additional	☐ Replacement Unit		
2450	Compressor Engine	Caterpillar	G3608A4	TBD	2750 hp	2750 hp	1/1/2024	CAT-15	20200253	☐ Existing (unchanged)	☐ To be Removed	4SLB	N/A
							1/1/2024	2450		☒ New/Additional	☐ Replacement Unit		
2460	Compressor Engine	Caterpillar	G3608A4	TBD	2750 hp	2750 hp	1/1/2024	CAT-16	20200254	☐ Existing (unchanged)	☐ To be Removed	4SLB	N/A
							1/1/2024	2460		☒ New/Additional	☐ Replacement Unit		
2470	Compressor Engine	Caterpillar	G3608A4	TBD	2750 hp	2750 hp	1/1/2024	CAT-17	20200253	☐ Existing (unchanged)	☐ To be Removed	4SLB	N/A
							1/1/2024	2470		☒ New/Additional	☐ Replacement Unit		
2480	Compressor Engine	Caterpillar	G3608A4	TBD	2750 hp	2750 hp	1/1/2024	CAT-18	20200254	☐ Existing (unchanged)	☐ To be Removed	4SLB	N/A
							1/1/2024	2480		☒ New/Additional	☐ Replacement Unit		
TK-1	Gunbarrel Tank	Permian Tank	N/A	4-15784	500 bbl	500 bbl	1/1/2018	FL-2	40400312	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							5/1/2018	FL-2		☒ To Be Modified	☐ To be Replaced		
TK-2	Condensate Tank	TOK	N/A	D-812 TK-9321	500 bbl	500 bbl	1/1/2018	FL-2	31000212	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							4/1/2018	FL-2		☒ To Be Modified	☐ To be Replaced		
TK-3	Condensate Tank	TBD ⁵	TBD ⁵	TBD ⁵	500 bbl	500 bbl	TBD ⁵	FL-2	31000212	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							After 9/18/2015	FL-2		☒ To Be Modified	☐ To be Replaced		
TK-4	Condensate Tank	TBD ⁵	TBD ⁵	TBD ⁵	500 bbl	500 bbl	TBD ⁵	FL-2	31000212	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							After 9/18/2015	FL-2		☒ To Be Modified	☐ To be Replaced		
TK-5	Condensate Tank	TBD	TBD	TBD	500 bbl	500 bbl	TBD	FL-2	31000212	☒ Existing (unchanged)	☐ To be Removed	N/A	N/A
							TBD	FL-2		☒ New/Additional	☐ Replacement Unit		
PWTk-1	Produced Water Tank	TOK	N/A	D-812 TK-9321	400 bbl	400 bbl	1/1/2018	FL-2	31000213	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							4/1/2018	FL-2		☒ To Be Modified	☐ To be Replaced		
PWTk-2	Produced Water Tank	TOK	N/A	D-812 TK-9321	400 bbl	400 bbl	1/1/2018	FL-2	31000213	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							4/1/2018	FL-2		☒ To Be Modified	☐ To be Replaced		
PWTk-3	Produced Water Tank	TBD	TBD	TBD	500 bbl	500 bbl	TBD	FL-2	31000213	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							TBD	FL-2		☒ New/Additional	☐ Replacement Unit		
PWTk-4	Produced Water Tank	TBD	TBD	TBD	500 bbl	500 bbl	TBD	FL-2	31000213	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							TBD	FL-2		☒ New/Additional	☐ Replacement Unit		
HTR-1	Dehy Reboiler	Flameco	TBD	1802-856	0.5 MMBtu/hr	0.5 MMBtu/hr	TBD	N/A	31000228	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							1/19/2018	HTR-1		☐ New/Additional	☐ Replacement Unit		
HTR-1	Dehy Reboiler	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD	N/A	31000228	☐ Existing (unchanged)	☐ To be Removed	N/A	HTR-1
							TBD	HTR-1		☒ Replacement Unit	☐ To be Replaced		
HTR-2	Dehy Reboiler	TBD ⁵	TBD ⁵	TBD ⁵	1.5 MMBtu/hr	1.5 MMBtu/hr	TBD ⁵	N/A	31000228	☒ Existing (unchanged)	☐ To be Removed	N/A	N/A
							TBD ⁵	HTR-2		☐ New/Additional	☐ Replacement Unit		
PW LOAD	Produced Water Loadout	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40400250	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							N/A	N/A		☒ To Be Modified	☐ To be Replaced		

CONDLOAD	Condensate Loadout	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40400250	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							N/A	N/A		☐ New/Additional	☐ Replacement Unit		
FUG-1	Fugitives	N/A	N/A	N/A	N/A	N/A	N/A	DEHY-2	31088811	☒ To Be Modified	☐ To be Replaced	N/A	N/A
							N/A	FUG-1		☐ New/Additional	☐ Replacement Unit		
DEHY-1	TEG Dehydrator	Valerus	TBD	TBD	25 MMSCFD	25 MMSCFD	TBD	ECD-1	31000304	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							9/13/2018	ECD-1		☐ New/Additional	☐ Replacement Unit		
DEHY-2	TEG Dehydrator	TBD	TBD	TBD	50 MMSCFD	50 MMSCFD	TBD	N/A	31000304	☒ To Be Modified	☐ To be Replaced	N/A	N/A
							TBD	ECD-2		☐ Existing (unchanged)	☐ To be Removed		
DEHY-1	TEG Dehydrator	TBD	TBD	TBD	70 MMSCFD	70 MMSCFD	TBD	ECD-1	31000304	☐ New/Additional	☐ Replacement Unit	N/A	DEHY-1
							TBD	ECD-1		☒ To Be Modified	☐ To be Replaced		
DEHY-2	TEG Dehydrator	TBD	TBD	TBD	70 MMSCFD	70 MMSCFD	TBD	ECD-2	31000304	☐ Existing (unchanged)	☐ To be Removed	N/A	DEHY-2
							TBD	ECD-2		☒ To Be Modified	☐ To be Replaced		
ECD-1	Combustor	SpiralX	TBD	TBD	15.0 MSCFD	12.2 MSCFD	TBD	N/A	31000160	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							11/16/2018	ECD-1		☐ New/Additional	☐ Replacement Unit		
ECD-2	Combustor	SpiralX	TBD	TBD	15.0 MSCFD	12.2 MSCFD	TBD	N/A	31000160	☒ To Be Modified	☐ To be Replaced	N/A	N/A
							TBD	ECD-2		☐ Existing (unchanged)	☐ To be Removed		
FL-1	Process Flare	TBD	TBD	TBD	TBD	31000 MSCFD	TBD	N/A	31000160	☐ New/Additional	☐ Replacement Unit	N/A	N/A
							TBD	N/A		☒ To Be Modified	☐ To be Replaced		
FL-2	Tank Flare	Tulsa Combustion	TBD	18-01-2172	140 MSCFD	81.9 MSCFD	TBD	N/A	31000160	☐ Existing (unchanged)	☐ To be Removed	N/A	N/A
							11/16/2018	N/A		☐ New/Additional	☐ Replacement Unit		
SSM	SSM Activities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31088811	☒ To Be Modified	☐ To be Replaced	N/A	N/A
							N/A	N/A		☐ Existing (unchanged)	☐ To be Removed		

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 set.

⁴ "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

⁵ Units exist within permit, however, have not been constructed at the site.

Table 2-B: Insignificant Activities¹ (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 20.2.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf>. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
HR-1	Road Dust	N/A	N/A	N/A	20.2.72.202.B.5	N/A	☒ Existing (unchanged) ☐ To be Removed
			N/A	N/A		N/A	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
GEN-1	Diesel Fired Generator	TBD	TBD	TBD	20.2.72.202.B.3	TBD	☒ Existing (unchanged) ☐ To be Removed
			TBD	TBD		TBD	☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed
							☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To be Replaced

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) ¹	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
CAT-1	Oxidation Catalyst/AFR	2/18/2024	CO, VOC, Formaldehyde	2310	CO: 93.00% VOC: 68.75% HCHO: 76.74%	Manufacturer Data
CAT-2	Oxidation Catalyst/AFR	2/18/2024	CO, VOC, Formaldehyde	2320		Manufacturer Data
CAT-3	Oxidation Catalyst/AFR	5/2/2022	CO, VOC, Formaldehyde	2330		Manufacturer Data
CAT-4	Oxidation Catalyst/AFR	8/16/2023	CO, VOC, Formaldehyde	2340		Manufacturer Data
CAT-5	Oxidation Catalyst/AFR	4/5/2025	CO, VOC, Formaldehyde	2350		Manufacturer Data
CAT-6	Oxidation Catalyst/AFR	10/16/2024	CO, VOC, Formaldehyde	2360		Manufacturer Data
CAT-7	Oxidation Catalyst/AFR	45771	CO, VOC, Formaldehyde	2370	CO: 90.49% VOC: 66.38% HCHO: 67.50%	Manufacturer Data
CAT-8	Oxidation Catalyst/AFR	45756	CO, VOC, Formaldehyde	2380		Manufacturer Data
CAT-9	Oxidation Catalyst/AFR	45756	NOx, CO, VOC, Formaldehyde	2390	NOx: 96.16% CO: 97.96% VOC: 66.67% HCHO: 60.00%	Manufacturer Data
CAT-10	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2400	CO: 79.31% VOC: 63.50% HCHO: 47.37%	Manufacturer Data
CAT-11	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2410		Manufacturer Data
CAT-12	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2420		Manufacturer Data
CAT-13	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2430		Manufacturer Data
CAT-14	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2440	CO: 81.57% VOC: 41.18% HCHO: 25.00%	Manufacturer Data
CAT-15	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2450		Manufacturer Data
CAT-16	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2460		Manufacturer Data
CAT-17	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2470		Manufacturer Data
CAT-18	Oxidation Catalyst/AFR	1/1/2024	CO, VOC, Formaldehyde	2480		Manufacturer Data
Condenser	DEHY-1 Condenser	TBD	VOC/HAPs	DEHY-1	~71%	Engineering Calculation
Condenser	DEHY-2 Condenser	TBD	VOC/HAPs	DEHY-2	~71%	Engineering Calculation
ECD-1	Dehy Combustor	TBD	VOC/HAPs	DEHY-1 (Regenerator)	98%	Manufacturer Data
ECD-2	Dehy Combustor	TBD	VOC/HAPs	DEHY-2 (Regenerator)	98%	Manufacturer Data
FL-1	Process Flare	TBD	VOC/HAPs	Sales Gas Downtime, Compressor Blowdowns, Plant Blowdowns	98%	Manufacturer Data
FL-2	Tank Flare	TBD	VOC/HAPs	TK-1, TK-2, TK-3, TK-4, TK-5, PWTK-1, PWTK-2, PWTK-3, PWTK-4	98%	Manufacturer Data

¹ List each control device on a separate line. For each control device, list all emission units controlled by the control device.

² Glycol Dehydration Units: Indicate each stream that is being controlled and which unit is controlling each stream (condensables, non-condensables, flash tank, reboiler etc.)

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

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

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

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		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
2310	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2320	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2330	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2340	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2350	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2360	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2370	49.05	214.84	41.09	179.98	0.52	2.26	0.069	0.30	0.15	0.65	0.15	0.65	0.15	0.65	--	--	--	--
2380	2.07	9.05	10.87	47.62	5.77	25.27	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2390	2.07	9.05	10.87	47.62	5.77	25.27	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2400	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2410	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2420	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2430	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2440	1.82	7.97	13.16	57.62	0.093	0.41	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2450	1.82	7.97	13.16	57.62	0.093	0.41	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2460	1.82	7.97	13.16	57.62	0.093	0.41	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2470	1.82	7.97	13.16	57.62	0.093	0.41	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2480	1.82	7.97	13.16	57.62	0.093	0.41	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
TK-1	--	--	--	--	59.56	260.87	--	--	--	--	--	--	--	--	2.47E-03	1.08E-02	--	--
TK-2	--	--	--	--	10.25	44.88	--	--	--	--	--	--	--	--	3.34E-04	1.46E-03	--	--
TK-3	--	--	--	--	10.25	44.88	--	--	--	--	--	--	--	--	3.34E-04	1.46E-03	--	--
TK-4	--	--	--	--	10.25	44.88	--	--	--	--	--	--	--	--	3.34E-04	1.46E-03	--	--
TK-5	-	-	-	-	10.25	44.88	-	-	-	-	-	-	-	-	3.34E-04	1.46E-03	--	--
PWTK-1	--	--	--	--	0.157	0.69	--	--	--	--	--	--	--	--	8.59E-05	3.76E-04	--	--
PWTK-2	--	--	--	--	0.157	0.69	--	--	--	--	--	--	--	--	8.59E-05	3.76E-04	--	--
PWTK-3	--	--	--	--	0.157	0.69	--	--	--	--	--	--	--	--	8.59E-05	3.76E-04	--	--
PWTK-4	--	--	--	--	0.157	0.69	--	--	--	--	--	--	--	--	8.59E-05	3.76E-04	--	--
HTR-1	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	0.011	0.049	--	--	--	--
HTR-2	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	0.011	0.049	--	--	--	--
COND LOAD	--	--	--	--	8.60	37.67	--	--	--	--	--	--	--	--	2.99E-04	1.31E-05	--	--
PW LOAD	--	--	--	--	2.38	10.41	--	--	--	--	--	--	--	--	1.42E-03	6.21E-05	--	--
DEHY-1	--	--	--	--	142.31	623.30	--	--	--	--	--	--	--	--	0.045	0.20	--	--
DEHY-2	--	--	--	--	142.31	623.30	--	--	--	--	--	--	--	--	0.045	0.20	--	--
ECD-1	0.013	0.055	0.011	0.046	0.94	4.12	5.71E-04	2.50E-03	--	--	--	--	--	--	--	--	--	--
ECD-2	0.013	0.055	0.011	0.046	0.94	4.12	5.71E-04	2.50E-03	--	--	--	--	--	--	--	--	--	--
FL-1	0.11	0.48	0.22	0.96	0.22	0.94	3.57E-03	0.016	--	--	--	--	--	--	0.0006	0.0027	--	--
FL-2	0.11	0.48	0.22	0.96	0.22	0.94	3.57E-03	0.016	--	--	--	--	--	--	0.0006	0.0027	--	--
FUG-1	--	--	--	--	3.70	16.21	--	--	--	--	--	--	--	--	2.07E-02	9.09E-02	--	--
Totals	76.91	336.84	221.63	970.75	459.01	2010.44	1.23	5.40	2.72	11.91	2.72	11.91	2.72	11.91	0.12	0.51	--	--

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

Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM ¹		PM10 ¹		PM2.5 ¹		H ₂ S		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
2310	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2320	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2330	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2340	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2350	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2360	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	0.11	0.49	--	--	--	--
2370	1.88	8.26	0.84	3.67	0.22	0.97	0.069	0.30	0.15	0.65	0.15	0.65	0.15	0.65	--	--	--	--
2380	2.07	9.05	1.03	4.53	2.03	8.88	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2390	2.07	9.05	1.03	4.53	2.03	8.88	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2400	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2410	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2420	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2430	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	0.14	0.62	--	--	--	--
2440	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2450	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2460	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2470	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
2480	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	0.21	0.91	--	--	--	--
TK-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HTR-1	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	0.011	0.049	--	--	--	--
HTR-2	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	0.011	0.049	--	--	--	--
COND LOAD	--	--	--	--	8.60	37.67	--	--	--	--	--	--	--	--	2.99E-04	1.31E-05	--	--
PW LOAD	--	--	--	--	2.38	10.41	--	--	--	--	--	--	--	--	1.42E-03	6.21E-05	--	--
DEHY-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEHY-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ECD-1	0.14	0.63	0.121	0.53	0.94	4.12	0.052	0.229	0.01	0.048	0.01	0.048	0.01	0.048	6.00E-04	2.63E-03	--	--
ECD-2	0.14	0.63	0.121	0.53	0.94	4.12	0.052	0.229	0.01	0.048	0.01	0.048	0.01	0.048	6.00E-04	2.63E-03	--	--
FL-1	0.11	0.48	0.22	0.96	0.22	0.94	3.57E-03	0.016	--	--	--	--	--	--	6.27E-04	2.75E-03	--	--
FL-2	0.56	2.47	1.13	4.94	39.04	9.81	0.011	0.049	--	--	--	--	--	--	7.10E-04	3.11E-03	--	--
FUG-1	--	--	--	--	3.70	16.21	--	--	--	--	--	--	--	--	0.021	0.091	--	--
Totals	30.46	133.40	29.89	130.92	82.72	201.15	1.34	5.89	2.74	12.00	2.74	12.00	2.74	12.00	0.025	0.10	--	--

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

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

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

All applications for facilities that have emissions during routine or predictable startup, shutdown or scheduled maintenance (SSM)¹, including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM ²		PM10 ²		PM2.5 ²		H ₂ S		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
FL-1	230.85	1.20	460.86	2.40	527.22	2.74	7.14E-06	3.14E-05	-	-	-	-	-	-	1.25E-06	5.52E-06	-	-
SSM	-	-	-	-	8.64	0.16	-	-	-	-	-	-	-	-	3.85E-04	5.58E-03	-	-
Totals	230.85	1.20	460.86	2.40	535.86	2.90	7.14E-06	3.14E-05	-	-	-	-	-	-	3.87E-04	5.59E-03	--	--

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 this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

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

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

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

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

[illegible]

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions.

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		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
Engine	2310	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2320	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2330	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2340	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2350	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2360	Vertical	No	24.20	1015.00	135.17	-	-	101.83	1.3
Engine	2370	Vertical	No	24.50	1145.00	144.13	-	-	183.52	1.0
Engine	2380	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2390	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2400	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2410	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2420	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2430	Vertical	No	26.10	827.00	198.57	-	-	149.60	1.3
Engine	2440	Vertical	No	21.67	876.00	270.02	-	-	152.80	1.5
Engine	2450	Vertical	No	21.67	876.00	270.02	-	-	152.80	1.5
Engine	2460	Vertical	No	21.67	876.00	270.02	-	-	152.80	1.5
Engine	2470	Vertical	No	21.67	876.00	270.02	-	-	152.80	1.5
Engine	2480	Vertical	No	21.67	876.00	270.02	-	-	152.80	1.5
Heater	HTR-1	Vertical	No	21.0	500.00	9.37	-	-	5.30	1.5
Heater	HTR-2	Vertical	No	21.0	500.00	9.37	-	-	5.30	1.5
ECD	ECD-1	Vertical	No	9.0	1100.00	30.80	-	-	5.9	2.6
ECD	ECD-2	Vertical	No	9.0	1100.00	30.80	-	-	5.9	2.6
Flare	FL-1	Vertical	No	30.0	1832.0	1396.95	-	-	65.6	5.5
Flare	FL-2	Vertical	No	20.0	1832.0	2.39	-	-	65.6	5.5

Table 2-1: Emission Rates for HAPs

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP		Acetaldehyde ☑ HAP		Acrolein ☑ HAP		Benzene ☑ HAP		Toluene ☑ HAP		Ethylbenzene ☑ HAP		Xylenes ☑ HAP		n-Hexane ☑ HAP	
		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
2310	2310	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.072	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2320	2320	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2330	2330	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2340	2340	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2350	2350	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2360	2360	0.52	2.29	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	.0057	0.025	.0006	.0024	.0026	0.011	0.015	0.067
2370	2370	0.26	1.13	0.08	0.37	0.055	0.24	0.052	0.24	0.031	0.14	0.011	0.048	.0005	.0021	.0038	0.017	0.022	0.094
2380	2380	0.59	2.58	0.27	1.18	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2390	2390	0.59	2.58	0.27	1.18	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2400	2400	0.73	3.22	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2410	2410	0.73	3.22	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2420	2420	0.73	3.22	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2430	2430	0.73	3.22	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.233	.0072	0.031	.0007	.0031	.0032	0.014	0.019	0.085
2440	2440	0.95	4.17	0.55	2.39	0.22	0.95	0.133	0.58	0.011	0.050	0.01	0.046	.0010	.0045	.0048	0.021	0.029	0.125
2450	2450	0.95	4.17	0.55	2.39	0.22	0.95	0.133	0.58	0.011	0.050	0.01	0.046	.0010	.0045	.0048	0.021	0.029	0.125
2460	2460	0.95	4.17	0.55	2.39	0.22	0.95	0.133	0.58	0.011	0.050	0.01	0.046	.0010	.0045	.0048	0.021	0.029	0.125
2470	2470	0.95	4.17	0.55	2.39	0.22	0.95	0.133	0.58	0.011	0.050	0.01	0.046	.0010	.0045	.0048	0.021	0.029	0.125
2480	2480	0.95	4.17	0.55	2.39	0.22	0.95	0.133	0.58	0.011	0.050	0.01	0.046	.0010	.0045	.0048	0.021	0.029	0.125
HTR-1	HTR-1	.0028	0.012	.0001	.0005	--	--	--	--	0.0000	0.0000	0.0000	0.0000	--	--	--	--	.0026	0.012
HTR-2	HTR-2	.0028	0.012	.0001	.0005	--	--	--	--	0.0000	0.0000	0.0000	0.0000	--	--	--	--	.0026	0.012
COND LOAD	COND LOAD	0.90	3.93	--	--	--	--	--	--	0.11	0.494	0.03	0.127	.0011	.0048	.0023	0.010	0.092	0.402
PW LOAD	PW LOAD	1.95	8.54	--	--	--	--	--	--	0.11	0.468	0.03	0.114	.0010	.0043	.0020	.00873	0.0001	0.0004
ECD-1	ECD-1	0.32	1.40	--	--	--	--	--	--	0.277	1.214	0.02	0.102	.0001	.0006	.0004	.00172	0.019	0.084
ECD-2	ECD-2	0.32	1.40	--	--	--	--	--	--	0.277	1.214	0.02	0.102	.0001	.0006	.0004	.00172	0.019	0.084
FL-1	FL-1	41.77	0.25	--	--	--	--	--	--	15.51	0.113	8.45	0.062	0.98	.0071	2.24	0.016	14.607	0.106
FL-2	FL-2	0.11	0.47	--	--	--	--	--	--	0.06	0.25	0.02	0.08	.0010	.0043	.0013	.0094	0.04	0.184
FUG-1	FUG-1	0.29	1.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SSM	SSM	0.37	.0067	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Totals:		58.31	71.07	6.83	29.91	2.72	11.93	1.69	7.42	17.08	5.70	8.71	1.20	1.00	0.08	2.31	0.32	15.16	2.52

¹ Gen-1 is exempt from permitting, but is shown here to include in facility-wide emissions.

Table 2-J: Fuel

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

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, ...)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value (BTU/SCF)	Hourly Usage (MSCF/hr)	Annual Usage (MMSCF/yr)	% Sulfur	% Ash
2310	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2320	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2330	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2340	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2350	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2360	Field Gas	Raw/Field Natural Gas	1,275.78	8.74	76.59	2 gr S / 100 scf	
2370	Field Gas	Raw/Field Natural Gas	1,275.78	12.09	105.93	2 gr S / 100 scf	
2380	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2390	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2400	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2410	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2420	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2430	Field Gas	Raw/Field Natural Gas	1,275.78	11.03	96.64	2 gr S / 100 scf	
2440	Field Gas	Raw/Field Natural Gas	1,275.78	16.27	142.54	2 gr S / 100 scf	
2450	Field Gas	Raw/Field Natural Gas	1,275.78	16.27	142.54	2 gr S / 100 scf	
2460	Field Gas	Raw/Field Natural Gas	1,275.78	16.27	142.54	2 gr S / 100 scf	
2470	Field Gas	Raw/Field Natural Gas	1,275.78	16.27	142.54	2 gr S / 100 scf	
2480	Field Gas	Raw/Field Natural Gas	1,275.78	16.27	142.54	2 gr S / 100 scf	
HTR-1	Field Gas	Raw/Field Natural Gas	1,275.78	1.18	10.30	2 gr S / 100 scf	
HTR-2	Field Gas	Raw/Field Natural Gas	1,275.78	1.18	10.30	2 gr S / 100 scf	
ECD-1	Field Gas	Raw/Field Natural Gas	1,275.78	0.10	0.88	2 gr S / 100 scf	
ECD-2	Field Gas	Raw/Field Natural Gas	1,275.78	0.10	0.88	2 gr S / 100 scf	
FL-1	Field Gas	Raw/Field Natural Gas	1,275.78	0.63	5.48	2 gr S / 100 scf	
FL-2	Field Gas	Raw/Field Natural Gas	1,275.78	0.63	5.48	2 gr S / 100 scf	

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-1	40400311	Oil/Produced Water	Mixed Hydrocarbons	6.31	35.71	61.07	14.83	61.07	14.83
TK-2	31000212	Condensate	Mixed Hydrocarbons	6.04	46.38	70.09	11.05	82.10	12.88
TK-3	31000212	Condensate	Mixed Hydrocarbons	6.04	46.38	70.09	11.05	82.10	12.88
TK-4	31000212	Condensate	Mixed Hydrocarbons	6.04	46.38	70.09	11.05	82.10	12.88
TK-5	31000212	Condensate	Mixed Hydrocarbons	6.04	46.38	70.09	11.05	82.10	12.88
PWTK-1	31000213	Produced Water	Mixed Hydrocarbons	8.34	41.65	70.09	11.26	82.10	12.88
PWTK-2	31000213	Produced Water	Mixed Hydrocarbons	8.34	41.65	70.09	11.26	82.10	12.88
PWTK-3	31000213	Produced Water	Mixed Hydrocarbons	8.34	41.65	70.09	11.26	82.10	12.88
PWTK-4	31000213	Produced Water	Mixed Hydrocarbons	8.34	41.65	70.09	11.26	82.10	12.88

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-1	5/1/2018	Condensate	N/A	Vertical - Fixed Roof (FX)	500		4.08	3.05	Green	Green	Average	16,096,500	766.5
TK-2	4/1/2018	Condensate	N/A	Vertical - Fixed Roof (FX)	500		4.08	3.05	Green	Green	Average	2,677,500	127.5
TK-3	After 9/18/2015	Condensate	N/A	Vertical - Fixed Roof (FX)	500		4.08	3.05	Green	Green	Average	2,677,500	127.5
TK-4	After 9/18/2015	Condensate	N/A	Vertical - Fixed Roof (FX)	500		4.08	3.05	Green	Green	Average	2,677,500	127.5
TK-5	1/1/2024	Condensate	N/A	Vertical - Fixed Roof (FX)	500		4.08	3.05	Green	Green	Average	2,677,500	127.5
PWTK-1	4/1/2018	Produced Water	N/A	Vertical - Fixed Roof (FX)	750		4.08	3.05	Green	Green	Average	1,341,375	63.9
PWTK-2	4/1/2018	Produced Water	N/A	Vertical - Fixed Roof (FX)	750		4.08	3.05	Green	Green	Average	1,341,375	63.9
PWTK-3	1/1/2024	Produced Water	N/A	Vertical - Fixed Roof (FX)	750		4.08	3.05	Green	Green	Average	1,341,375	63.9
PWTK-4	1/1/2024	Produced Water	N/A	Vertical - Fixed Roof (FX)	750		4.08	3.05	Green	Green	Average	1,341,375	63.9

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

Roof Type	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 M³ = 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	51100 MMScf/yr	Condensate	Mixed Hydrocarbons	Liquid	255000 bbl/yr
				Natural Gas	Mixed Hydrocarbons	Gas	51100 MMScf/yr
				Produced Water	Mixed Hydrocarbons	Liquid	127750 bbl/yr

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.

[illegible]

Table 2-O: Parametric Emissions Measurement Equipment

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

[illegible]

Table 2-P: Greenhouse Gas Emissions

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

		CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²									Total GHG Mass Basis ton/yr ⁴	Total CO ₂ e ton/yr ⁵
Unit No.	GWPs ¹	1	265	28	22,800	footnote 3										
2310	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2200	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2300	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2400	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2500	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2600	mass GHG	5,715.15	0.011	0.12	-	-									5715.28	
	CO ₂ e	5,715.15	2.85	3.32	-	-										5721.32
2700	mass GHG	7,963.11	0.015	0.17	-	-									7963.29	
	CO ₂ e	7,963.11	3.98	4.62	-	-										7971.71
2800	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
2900	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
3000	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
3100	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
3200	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
3300	mass GHG	7,210.84	0.014	0.15	-	-									7211.00	
	CO ₂ e	7,210.84	3.60	4.19	-	-										7218.63
3400	mass GHG	10,636.48	0.020	0.22	-	-									10636.72	
	CO ₂ e	10,636.48	5.31	6.17	-	-										10647.97
3500	mass GHG	10,636.48	0.020	0.22	-	-									10636.72	
	CO ₂ e	10,636.48	5.31	6.17	-	-										10647.97
3600	mass GHG	10,636.48	0.020	0.22	-	-									10636.72	
	CO ₂ e	10,636.48	5.31	6.17	-	-										10647.97

3700	mass GHG	10,636.48	0.020	0.22	-	-									10636.72	
	CO ₂ e	10,636.48	5.31	6.17	-	-										10647.97
3800	mass GHG	10,636.48	0.020	0.22	-	-									10636.72	
	CO ₂ e	10,636.48	5.31	6.17	-	-										10647.97
HTR-1	mass GHG	768.54	1.45E-03	0.016											768.56	
	CO ₂ e	768.54	0.38	0.45												769.37
HTR-2	mass GHG	768.54	1.45E-03	0.016	-	-									768.56	
	CO ₂ e	768.54	0.38	0.45	-	-										769.37
COND LOAD	mass GHG	1.39	-	1.96											3.35	
	CO ₂ e	1.39	-	54.76												56.16
PW LOAD	mass GHG	5.45E-03	-	0.54											0.54	
	CO ₂ e	5.45E-03	-	15.00												15.01
ECD-1	mass GHG	1,577.24	2.97E-03	0.033											1577.28	
	CO ₂ e	1,577.24	0.79	0.92												1578.94
ECD-2	mass GHG	1,577.24	2.97E-03	0.033											1577.28	
	CO ₂ e	1,577.24	0.79	0.92												1578.94
FL-1	mass GHG	1,392.19	2.36E-03	4.81											1397.00	
	CO ₂ e	1,392.19	0.62	134.55												1527.36
FL-2	mass GHG	3,782.93	7.13E-03	0.08											3783.01	
	CO ₂ e	3,782.93	1.89	2.20												3787.01
FUG-1	mass GHG	2.60	-	22.32											24.92	
	CO ₂ e	2.60	-	625.06												627.65
SSM	mass GHG	20.68	-	177.95	-	-									198.63	
	CO ₂ e	20.68	-	4,982.55	-	-										5003.23
Total	mass GHG	148,592.82	0.28	210.62											148803.72	
	CO ₂ e	148,592.82	74.13	914.80												154564.31

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

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

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

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

⁵ CO₂e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

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 affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

The **Process Summary** shall include a brief description of the facility and its processes.

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

This application is being submitted is an Initial NSR Permit for the Lariat Compressor Station (Lariat CS) pursuant to 20.2.72.219.D.(1)(a) NMAC. Currently permitted under GCP-O&G Permit No. 7600-M3, the facility is owned and operated by Delek Logistics Partners, LP (Delek)

Lariat CS receives natural gas from nearby facilities and compresses the gas for sales. The facility utilizes compressors powered by compressor engines to compress the gas for sales. With this application, Delek is proposing the replacement of two (2) existing glycol dehydrators with two (2) 70 MMSCFD units, one (1) 0.5 MMBtu/hr glycol dehydrator reboiler with one (1) 1.5 MMBtu/hr reboiler unit, and the addition of nine (9) natural gas compressor engines, one (1) condensate storage tank, two (2) produced water storage tanks, and one (1) process flare. All other units and facility operations will remain existing (unchanged).

An increase in facility throughputs of up to 140 MMSCFD of natural gas, 700 barrels per day of condensate, and 350 barrels per day of produced water is also included in this permit application.

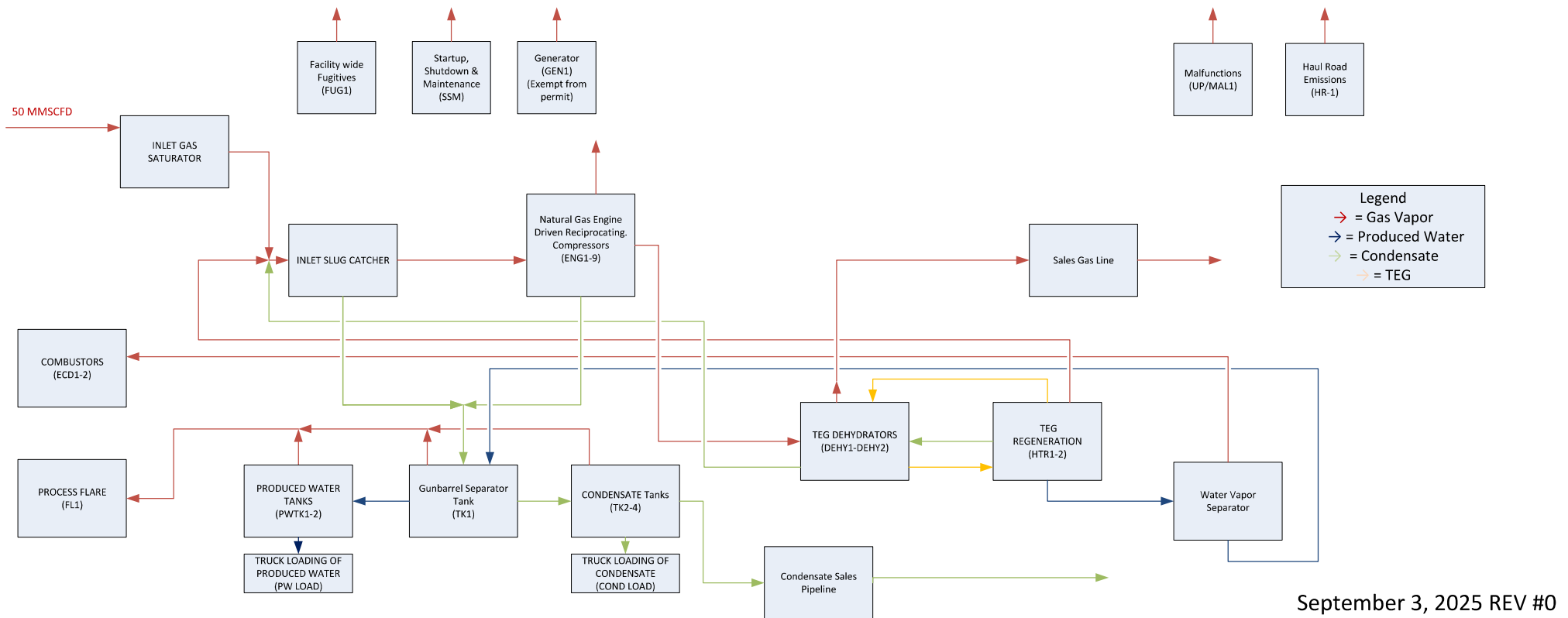
Section 4

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.

A process flow diagram of this facility is included below.

LARIAT COMPRESSOR STATION



Section 5

Plot Plan Drawn To Scale

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

A plot plan of this facility has been included below.

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. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

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

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

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

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

Significant Figures:

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

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

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

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

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

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

Authorized emissions units at the facility will be as follows:

- Eighteen (18) natural gas compressor engines (Units 2310 through 2480)
- Two (2) 70 MMSCFD Glycol Dehydrators (Units DEHY-1 & DEHY-2)
- Two (2) 1.5 MMBtu/hr glycol reboilers (Units HTR-1 & HTR-2)
- Two (2) enclosed combustion devices (Units ECD-1 & ECD-2)
- Two (2) flares, one (1) process flare (Unit FL-1) and one (1) tank flare (Unit FL-2)
- One (1) gunbarrel tank (Unit TK-1)
- Four (4) condensate storage tanks (Units TK-2, TK-3, TK-4 & TK-5)
- Four (4) produced water storage tanks (Units PWTK-1, PWTK-2, PWTK-3 & PWTK-4)
- Condensate Loading (Unit COND LOAD)
- Produced Water Loading (Unit PW LOAD)
- Haul Roads (Units HR-1) (exempt pursuant to 20.2.72.202.B. (5) NMAC)
- One emergency generator, providing standby electric power (Unit GEN-1) (exempt pursuant to 20.2.72.202.B.(3) NMAC)
- Facility-wide fugitive emissions (Unit FUG-1)
- Startup, shutdown and maintenance emissions (Unit SSM)

The basis for calculating the emissions for these units is discussed here.

Compressor Engines (Units 2310 through 2480)

NO_x, CO, VOC, and formaldehyde emissions are calculated using manufacturer specifications. SO₂ emissions are based on a conservative fuel sulfur content estimated of 2 gr S/100 scf and 100% conversion of elemental sulfur to SO₂. Particulate (PM, PM_{2.5}, and PM₁₀) and HAP emissions were calculated using AP-42 Table 3.2-3. Greenhouse gas emissions are estimated using emission factors from 40 CFR 98 Subpart C Tables C-1 and C-2 and global warming potential conversion factors from 40 CFR 98 Subpart A Table A-1.

Generator Engine (Unit GEN-1)

NO_x, CO, and VOC emissions are calculated using a Certification of Conformity with the Clean Air Act dated 2021. SO₂ emissions are based on a conservative fuel sulfur content estimated of 2 gr S/100 scf and 100% conversion of elemental sulfur to SO₂. Particulate (PM, PM_{2.5}, and PM₁₀) and HAP emissions were calculated using AP-42 Table 3.2-2. Greenhouse gas emissions are estimated using emission factors from 40 CFR 98 Subpart C Tables C-1 and C-2. GEN-1 is exempt per 20.2.202.B.(3).

Glycol Dehydrator (Units Dehy-1 & DEHY-2)

Glycol dehydration emissions are calculated using BR&E ProMax and an extended inlet gas analysis. VOC and HAP emissions from the regenerator are controlled with a BTEX condenser. Flash tank emissions are recycled back to the inlet. The BTEX condenser overheads are routed to the reboiler for fuel, however, when the reboiler does not call for fuel, the BTEX condenser overheads are routed to the enclosed combustion device (Units ECD-1 for DEHY-1 & ECD-2 for DEHY-2).

Glycol Reboilers (Units HTR-1 & HTR-2)

NO_x, CO, VOC, PM, and HAPs emissions are calculated using AP-42 Table 1.4-1 through 1.4-3 emission factors. Greenhouse gas emissions are estimated using emission factors from 40 CFR 98 Subpart C Tables C-1 and C-2 and global warming potential conversion factors from 40 CFR 98 Subpart A Table A-1.

Atmospheric Storage Tanks (Units TK-1 through TK-5 & PWTK-1 through PWTK-4)

Uncontrolled emissions are calculated using BR&E ProMax. Hourly loading emissions are based on the short-term worse case

scenario. Annual emissions are based on the daily thought of the facility. Flash, working, and breathing emissions are routed to the tank flare (FL-1) with a 100% capture efficiency and a 98% DRE.

Enclosed Combustion Devices (Units ECD-1 & ECD-2)

Emissions for NO_x, CO, PM and VOC are calculated using AP-42 Tables 1.4-1 & 2 emission factors. Pilot SO₂ emissions are based on a conservative fuel sulfur content of 2 gr S/100 scf and a 100% conversion of elemental sulfur to SO₂. SO₂ emissions were calculated based on a 98% DRE, based on the manufacturer specification sheet, and conversion to SO₂. VOC, H₂S, and HAPs are calculated based on BR&E ProMax for the BTEX condenser overheads. For the H₂S, it was assumed 98% was combusted and 100% of the combusted H₂S was converted to SO₂. Greenhouse gas emissions are estimated using emission factors from 40 CFR 98 Subpart C Tables C-1 and C-2 and global warming potential conversion factors from 40 CFR 98 Subpart A Table A-1.

Loading Emissions (Units CONDLOAD & PW LOAD)

Loading emissions are calculated using AP-42 Section 5.2 methodology. The maximum hourly throughput is based on the assumption that two trucks with a 210 bbl capacity can be loaded in an hour.

Fugitive Emissions (Unit FUG-1)

Fugitive emission calculations were completed using emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emissions Estimates, 1995. Subcomponent counts for each subcomponent are based on estimated average component counts for each piece of equipment.

Haul Road Emissions (Unit HR-1)

Emissions are calculated using Equation 2 of AP-42 Section 13.2.2. Haul road emissions at this facility are exempt pursuant to 202.2.82.202.B.(5) NMAC. Emissions calculations are included in the application reference.

Startup, Shutdown, Maintenance/Malfunction (Unit SSM)

Emissions are based on various activities including, but not limited to, compressor blowdowns, dehydrator blowdowns, filter coalescer blowdowns, scrubber blowdowns, pump blowdowns, reboiler maintenance, pigging, pipeline downs, tank maintenance, surface coating, and abrasive blasting. All blowdowns are conservatively based on the inlet gas. Blowdown volumes were provided by Delek.

Flares (Units FL-1 & FL-2)

Emissions for NO_x, CO, and PM are calculated using AP-42 Tables 1.4-1 & 2 emission factors. Pilot SO₂ emissions are based on a conservative fuel sulfur content of 2 gr S/100 scf and a 100% conversion of elemental sulfur to SO₂. SO₂ emissions were calculated based on a 98% DRE and conversion to SO₂. VOC, H₂S, and HAPs are calculated based on BR&E ProMax for the inlet process gas (Unit FL-1) and tank flashing, working & breathing emissions (Unit FL-2). For the H₂S, it was assumed 98% was combusted and 100% of the combusted H₂S was converted to SO₂. Greenhouse gas emissions are estimated using emission factors from 40 CFR 98 Subpart C Tables C-1 and C-2.

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO₂e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO₂e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO₂e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO₂e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following ☐ By checking this box, the applicant acknowledges the total CO₂e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at <http://www.epa.gov/ttn/chief/ap42/index.html>
- EPA's Internet emission factor database WebFIRE at <http://cfpub.epa.gov/webfire/>
- 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at <http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases>:

Global Warming Potentials (GWP):

Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO₂ over a specified time period.

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

Metric to Short Ton Conversion:

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

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

Greenhouse Gas calculations are included in Table 2-P of the UA2.



Delek Logistics Partners LP - Lariat Compressor Station

Emission Summary

Uncontrolled Emissions																	
Unit	Description	NO _x		CO		VOC		SO ₂		PM ₁₀		PM _{2.5}		H ₂ S		Total HAPs	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
2310	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2320	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2330	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2340	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2350	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2360	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	7.39	32.38	2.89	12.64	0.050	0.22	0.11	0.49	0.11	0.49	--	--	1.53	6.69
2370	Waukesha 7044GSIS5 1900 hp Compressor Engine	49.05	214.84	41.09	179.98	0.52	2.26	0.069	0.30	0.15	0.65	0.15	0.65	--	--	0.38	1.68
2380	Caterpillar G3606A3 1875 hp Compressor Engine	2.07	9.05	10.87	47.62	5.77	25.27	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.15	5.03
2390	Caterpillar G3606A3 1875 hp Compressor Engine	2.07	9.05	10.87	47.62	5.77	25.27	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.15	5.03
2400	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.11	4.85
2410	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.11	4.85
2420	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.11	4.85
2430	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	11.99	52.51	6.60	28.89	0.063	0.28	0.14	0.62	0.14	0.62	--	--	1.11	4.85
2440	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	13.16	57.62	0.09	0.41	0.093	0.41	0.21	0.91	0.21	0.91	--	--	1.13	4.97
2450	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	13.16	57.62	0.09	0.41	0.093	0.41	0.21	0.91	0.21	0.91	--	--	1.13	4.97
2460	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	13.16	57.62	0.09	0.41	0.093	0.41	0.21	0.91	0.21	0.91	--	--	1.13	4.97
2470	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	13.16	57.62	0.09	0.41	0.093	0.41	0.21	0.91	0.21	0.91	--	--	1.13	4.97
2480	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	13.16	57.62	0.09	0.41	0.093	0.41	0.21	0.91	0.21	0.91	--	--	1.13	4.97
TK-1	Gunbarrel Tank	--	--	--	--	59.56	260.87	--	--	--	--	--	--	2.47E-03	0.011	5.78	25.31
TK-2	Condensate Tank	--	--	--	--	10.25	44.88	--	--	--	--	--	--	3.34E-04	1.46E-03	1.13	4.95
TK-3	Condensate Tank	--	--	--	--	10.25	44.88	--	--	--	--	--	--	3.34E-04	1.46E-03	1.13	4.95
TK-4	Condensate Tank	--	--	--	--	10.25	44.88	--	--	--	--	--	--	3.34E-04	1.46E-03	1.13	4.95
TK-5	Condensate Tank	--	--	--	--	10.25	44.88	--	--	--	--	--	--	3.34E-04	1.46E-03	1.13	4.95
PWTK-1	Produced Water Tank	--	--	--	--	0.157	0.69	--	--	--	--	--	--	8.59E-05	3.76E-04	0.119	0.52
PWTK-2	Produced Water Tank	--	--	--	--	0.157	0.69	--	--	--	--	--	--	8.59E-05	3.76E-04	0.119	0.52
PWTK-3	Produced Water Tank	--	--	--	--	0.157	0.69	--	--	--	--	--	--	8.59E-05	3.76E-04	0.119	0.52
PWTK-4	Produced Water Tank	--	--	--	--	0.157	0.69	--	--	--	--	--	--	8.59E-05	3.76E-04	0.119	0.52
HTR-1	1.5 MMBtu/Hr Dehy Reboiler	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	--	--	2.77E-03	0.01
HTR-2	1.5 MMBtu/hr Dehy Reboiler	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	--	--	2.77E-03	0.012
COND LOAD	Condensate Load	--	--	--	--	8.60	37.67	--	--	--	--	--	--	2.99E-04	1.31E-05	0.90	3.93
PW LOAD	Produced Water Load	--	--	--	--	2.38	10.41	--	--	--	--	--	--	1.42E-03	6.21E-05	1.95	8.54
DEHY-1	TEG Dehydrator	--	--	--	--	142.31	623.30	--	--	--	--	--	--	0.045	0.198	22.97	100.61
DEHY-2	TEG Dehydrator	--	--	--	--	142.31	623.30	--	--	--	--	--	--	0.045	0.198	22.97	100.61
ECD-1	Enclosed Combustion Device	0.013	0.055	0.011	0.046	0.94	4.12	5.71E-04	2.503E-03	--	--	--	--	--	--	0.13	0.55
ECD-2	Enclosed Combustion Device	0.013	0.055	0.011	0.046	0.94	4.12	5.71E-04	2.503E-03	--	--	--	--	--	--	0.32	1.40
FL-1	Process Flare	0.11	0.48	0.22	0.96	0.216	0.94	3.57E-03	0.016	--	--	--	--	6.27E-04	2.75E-03	7.62E-03	0.033
FL-2	Tank Flare	0.11	0.48	0.22	0.96	0.216	0.94	3.57E-03	0.016	--	--	--	--	6.27E-04	2.75E-03	7.62E-03	0.033
FUG-1	Fugitives	--	--	--	--	3.70	16.21	--	--	--	--	--	--	0.021	0.091	0.29	1.27
SSM	Startup, Shutdown, Maintenance	--	--	--	--	26263.76	131.02	--	--	--	--	--	--	1.12	5.58E-03	2080.06	10.37
Total Emissions:		76.91	336.84	221.63	970.75	26722.76	2141.46	1.23	5.40	2.72	11.91	2.72	11.91	1.24	0.52	2162.32	370.67



Delek Logistics Partners LP - Lariat Compressor Station

Emission Summary

Controlled Emissions																	
Unit	Description	NO _x		CO		VOC		SO ₂		PM ₁₀		PM _{2.5}		H ₂ S		Total HAPs	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
2310	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2320	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2330	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2340	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2350	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2360	Caterpillar G3516 1380 hp Compressor Engine	1.52	6.66	0.52	2.27	0.88	3.84	0.050	0.22	0.11	0.49	0.11	0.49	-	-	0.52	2.29
2370	Waukesha 7044GSIS5 1900 hp Compressor Engine	1.88	8.26	0.84	3.67	0.22	0.97	0.069	0.30	0.15	0.65	0.15	0.65	-	-	0.26	1.13
2380	Caterpillar G3606A3 1875 hp Compressor Engine	2.07	9.05	1.03	4.53	2.03	8.88	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.59	2.58
2390	Caterpillar G3606A3 1875 hp Compressor Engine	2.07	9.05	1.03	4.53	2.03	8.88	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.59	2.58
2400	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.73	3.22
2410	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.73	3.22
2420	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.73	3.22
2430	Caterpillar G3606A4 1875 hp Compressor Engine	1.24	5.43	2.48	10.86	2.63	11.51	0.063	0.28	0.14	0.62	0.14	0.62	-	-	0.73	3.22
2440	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	-	-	0.95	4.17
2450	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	-	-	0.95	4.17
2460	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	-	-	0.95	4.17
2470	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	-	-	0.95	4.17
2480	Caterpillar G3608A4 2750 hp Compressor Engine	1.82	7.97	2.43	10.62	1.37	6.00	0.093	0.41	0.21	0.91	0.21	0.91	-	-	0.95	4.17
TK-1	Gunbarrel Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-2	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-3	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-4	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-5	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-1	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-2	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-3	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-4	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HTR-1	1.5 MMBtu/Hr Dehy Reboiler	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	--	--	2.77E-03	0.012
HTR-2	1.5 MMBtu/hr Dehy Reboiler	0.15	0.64	0.12	0.54	8.09E-03	0.035	6.72E-03	0.029	0.011	0.049	0.011	0.049	--	--	2.77E-03	0.012
COND LOAD	Condensate Load	--	--	--	--	8.60	37.67	--	--	--	--	--	--	2.99E-04	1.31E-05	0.90	3.93
PW LOAD	Produced Water Load	--	--	--	--	2.38	10.41	--	--	--	--	--	--	1.42E-03	6.21E-05	1.95	8.54
DEHY-1	TEG Dehydrator	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEHY-2	TEG Dehydrator	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ECD-1	Enclosed Combustion Device	0.14	0.63	0.121	0.53	0.94	4.12	0.052	0.229	0.011	0.048	0.011	0.048	6.00E-04	2.63E-03	0.32	1.40
ECD-2	Enclosed Combustion Device	0.14	0.63	0.121	0.53	0.94	4.12	0.052	0.229	0.011	0.048	0.011	0.048	6.00E-04	2.63E-03	0.32	1.40
FL-1	Process Flare	230.96	1.68	461.08	3.36	527.44	3.69	3.58E-03	0.016	--	--	--	--	6.28E-04	2.75E-03	41.77	0.25
FL-2	Tank Flare	0.56	2.47	1.13	4.94	39.04	9.81	0.011	0.049	--	--	--	--	7.10E-04	3.11E-03	0.108	0.47
FUG-1	Fugitives	--	--	--	--	3.70	16.21	--	--	--	--	--	--	0.021	0.091	0.29	1.273
SSM	Startup, Shutdown, Maintenance	--	--	--	--	8.64	0.16	--	--	--	--	--	--	3.85E-04	5.584E-03	0.37	6.66E-03
Total Emissions:		261.31	134.60	490.75	133.31	618.59	204.05	1.34	5.89	2.74	12.00	2.74	12.00	0.03	0.11	58.31	71.07
Total Emissions w/o Fugitives:		261.31	134.60	490.75	133.31	614.89	187.84	1.34	5.89	2.74	12.00	2.74	12.00	4.640E-03	0.02	58.02	69.80



Delek Logistics Partners LP - Lariat Compressor Station

HAP Emission Summary

Uncontrolled HAP Emissions																			
Unit		Description		Formaldehyde		Acetaldehyde		Acrolein		Benzene		Toluene		Ethylbenzene		Xylenes		n-Hexane	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
2310	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.03	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2320	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2330	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2340	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2350	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2360	Caterpillar G3516 1380 hp Compressor Engine	1.31	5.73	0.12	0.51	0.072	0.31	6.14E-03	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067		
2370	Waukesha 7044GSI5 1900 hp Compressor Engine	0.084	0.37	0.05	0.24	0.052	0.23	0.031	0.14	1.09E-02	0.048	4.86E-04	2.13E-03	3.82E-03	0.017	0.022	0.094		
2380	Caterpillar G3606A3 1875 hp Compressor Engine	0.83	3.62	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2390	Caterpillar G3606A3 1875 hp Compressor Engine	0.83	3.62	0.147	0.64	0.090	0.40	0.053	0.23	7.182E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2400	Caterpillar G3606A4 1875 hp Compressor Engine	0.79	3.44	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2410	Caterpillar G3606A4 1875 hp Compressor Engine	0.79	3.44	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2420	Caterpillar G3606A4 1875 hp Compressor Engine	0.79	3.44	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.03	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2430	Caterpillar G3606A4 1875 hp Compressor Engine	0.79	3.44	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.03	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085		
2440	Caterpillar G3608A4 2750 hp Compressor Engine	0.73	3.19	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13		
2450	Caterpillar G3608A4 2750 hp Compressor Engine	0.73	3.19	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13		
2460	Caterpillar G3608A4 2750 hp Compressor Engine	0.73	3.19	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13		
2470	Caterpillar G3608A4 2750 hp Compressor Engine	0.73	3.19	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13		
2480	Caterpillar G3608A4 2750 hp Compressor Engine	0.73	3.19	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13		
TK-1	Gunbarrel Tank	--	--	--	--	--	--	2.76	12.10	0.69	3.03	0.025	0.11	0.05	0.23	2.25	9.84		
TK-2	Condensate Tank	--	--	--	--	--	--	0.53	2.34	0.14	0.62	5.57E-03	0.02	0.01	0.05	0.44	1.91		
TK-3	Condensate Tank	--	--	--	--	--	--	0.53	2.34	0.14	0.62	5.57E-03	0.02	0.01	0.05	0.44	1.91		
TK-4	Condensate Tank	--	--	--	--	--	--	0.53	2.34	0.14	0.62	5.57E-03	0.02	0.01	0.05	0.44	1.91		
TK-5	Condensate Tank	--	--	--	--	--	--	0.53	2.34	0.14	0.62	5.57E-03	0.02	0.01	0.05	0.44	1.91		
PWTK-1	Produced Water Tank	--	--	--	--	--	--	0.09	0.41	0.02	0.10	8.61E-04	3.77E-03	1.73E-03	7.59E-03	2.99E-04	1.31E-03		
PWTK-2	Produced Water Tank	--	--	--	--	--	--	0.09	0.41	0.02	0.10	8.61E-04	3.77E-03	1.73E-03	7.59E-03	2.99E-04	1.31E-03		
PWTK-3	Produced Water Tank	--	--	--	--	--	--	0.09	0.41	0.02	0.10	8.61E-04	3.77E-03	1.73E-03	7.59E-03	2.99E-04	1.31E-03		
PWTK-4	Produced Water Tank	--	--	--	--	--	--	0.09	0.41	0.02	0.10	8.61E-04	3.77E-03	1.73E-03	7.59E-03	2.99E-04	1.31E-03		
HTR-1	1.5 MMBtu/Hr Dehy Reboiler	1.10E-04	4.83E-04	--	--	--	--	3.09E-06	1.35E-05	5.00E-06	2.19E-05	--	--	--	--	2.65E-03	0.012		
HTR-2	1.5 MMBtu/hr Dehy Reboiler	1.10E-04	4.83E-04	--	--	--	--	3.09E-06	1.35E-05	5.00E-06	2.19E-05	--	--	--	--	2.65E-03	0.012		
COND LOAD	Condensate Load	--	--	--	--	--	--	0.11	0.49	0.03	0.127	1.10E-03	4.82E-03	2.32E-03	0.010	0.092	0.402		
PW LOAD	Produced Water Load	--	--	--	--	--	--	0.11	0.47	0.03	0.114	9.90E-04	4.33E-03	1.99E-03	8.73E-03	9.00E-05	3.94E-04		
DEHY-1	TEG Dehydrator	--	--	--	--	--	--	18.00	78.85	1.71	7.48	0.02	0.07	0.03	0.15	3.21	14.06		
DEHY-2	TEG Dehydrator	--	--	--	--	--	--	18.00	78.85	1.71	7.48	0.02	0.07	0.03	0.15	3.21	14.06		
ECD-1	Enclosed Combustion Device	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
ECD-2	Enclosed Combustion Device	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FL-1	Process Flare	--	--	--	--	--	--	7.38E-03	0.03	4.02E-03	0.018	4.67E-04	2.04E-03	2.48E-04	4.672E-03	6.95E-03	0.030		
FL-2	Tank Flare	--	--	--	--	--	--	7.38E-03	0.03	4.02E-03	0.018	4.67E-04	2.04E-03	2.48E-04	4.672E-03	6.95E-03	0.030		
FUG-1	Fugitives	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
SSM	Startup, Shutdown, Maintenance	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Total Emissions:		16.37	71.68	2.72	11.93	1.69	7.41	41.96	183.77	4.97	21.77	0.10	0.43	0.24	1.08	10.90	47.73		



Delek Logistics Partners LP - Lariat Compressor Station

HAP Emission Summary

Controlled HAP Emissions and GHG emissions																					
Unit	Description	Formaldehyde lb/hr	tpy	Acetaldehyde lb/hr	tpy	Acrolein lb/hr	tpy	Benzene lb/hr	tpy	Toluene lb/hr	tpy	Ethylbenzene lb/hr	tpy	Xylenes lb/hr	tpy	n-Hexane lb/hr	tpy	CO ₂ tpy	CH ₄ tpy	N ₂ O tpy	CO ₂ e tpy
2310	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.072	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2320	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2330	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2340	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2350	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2360	Caterpillar G3516 1380 hp Compressor Engine	0.30	1.33	0.12	0.51	0.072	0.31	0.053	0.027	5.69E-03	0.025	5.54E-04	2.43E-03	2.57E-03	0.011	0.015	0.067	5715.15	0.12	0.011	5721.32
2370	Waukesha 7044GSISS 1900 hp Compressor Engine	0.08	0.37	0.055	0.24	0.052	0.24	0.031	0.14	0.01	0.048	4.86E-04	2.13E-03	3.82E-03	0.017	0.022	0.094	7963.11	0.17	0.015	7971.71
2380	Caterpillar G3606A3 1875 hp Compressor Engine	0.27	1.18	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
2390	Caterpillar G3606A3 1875 hp Compressor Engine	0.27	1.18	0.15	0.64	0.090	0.40	0.053	0.23	7.182E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
3000	Caterpillar G3606A4 1875 hp Compressor Engine	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
3100	Caterpillar G3606A4 1875 hp Compressor Engine	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
3200	Caterpillar G3606A4 1875 hp Compressor Engine	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
3300	Caterpillar G3606A4 1875 hp Compressor Engine	0.41	1.81	0.15	0.64	0.090	0.40	0.053	0.23	7.18E-03	0.031	6.99E-04	3.06E-03	3.24E-03	0.014	0.019	0.085	7210.84	0.15	0.014	7218.63
3400	Caterpillar G3608A4 2750 hp Compressor Engine	0.55	2.39	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13	10636.48	0.22	0.020	10647.97
3500	Caterpillar G3608A4 2750 hp Compressor Engine	0.55	2.39	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13	10636.48	0.22	0.020	10647.97
3600	Caterpillar G3608A4 2750 hp Compressor Engine	0.55	2.39	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13	10636.48	0.22	0.020	10647.97
3700	Caterpillar G3608A4 2750 hp Compressor Engine	0.55	2.39	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13	10636.48	0.22	0.020	10647.97
3800	Caterpillar G3608A4 2750 hp Compressor Engine	0.55	2.39	0.22	0.95	0.13	0.58	0.011	0.050	0.011	0.046	1.03E-03	4.52E-03	4.78E-03	0.021	0.029	0.13	10636.48	0.22	0.020	10647.97
TK-1	Gunbarrel Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-2	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-3	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-4	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TK-5	Condensate Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-1	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-2	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-3	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PWTK-4	Produced Water Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HTR-1	1.5 MMBtu/Hr Dehy Reboiler	1.10E-04	4.83E-04	--	--	--	--	3.09E-06	1.35E-05	5.00E-06	2.19E-05	--	--	--	--	2.65E-03	0.012	768.54	0.016	1.45E-03	769.37
HTR-2	1.5 MMBtu/hr Dehy Reboiler	1.10E-04	4.83E-04	--	--	--	--	3.09E-06	1.35E-05	5.00E-06	2.19E-05	--	--	--	--	2.65E-03	0.012	768.54	0.016	1.45E-03	769.37
COND LOAD	Condensate Load	--	--	--	--	--	--	0.11	0.494	0.03	0.13	1.10E-03	4.82E-03	2.32E-03	0.010	0.092	0.40	1.39	1.96	--	56.16
PW LOAD	Produced Water Load	--	--	--	--	--	--	0.11	0.468	0.03	0.11	9.90E-04	4.33E-03	1.99E-03	8.73E-03	9.00E-05	3.94E-04	5.45E-03	0.54	--	15.01
DEHY-1	TEG Dehydrator	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEHY-2	TEG Dehydrator	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ECD-1	Enclosed Combustion Device	--	--	--	--	--	--	0.277	1.21	0.023	0.10	1.36E-04	5.94E-04	3.94E-04	1.724E-03	0.02	0.084	1577.24	0.033	2.973E-03	1578.94
ECD-2	Enclosed Combustion Device	--	--	--	--	--	--	0.277	1.21	0.023	0.10	1.36E-04	5.94E-04	3.94E-04	1.724E-03	0.02	0.084	1577.24	0.033	2.973E-03	1578.94
FL-1	Process Flare	--	--	--	--	--	--	15.51	0.113	8.45	0.062	0.98	#####	2.24	0.02	14.61	0.11	1392.19	4.81	2.357E-03	1527.36
FL-2	Tank Flare	--	--	--	--	--	--	0.058	0.25	0.017	0.075	9.81E-04	4.30E-03	1.33E-03	9.403E-03	0.042	0.18	3782.93	0.08	7.130E-03	3787.01
FUG-1	Fugitives	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.596	22.324	--	627.655
SSM	Startup, Shutdown, Maintenance	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.679	177.95	--	5003.23
Total Emissions:		6.83	29.91	2.72	11.93	1.69	7.42	17.08	5.70	8.71	1.20	1.00	0.08	2.31	0.32	15.16	2.52	148592.82	210.62	0.28	154564.31



Delek Logistics Partners LP - Lariat Compressor Station

Inputs

Site-Wide		
Description	Value	Unit
Gas Throughput	140	MMscf/day
Annual Operating Hours	8,760	hr
Daily Operating Hours	24	hr
Site Elevation	3,602	ft MSL

Fuel Gas			
	Value	Unit	Notes
Fuel Heat Value	1,275.78	Btu/scf	Extended Gas Analysis
Fuel Sulfur Content	2.0	gr S / 100 scf	Engineering Estimate

Engine Input Information			
	Value	Unit	Notes
Units:	2390		
Description:	Waukesha 7044GSIS5 1900 hp Compressor Engine		
Rating:	1900	hp	Facility Permit
Fuel Usage:	8180	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating
Units:	2310 through 2360		
Description:	Caterpillar G3516 1380 hp Compressor Engine		
Rating:	1380	hp	Facility Permit
Fuel Usage:	8083	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating
Units:	2400 through 2430		
Description:	Caterpillar G3606A4 1875 hp Compressor Engine		
Rating:	1875	hp	Facility Permit
Fuel Usage:	7506	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating
Units:	ENG-2440 through 2480		
Description:	Caterpillar G3608A4 2107 hp Compressor Engine		
Rating:	2750	hp	Facility Permit
Fuel Usage:	7549	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating
Units:	2370, 2380		
Description:	Caterpillar G3606A3 1875 hp Compressor Engine		
Rating:	1875	hp	Facility Permit
Fuel Usage:	7506	Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating

Gunbarrel Tanks			
	Value	Unit	Notes
Unit:	TK-1		
Description:	500 bbl Gunbarrel Tank		
Number of Tanks	1		
Volume	500	bbl	
Height (Shell)	20	ft	
Diameter	13.4	ft	
Hourly Throughput	43.75	bbl/hr	
Annual Throughput	383250.00	bbl/yr	

Condensate Tanks			
	Value	Unit	Notes
Unit:	TK-2-TK-5		
Description:	500 bbl Condensate Tanks		
Number of Tanks	4		
Volume	500	bbl	
Height (Shell)	20	ft	
Diameter	13.40	ft	
Hourly Throughput	29.11	bbl/hr	
Annual Throughput	255000	bbl/yr	

Produced Water Tanks			
	Value	Unit	Notes
Unit:	PWTK-1-PWTK-4		
Description:	500 bbl Produced Water Tanks		
Number of Tanks	4		
Volume	500	bbl	
Height (shell)	20	ft	
Diameter	13.40	ft	
Hourly Throughput	14.58	bbl/hr	
Annual Throughput	127750	bbl/yr	



Delek Logistics Partners LP - Lariat Compressor Station

Waukesha 7044GSIS5 Engine Calculations

Emission Unit: 2390
Source Description: Compressor Engine
Manufacturer: Waukesha
Model: 7044GSIS5
Type: 4SRB

Fuel Consumption
Site horsepower 1900 hp
Fuel heat value 1285.31 Btu/scf
Heat input 15.5 MMBtu/hr
Fuel consumption 12.1 Mscf/hr
Hours of Operation 8760.0 hrs/yr
Annual fuel usage 105.9 MMscf/yr
Fuel Consumption 8180 Btu/hp-hr
Manufacturer Rating
Fuel Gas Analysis
Fuel consumption * HP
Heat input / fuel heat value
8760 hrs/yr operation
Manufacturer Spec Sheet @ Max Rating

Emission Calculations										
Uncontrolled	NO _x	CO	VOC	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	11.71	9.81	0.06		0.05				a/hp-hr	Catalyst Specification Sheet
				0.020		9.50E-03	9.50E-03		lb/MMBtu	AP-42 Table 3.2-3
									gr S/scf	Engineering Estimate
Emissions	49.05	41.09	0.52	0.069	0.21	0.15	0.15	0.38	lb/hr	
	214.84	179.98	2.26	0.30	0.92	0.65	0.65	1.68	tpy	

Controlled	NO _x	CO	VOC ¹	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	0.45	0.20	0.02		0.020				a/hp-hr	Catalyst Specification Sheet
	96.16%	98%	67%		60.00%				lb/MMBtu	% Reduction
				0.020		9.50E-03	9.50E-03		gr S/scf	AP-42 Table 3.2-3
										Engineering Estimate
Emissions	1.88	0.84	0.22	0.069	0.08	0.15	0.15	0.26	lb/hr	
	8.26	3.669	0.97	0.30	0.37	0.65	0.65	1.13	tpy	

Acetaldehyde ⁵	Acrolein ⁵	Benzene ⁵	E-Benzene ⁵	n-Hexane ⁵	Toluene ⁵	Xylene ⁵	Units	Notes
2.79E-03	2.63E-03	1.58E-03	2.48E-05	1.10E-03	5.58E-04	1.95E-04	lb/MMBtu	AP-42 Table 3.2-3
3.52E-03	3.31E-03	1.99E-03	3.13E-05	1.39E-03	7.03E-04	2.46E-04	lb/MMBtu	AP-42 Table 3.2-3 (adjusted)
0.055	0.052	0.031	4.86E-04	0.022	0.011	3.82E-03	lb/hr	
0.24	0.23	0.136	2.13E-03	0.094	0.048	0.017	tpy	

- NOTES
- ¹ VOC emission factor is calculated by adding aldehyde emissions.
- ² SO₂ emissions are based on fuel consumption and fuel sulfur content of 2 grains of sulfur per 100 scf
2 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO₂/ 32 lb-mol S = lb/hr SO₂
- ³ HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg spec sheet).
- ⁴ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}
- ⁵ AP-42 Table 3.2-3 & adjusted for

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	7963.11	0.17	0.02	-	tpy	
	7963.11	4.62	3.98	7971.71	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)
CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

G3516 Engine Calculations

Emission Unit: 2310 through 2360
Source Description: Compressor Engine
Manufacturer: Caterpillar
Model: G3516B
Type: 4SLB

Fuel Consumption

Site horsepower	1380 hp	Manufacturer Rating
Fuel heat value	1275.78 Btu/scf	Fuel Gas Analysis
Heat input	11.2 MMBtu/hr	Fuel consumption * HP
Fuel consumption	8.7 Mscf/hr	Heat input / fuel heat value
Hours of Operation	8760.0 hrs/yr	
Annual fuel usage	76.6 MMscf/yr	8760 hrs/yr operation
Fuel Consumption	8083 Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating

Emission Calculations

<i>Uncontrolled</i>	NO _x	CO	VOC	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
	0.50	2.43	0.48		0.43	9.99E-03	9.99E-03		q/hp-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.52 6.66	7.39 32.38	2.89 12.64	0.050 0.22	1.31 5.73	0.11 0.49	0.11 0.49	1.53 6.69	lb/hr tpy	

<i>Controlled</i>	NO _x	CO	VOC ¹	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
	0.50 0.00%	0.17 93%	0.15 69%		0.10 76.74%	9.99E-03	9.99E-03		q/hp-hr % Reduction lb/MMBtu gr S/scf	Catalyst Specification Sheet % Reduction AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.52 6.66	0.52 2.27	0.88 3.84	0.050 0.22	0.30 1.33	0.11 0.49	0.11 0.49	0.52 2.29	lb/hr tpy	

Acetaldehyde ⁵	Acrolein ⁵	Benzene ⁵	E-Benzene ⁵	n-Hexane ⁵	Toluene ⁵	Xylene ⁵	Units	Notes
8.36E-03	5.14E-03	4.40E-04	3.97E-05	1.10E-03	4.08E-04	1.84E-04	lb/MMBtu	AP-42 Table 3.2-2
1.05E-02	6.43E-03	5.50E-04	4.97E-05	1.38E-03	5.10E-04	2.30E-04	lb/MMBtu	AP-42 Table 3.2-2 (adjusted)
0.12	0.072	6.14E-03	5.54E-04	0.015	5.69E-03	2.57E-03	lb/hr	
0.51	0.31	0.027	2.43E-03	0.067	0.025	0.011	tpy	

NOTES

- ¹ VOC emission factor is calculated by adding aldehyde emissions.
- ² SO₂ emissions are based on fuel consumption and fuel sulfur content of 2 grains of sulfur per 100 scf
2 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO₂/ 32 lb-mol S = lb/hr SO₂
- ³ HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg spec sheet).
- ⁴ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}
- ⁵ AP-42 Table 3.2-2 & adjusted for 1275.78 Btu/scf

<i>Green House Gas Emissions</i>	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	5715.15	0.12	0.01	5721.32	tpy	
	5715.15	3.32E+00	2.85E+00	5721.32	tpy CO ₂ e	

- ⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)
CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



G3606 Engine Calculations

Emission Unit: 2370, 2380
 Source Description: Compressor Engine
 Manufacturer: Caterpillar
 Model: G3606
 Type: 4SLB

Fuel Consumption

Site horsepower	1875 hp	Manufacturer Rating
Fuel heat value	1275.78 Btu/scf	Fuel Gas Analysis
Heat input	14.1 MMBtu/hr	Fuel consumption * HP
Fuel consumption	11.0 Mscf/hr	Heat input / fuel heat value
Hours of Operation	8760.0 hrs/yr	
Annual fuel usage	96.6 Mmscf/yr	8760 hrs/yr operation
Fuel Consumption	7506 Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating

Emission Calculations

<i>Uncontrolled</i>	NO _x	CO	VOC	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	0.50	2.63	1.16		0.20	9.99E-03	9.99E-03		g/hp-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	2.07 9.05	10.87 47.62	5.77 25.27	0.063 0.28	0.83 3.62	0.14 0.62	0.14 0.62	1.15 5.03	lb/hr tpy	

<i>Controlled</i>	NO _x	CO	VOC ¹	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	0.50 0.00%	0.25 90%	0.39 66.38%		0.065 67.50%	9.99E-03	9.99E-03		g/hp-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet % Reduction AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	2.07 9.05	1.03 4.53	2.03 8.88	0.063 0.28	0.27 1.18	0.14 0.62	0.14 0.62	0.59 2.58	lb/hr tpy	

Acetaldehyde ⁵	Acrolein ⁵	Benzene ⁵	E-Benzene ⁵	n-Hexane ⁵	Toluene ⁵	Xylene ⁵	Units	Notes
8.36E-03	5.14E-03	4.40E-04	3.97E-05	1.10E-03	4.08E-04	1.84E-04	lb/MMBtu	AP-42 Table 3.2-2
1.05E-02	6.43E-03	3.78E-03	4.97E-05	1.38E-03	5.10E-04	2.30E-04	lb/MMBtu	AP-42 Table 3.2-2 (adjusted)
0.15 0.64	0.090 0.40	0.05 0.233	6.99E-04 3.06E-03	0.019 0.085	7.18E-03 0.031	3.24E-03 0.014	lb/hr tpy	

NOTES

¹ VOC emission factor is calculated by adding aldehyde emissions.

² SO₂ emissions are based on fuel consumption and fuel sulfur content of 2 grains of sulfur per 100 scf
 2 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO₂/ 32 lb-mol S = lb/hr SO₂

³ HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg spec sheet).

⁴ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}

⁵ AP-42 Table 3.2-2 & adjusted for 1275.78 Btu/scf

<i>Green House Gas Emissions</i>	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	7210.84	0.15	0.01		tpy	
	7210.84	4.19E+00	3.60E+00	7218.63	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)

CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



G3606A4 Engine Calculations

Emission Unit: 2400 through 2430
 Source Description: Compressor Engine
 Manufacturer: Caterpillar
 Model: G3606A4
 Type: 4SLB

Fuel Consumption

Site horsepower	1875 hp	Manufacturer Rating
Fuel heat value	1275.78 Btu/scf	Fuel Gas Analysis
Heat input	14.1 MMBtu/hr	Fuel consumption * HP
Fuel consumption	11.0 Mscf/hr	Heat input / fuel heat value
Hours of Operation	8760.0 hrs/yr	
Annual fuel usage	96.6 MMscf/yr	8760 hrs/yr operation
Fuel Consumption	7506 Btu/hp-hr	Manufacturer Spec Sheet @ Max Rating

Emission Calculations

<i>Uncontrolled</i>	NO _x	CO	VOC	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	0.30	2.90	1.37		0.19	9.99E-03	9.99E-03		g/hp-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.24	11.99	6.60	0.063	0.79	0.14	0.14	1.11	lb/hr	
	5.43	52.51	28.89	0.28	3.44	0.62	0.62	4.85	tpy	

<i>Controlled</i>	NO _x	CO	VOC ¹	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
Emission Factors	0.30	0.60	0.50		0.10				g/hp-hr	Catalyst Specification Sheet
	0.00%	79%	63.50%		47.37%	9.99E-03	9.99E-03		lb/MMBtu gr S/scf	% Reduction AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.24	2.48	2.63	0.063	0.41	0.14	0.14	0.73	lb/hr	
	5.43	10.86	11.51	0.28	1.81	0.62	0.62	3.22	tpy	

Acetaldehyde ⁵	Acrolein ⁵	Benzene ⁵	E-Benzene ⁵	n-Hexane ⁵	Toluene ⁵	Xylene ⁵	Units	Notes
8.36E-03	5.14E-03	4.40E-04	3.97E-05	1.10E-03	4.08E-04	1.84E-04	lb/MMBtu	AP-42 Table 3.2-2
1.05E-02	6.43E-03	3.78E-03	4.97E-05	1.38E-03	5.10E-04	2.30E-04	lb/MMBtu	AP-42 Table 3.2-2 (adjusted)
0.15	0.090	0.05	6.99E-04	0.019	7.18E-03	3.24E-03	lb/hr	
0.64	0.40	0.233	3.06E-03	0.085	0.031	0.014	tpy	

NOTES

¹ VOC emission factor is calculated by adding aldehyde emissions.

² SO₂ emissions are based on fuel consumption and fuel sulfur content of 2 grains of sulfur per 100 scf

2 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO₂/ 32 lb-mol S = lb/hr SO₂

³ HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg spec sheet).

⁴ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}

⁵ AP-42 Table 3.2-2 & adjusted for 1275.78 Btu/scf

<i>Green House Gas Emissions</i>	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	7210.84	0.15	0.01		tpy	
	7210.84	4.19E+00	3.60E+00	7218.63	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)

CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

G3608A4 Engine Calculations

Emission Unit: ENG-2440 through 2480
Source Description: Compressor Engine
Manufacturer: Caterpillar
Model: G3608A4
Type: 4SLB

Fuel Consumption
Site horsepower 2750 hp
Fuel heat value 1275.78 Btu/scf
Heat input 20.8 MMBtu/hr
Fuel consumption 16.3 Mscf/hr
Hours of Operation 8760.0 hrs/yr
Annual fuel usage 142.5 MMscf/yr
Fuel Consumption 7549 Btu/hp-hr
Manufacturer Rating
Fuel Gas Analysis
Fuel consumption * HP
Heat input / fuel heat value
8760 hrs/yr operation
Manufacturer Spec Sheet @ Max Rating

Emission Calculations										
Uncontrolled	NO _x	CO	VOC	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
	0.30	2.17	0.17		0.12	9.99E-03	9.99E-03		a/hr-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.82 7.97	13.16 57.62	1.98 8.65	0.093 0.41	0.73 3.19	0.21 0.91	0.21 0.91	1.13 4.97	lb/hr tpy	

Controlled	NO _x	CO	VOC ¹	SO ₂ ²	HCHO	PM ₁₀ ⁴	PM _{2.5} ⁴	Total HAPs ³	Units	Notes
	0.30 0.00%	0.40 81.57%	0.10 41.18%		0.09 25.00%	9.99E-03	9.99E-03		a/hp-hr lb/MMBtu gr S/scf	Catalyst Specification Sheet % Reduction AP-42 Table 3.2-2 Engineering Estimate
				0.020						
Emissions	1.82 7.97	2.43 10.62	1.37 6.00	0.093 0.41	0.55 2.39	0.21 0.91	0.21 0.91	0.95 4.17	lb/hr tpy	

Acetaldehyde ⁵	Acrolein ⁵	Benzene ⁵	E-Benzene ⁵	n-Hexane ⁵	Toluene ⁵	Xylene ⁵	Units	Notes
8.36E-03	5.14E-03	4.40E-04	3.97E-05	1.10E-03	4.08E-04	1.84E-04	lb/MMBtu	AP-42 Table 3.2-2
1.05E-02	6.43E-03	5.50E-04	4.97E-05	1.38E-03	5.10E-04	2.30E-04	lb/MMBtu	AP-42 Table 3.2-2 (adjusted)
0.22 0.95	0.13 0.58	0.01 0.050	1.03E-03 4.52E-03	0.029 0.125	0.01 0.046	4.78E-03 0.021	lb/hr tpy	

NOTES
¹ VOC emission factor is calculated by adding aldehyde emissions.
² SO₂ emissions are based on fuel consumption and fuel sulfur content of 2 grains of sulfur per 100 scf
2 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO₂/ 32 lb-mol S = lb/hr SO₂
³ HAPs emissions factors are referenced from AP-42 Table 3.2-2 (except formaldehyde: provided in mfg spec sheet).
⁴ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}
⁵ AP-42 Table 3.2-2 & adjusted for

Green House Gas Emissions						1275.78 Btu/scf	
CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes		
53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2		
1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1		
10636.48	0.22	0.02		tpy			
10636.48	6.17E+00	5.31E+00	10647.97	tpy CO ₂ e			

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)
CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

Gunbarrel Tank

Emission unit number(s): TK-1
Source description: 500 bbl Gunbarrel Tank

Annual Operating Hours: 8,760
Number of Tanks: 1
Capacity of Tanks: 500 bbl
Max Hourly Cond Throughput: 43.75 bbl/hr
Daily Throughput: 1050.00 bbl/d
Annual Throughput: 383250.00 bbl/yr

Gunbarrel Tank Emissions ¹				
Component	Uncontrolled Emissions			
	Flash (lb/hr)	Working and Breathing (lb/hr)	Total per Tank (lb/hr)	Total Emissions Per Tank (tpy)
Methane	11.58	1.26	12.84	56.24
Ethane	12.31	2.54	14.85	65.03
Propane	15.57	4.45	20.03	87.72
i-Butane	8.66	3.10	11.76	51.50
n-Butane	3.20	1.24	4.45	19.48
i-Pentane	3.04	1.04	4.08	17.85
n-Pentane	6.10	2.42	8.52	37.31
Cyclohexane	1.36	0.58	1.94	8.50
n-Hexane	1.58	0.67	2.25	9.84
n-Heptane	1.92	0.85	2.77	12.14
C8	0.09	0.04	0.13	0.59
Water	0.62	0.29	0.90	3.96
N2	0.33	8.86E-03	0.338	1.48
CO2	3.16	0.54	3.70	16.19
H2S	2.00E-03	4.62E-04	2.47E-03	0.01
Triethylene Glycol	8.17E-12	7.52E-12	1.57E-11	6.87E-11
EG	-	-	-	-
MeOH	-	-	-	-
MDEA	-	-	-	-
2,2,4-Trimethylpentane	-	-	-	-
Benzene	1.94	0.82	2.76	12.10
Toluene	0.48	0.21	0.69	3.03
Ethylbenzene	0.02	8.01E-03	0.025	0.11
m-Xylene	0.03	0.01	0.041	0.18
o-Xylene	8.55E-03	3.95E-03	0.012	0.055
Nonane	0.04	0.02	0.064	0.28
Decane	0.03	0.01	0.044	0.192
Undecane	-	-	-	-
Dodecane	-	-	-	-
VOC	44.09	15.47	59.56	260.87
Total HAPS	4.06	1.72	5.78	25.31
Total H₂S	2.00E-03	4.62E-04	2.47E-03	0.01

¹ Uncontrolled emissions are calculated using BR&E ProMax. Hourly loading emissions are based on the short-term worse case scenario. Annual emissions are based on the daily throughput of the facility.



Delek Logistics Partners LP - Lariat Compressor Station

Condensate Tanks

Emission unit number(s): TK-2-TK-5
Source description: 500 bbl Condensate Tanks

Annual Operating Hours: 8,760
Number of Tanks: 4
Capacity of Tanks: 500 bbl
Hourly Throughput: 29.11 bbl/hr
Daily Throughput: 698.63 bbl/d
Annual Throughput: 255000 bbl/yr

Condensate Tank Emissions ¹				
Component	Uncontrolled Emissions			
	Flash (lb/hr)	Working and Breathing (lb/hr)	Total per Tank (lb/hr)	Total Emissions Per Tank (tpy)
Methane	1.62	0.68	0.58	2.52
Ethane	4.80	2.53	1.83	8.02
Propane	8.20	4.13	3.08	13.50
i-Butane	5.42	2.59	2.00	8.77
n-Butane	2.18	1.01	0.80	3.49
i-Pentane	1.83	0.89	0.68	2.97
n-Pentane	4.26	1.95	1.55	6.80
Cyclohexane	1.05	0.46	0.38	1.65
n-Hexane	1.22	0.53	0.437	1.91
n-Heptane	1.61	0.67	0.57	2.50
C8	0.08	0.03	0.029	0.13
Water	0.21	0.11	0.080	0.35
N2	0.01	1.68E-03	4.07E-03	0.018
CO2	0.90	0.48	0.35	1.52
H2S	8.82E-04	4.56E-04	3.34E-04	1.46E-03
Triethylene Glycol	9.63E-12	3.36E-12	3.25E-12	1.42E-11
EG	-	-	-	-
MeOH	-	-	-	-
MDEA	-	-	-	-
2,2,4-Trimethylpentane	-	-	-	-
Benzene	1.49	0.65	0.535	2.34
Toluene	0.40	0.17	0.14	0.62
Ethylbenzene	0.02	6.346E-03	5.574E-03	0.024
m-Xylene	0.03	0.010	9.015E-03	0.04
o-Xylene	7.88E-03	3.127E-03	2.75E-03	0.012
Nonane	0.04	0.016	0.015	0.065
Decane	0.03	0.012	0.01	0.047
Undecane	-	-	-	-
Dodecane	-	-	-	-
VOC	27.87	13.12	10.25	44.88
Total HAPS	3.16	1.37	1.13	4.95
Total H₂S	8.82E-04	4.56E-04	3.34E-04	1.46E-03

¹ Uncontrolled emissions are calculated using BR&E ProMax. Hourly loading emissions are based on the short-term worse case scenario. Annual emissions are based on the daily throughput of the facility.



Delek Logistics Partners LP - Lariat Compressor Station

Produced Water Tanks

Emission unit number(s): PWTk-1-PWTk-4
 Source description: 500 bbl Produced Water Tanks

Annual Operating Hours: 8,760
 Number of Tanks: 4
 Capacity of Tanks: 500 bbl
 Hourly Throughput: 14.58 bbl/hr
 Daily Throughput: 350.00 bbl/d
 Annual Throughput: 127750.00 bbl/yr

Produced Water Tank Emissions ¹				
Component	Uncontrolled Emissions			
	Flash (lb/hr)	Working and Breathing (lb/hr)	Total per Tank (lb/hr)	Total Emissions Per Tank (tpy)
Methane	0.02	0.029	0.01	0.049
Ethane	0.02	0.056	0.02	0.084
Propane	0.02	0.05	0.02	0.076
i-Butane	0.01	0.02	8.77E-03	0.04
n-Butane	4.46E-03	5.46E-03	2.48E-03	0.011
i-Pentane	4.57E-03	5.93E-03	2.62E-03	0.01
n-Pentane	4.26E-03	2.21E-03	1.62E-03	7.08E-03
Cyclohexane	3.12E-03	0.02	5.75E-03	0.03
n-Hexane	8.88E-04	3.09E-04	2.99E-04	1.31E-03
n-Heptane	9.21E-04	2.30E-04	2.88E-04	1.26E-03
C8	1.97E-05	2.15E-06	5.47E-06	2.40E-05
Water	2.33E-03	0.134	0.034	0.15
N2	3.20E-04	2.98E-04	1.54E-04	6.77E-04
CO2	6.96E-03	0.259	0.066	0.291
H2S	4.54E-06	3.39E-04	8.59E-05	3.76E-04
Triethylene Glycol	1.23E-13	3.47E-12	8.99E-13	3.94E-12
EG	-	-	-	-
MeOH	-	-	-	-
MDEA	-	-	-	-
2,2,4-Trimethylpentane	-	-	-	-
Benzene	5.52E-03	0.366	0.093	0.407
Toluene	1.34E-03	0.089	0.023	0.10
Ethylbenzene	5.32E-05	3.39E-03	8.61E-04	3.771E-03
m-Xylene	7.70E-05	5.18E-03	1.31E-03	5.755E-03
o-Xylene	2.57E-05	1.65E-03	4.20E-04	1.84E-03
Nonane	1.22E-05	1.24E-06	3.35E-06	1.47E-05
Decane	2.43E-06	7.41E-08	6.26E-07	2.74E-06
Undecane	-	-	-	-
Dodecane	-	-	-	-
VOC	0.06	0.57	0.157	0.69
Total HAPS	7.90E-03	0.47	0.119	0.52
Total H₂S	4.54E-06	3.39E-04	8.59E-05	3.76E-04

¹ Uncontrolled emissions are calculated using BR&E ProMax. Hourly loading emissions are based on the short-term worse case scenario. Annual emissions are based on the daily throughput of the facility.



Delek Logistics Partners LP - Lariat Compressor Station

1.5 MMBtu / Hr Dehy Reboiler

Unit: HTR-1
Heat Input: 1.5 MMBTU/hr
Fuel Heat Value: 1275.78 BTU/scf
Fuel Sulfur Content: 2 gr/100 scf
Operating Hours: 8,760 hours/yr
Fuel Usage: 1175.75 scf/hr

Criteria Pollutant Emission Rates per Unit							
	NO _x	CO	VOC	SO _x ¹	PM ²	Units	Notes
Emission Factors	100	84	5.5	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2 Adjusted EF, per footnote a in Tables 1.4-1 and 1.4-2
	125.08	105.06	6.88	-	9.51	lb/MMscf	
				2.00		gr S/100 scf	
Emissions	0.15	0.12	8.09E-03	6.72E-03	0.011	lb/hr ⁴	
	0.64	0.54	0.035	0.029	0.049	tons/year ⁴	

HAP Emission Rates per Unit							
	n-Hexane	Benzene	Toluene	HCHO	Total HAPs ⁵	Units	Notes
Emission Factors	1.80E+00	2.1E-03	3.4E-03	7.5E-02	-	lb/MMscf	AP-42 Table 1.4-3 Adjusted EF, per footnote a in Table 1.4-3
	2.25E+00	2.63E-03	4.25E-03	9.38E-02	-	lb/MMscf	
Emissions	2.65E-03	3.09E-06	5.00E-06	1.10E-04	2.77E-03	lb/hr ⁴	
	1.16E-02	1.35E-05	2.19E-05	4.83E-04	1.21E-02	tons/year ⁴	

Notes:
¹ SO_x emissions based on fuel sulfur (gr/100 scf)
² Assumes PM₁₀ = PM_{2.5}
³ lb/hr emissions calculated using the following methods:
Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBTU/hr) / Heat value (Btu/scf)
⁴ For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb
⁵ Total HAP emissions are the sum of all individual HAPs calculated.

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBTU	40 CFR 98 Subpart C Tables C-1 & C-2 40 CFR 98 Subpart A Table A-1
	1	28	265	-	GWP	
	768.541	0.016	0.001		tpy	
	768.541	4.46E-01	3.84E-01	769.37	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBTU) * Fuel Usage (MMBTU/hr) * (2.20462 lb/kg) / (2000 lb/ton)
CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

1.5 MMBtu/hr Dehy Reboiler

Unit: HTR-2
Heat Input: 1.5 MMBTU/hr
Fuel Heat Value: 1275.78 BTU/scf
Fuel Sulfur Content: 2 gr/100 scf
Operating Hours: 8,760 hours/yr
Fuel Usage: 1175.75 scf/hr

Criteria Pollutant Emission Rates per Unit						
	NO _x	CO	VOC	SO ₂ ¹	PM ²	Units
Emission Factors	100	84	5.5	-	7.6	lb/MMscf
	125.08	105.06	6.88	-	9.51	lb/MMscf
	-	-	-	2	-	gr S/100 scf
Emissions	0.15	0.12	8.09E-03	6.72E-03	0.011	lb/hr ³
	0.64	0.54	0.035	0.029	0.049	tons/year ⁴

HAP Emission Rates per Unit						
	n-Hexane	Benzene	Toluene	HCHO	Total HAPs ⁵	Units
Emission Factors	1.80E+00	2.1E-03	3.4E-03	7.5E-02	-	lb/MMscf
	2.25E+00	2.63E-03	4.25E-03	9.38E-02	-	lb/MMscf
Emissions	2.65E-03	3.09E-06	5.00E-06	1.10E-04	2.77E-03	lb/hr ³
	1.16E-02	1.35E-05	2.19E-05	4.83E-04	1.21E-02	tons/year ⁴

Notes:

¹ SO₂ emissions based on fuel sulfur (gr/100 scf)

² Assumes PM₁₀ = PM_{2.5}

³ lb/hr emissions calculated using the following methods:

Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)

⁴ For all pollutant calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb

⁵ Total HAP emissions are the sum of all individual HAPs calculated.

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	768.54	0.02	0.00		tpy	
	768.54	4.46E-01	3.84E-01	769.37	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)

CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

Condensate Loading

Equation¹:

$$L_L = \frac{12.46 \cdot SPM}{T}$$

Variables¹:

L_L - Loading Loss (lbs/1000 gal loaded)

S - Saturation Factor (From Table 5.2-1 of AP-42, Section 5.2)

P - True Vapor Pressure of Loaded Liquid (psia)

M - Molecular Weight of Vapor (lb/lb mol)

T- Temperature of Bulk Liquid (°R = [°F + 460])

															CONDLOAD			
Unit	Material Loaded ²	Loading Method	S	P _{max} ⁶ (psia)	M ⁶ (lb/lbmol)	T _{max} ⁴ (°R)	L _L (lbs/1000 gal)	Hourly Throughput ⁵ (gal/hr)	Capture Efficiency (%)	VOC Wt %	HAP Wt %	H ₂ S Wt % ³	VOC Vapor Loading Losses (lb/hr)	HAP Vapor Loading Losses (lb/hr)	H ₂ S Vapor Loading Losses (lb/hr)	Uncontrolled Hourly VOC Emissions (lb/hr)	Uncontrolled Hourly HAP Emissions (lb/hr)	Uncontrolled Hourly H ₂ S Emissions ³ (lb/hr)
CONDLOAD	Condensate	Submerged	0.6	12.88	51.07	542.03	9.07	1,223	0%	77.51%	8.08%	0.00%	8.60	0.90	2.99E-04	8.60	0.90	2.99E-04

															CONDLOAD			
Unit	Material Loaded ²	Loading Method	S	P _{avg} ⁷ (psia)	M ⁷ (lb/lbmol)	T _{avg} ⁴ (°R)	L _L (lbs/1000 gal)	Annual Throughput ⁷ (gal/yr)	Capture Efficiency (%)	VOC Wt %	HAP Wt %	H ₂ S Wt % ³	VOC Vapor Loading Losses (tpy)	HAP Vapor Loading Losses (tpy)	H ₂ S Vapor Loading Losses (tpy)	Uncontrolled Annual VOC Emissions (tpy)	Uncontrolled Annual HAP Emissions (tpy)	Uncontrolled Annual H ₂ S Emissions ³ (tpy)
CONDLOAD	Condensate	Submerged	0.6	11.43	51.07	542.03	9.07	10,709,999	0%	77.51%	8.08%	0.00%	37.67	3.93	1.31E-03	37.67	3.93	1.31E-05

¹ Loading loss equation and variables are from AP-42, Section 5.2, Transportation and Marketing of Petroleum Liquids.

² Material loaded is a mixture of condensate and produced water.

³ H₂S content is conservatively assumed.

⁴ Worst case scenario temperature is approximately 82° F and the average temperature is approximately 82° F.

⁵ The maximum hourly throughput is based on the assumption that one truck with a 180 bbl capacity can be loaded in an hour.

⁶ TVP and MW pulled from Max Hourly ProMax

⁷ TVP, MW, and annual throughput pulled from Annual Average promax

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	1.390326	1.95589	-	-	tpy	
	1.390326	54.7649	-	56.1551775	tpy CO ₂ e	

⁶ CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

Produced Water Loading

Equation¹:

$$L_L = \frac{12.46 \cdot SPM}{T}$$

Variables¹:

L_L - Loading Loss (lbs/1000 gal loaded)
S - Saturation Factor (From Table 5.2-1 of AP-42, Section 5.2)
P - True Vapor Pressure of Loaded Liquid (psia)
M - Molecular Weight of Vapor (lb/lb mol)
T- Temperature of Bulk Liquid (°R = [°F + 460])

															PW LOAD			
Unit	Material Loaded ²	Loading Method	S	P _{max} ⁵ (psia)	M ⁶ (lb/lbmol)	T _{max} ⁴ (°R)	L _L (lbs/1000 gal)	Hourly Throughput ⁵ (gal/hr)	Capture Efficiency (%)	VOC Wt %	HAP Wt %	H ₂ S Wt % ³	VOC Vapor Loading Losses (lb/hr)	HAP Vapor Loading Losses (lb/hr)	H ₂ S Vapor Loading Losses (lb/hr)	Uncontrolled Hourly VOC Emissions (lb/hr)	Uncontrolled Hourly HAP Emissions (lb/hr)	Uncontrolled Hourly H ₂ S Emissions ³ (lb/hr)
PW LOAD	Produced Water	Submerged	0.6	12.88	40.25	542.03	7.15	612.50	0%	54.23%	44.51%	0.032%	2.38	1.95	1.42E-03	2.38	1.95	1.418E-03

															PW LOAD			
Unit	Material Loaded ²	Loading Method	S	P _{avg} ⁷ (psia)	M ⁷ (lb/lbmol)	T _{avg} ⁴ (°R)	L _L (lbs/1000 gal)	Annual Throughput ⁷ (gal/yr)	Capture Efficiency (%)	VOC Wt %	HAP Wt %	H ₂ S Wt % ³	VOC Vapor Loading Losses (tpy)	HAP Vapor Loading Losses (tpy)	H ₂ S Vapor Loading Losses (tpy)	Uncontrolled Annual VOC Emissions (tpy)	Uncontrolled Annual HAP Emissions (tpy)	Uncontrolled Annual H ₂ S Emissions ³ (tpy)
PW LOAD	Produced Water	Submerged	0.6	12.88	40.25	542.03	7.15	5,365,500	0%	54.23%	44.51%	0.03%	10.41	8.54	0.01	10.41	8.54	6.21E-05

¹ Loading loss equation and variables are from AP-42, Section 5.2, Transportation and Marketing of Petroleum Liquids.
² Material loaded is a mixture of condensate and produced water.
³ H₂S content is conservatively assumed.
⁴ Worst case scenario temperature is approximately 82° F and the average temperature is approximately 82° F.
⁵ The maximum hourly throughput is based on the assumption that one truck with a 180 bbl capacity can be loaded in an hour.
⁶ TVP and MW pulled from Max Hourly ProMax
⁷ TVP, MW, and annual throughput pulled from Annual Average promax

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	0.005	0.536	-	-	tpy	
	0.005	15.00	-	15.006	tpy CO ₂ e	

⁶ CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP -Lariat Compressor Station

TEG Dehydrator 1

Emission Unit: DEHY-1
Source Description: TEG Dehydrator 1 w/ Condenser
Operating Hours: 8760 hrs/yr
Throughput: 70.00 MMSCFD
ECD DRE: 98%

Uncontrolled ¹	VOC		H ₂ S		Total HAP		Hexane		Benzene		Toluene		Ethylbenzene		2,2,4 Trimethyl pentane		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	95.30	417.43	0.02	0.08	6.96	30.48	2.25	9.86	4.14	18.14	0.54	2.37	8.346E-03	0.04	-	-	0.015	0.07
Uncontrolled Condenser Overheads	47.00	205.87	0.03	0.123	16.01	70.13	0.958	4.19	13.86	60.71	1.17	5.11	6.779E-03	0.030	-	-	0.020	0.09
Uncontrolled Emissions Per Unit	142.31	623.30	0.05	0.198	22.97	100.61	3.21	14.06	18.00	78.85	1.71	7.48	0.015	0.07	-	-	0.03	0.15

Controlled ^{2,3}	VOC		H ₂ S		Total HAP		Hexane		Benzene		Toluene		Ethylbenzene		2,2,4 Trimethyl pentane		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Condenser Overheads	Emissions are represented at ECD-1																	
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ Emissions estimated using BR&E ProMax.

² 100% of emissions from condenser overheads are captured and routed to a combustor (ECD-1).

³ Flash tank overheads are routed back to the inlet mixer where it is routed to the slug catcher.



Delek Logistics Partners LP - Lariat Compressor Station

TEG Dehydrator 2

Emission Unit: DEHY-2
Source Description: TEG Dehydrator 2 w/ Condenser
Operating Hours: 8760 hrs/yr
Throughput: 70.00 MMSCFD
ECD DRE: 98%

Uncontrolled ¹	VOC		H ₂ S		Total HAP		Hexane		Benzene		Toluene		Ethylbenzene		2,2,4 Trimethyl pentane		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Uncontrolled Flash Tank Overheads	95.30	417.43	0.02	0.08	6.96	30.48	2.25	9.86	4.14	18.14	0.54	2.37	8.346E-03	0.04	-	-	0.015	0.07
Uncontrolled Condenser Overheads	47.00	205.87	0.03	0.123	16.01	70.13	0.958	4.19	13.86	60.71	1.17	5.11	6.779E-03	0.030	-	-	0.020	0.09
Uncontrolled Emissions Per Unit	142.31	623.30	0.05	0.198	22.97	100.61	3.21	14.06	18.00	78.85	1.71	7.48	0.015	0.07	-	-	0.03	0.15

Controlled ^{2,3}	VOC		H ₂ S		Total HAP		Hexane		Benzene		Toluene		Ethylbenzene		2,2,4 Trimethyl pentane		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Controlled Flash Tank Overheads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Condenser Overheads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Emissions are represented at ECD-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controlled Emissions Per Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ Emissions estimated using BR&E ProMax.
² 100% of emissions from condenser overheads are captured and routed to a combuster (ECD-2).
³ Flash tank overheads are routed back to the inlet mixer where it is routed to the slug catcher.



Delek Logistics Partners LP - Lariat Compressor Station

Enclosed Combustion Device

Emission Unit: ECD-1
Source Description: TEG Dehydrator (DEHY-1)
Control Efficiency: 98% DRE
Capture Efficiency: 100%

VOC Heat Input and Flow Rate Calculation Per Unit

Process Parameters	Value	Unit	Notes
VOC Emissions	205.87	tpy	TEG BTEX Vapors
HAP Emissions	70.13	tpy	TEG BTEX Vapors
H2S Emissions	0.123	tpy	TEG BTEX Vapors
Total Flared Gas Heating Value	2221.54	Btu/scf	Heating Value
Total Flared Gas Flow	483.01	scf/hr	Stream to flare
Total Flared Gas Heating Rate	1.07	MMBtu/hr	Calculated based on heating value and steady-state flow
Combusted Gas Flow Rate with Safety Factor	25% 603.76 5.29	% scf/hr MMscf/yr	Safety factor Flow with safety factor
Short-Term Safety Factor	10%	-	Applied to emissions to account for variations in heat content
Heating Rate	1.48	MMBtu/hr	
Pilot Parameters	Value	Unit	Notes
Flare pilot hourly	100	scf/hr	Engineering estimation (assumed)
	0%		Safety factor
	100	scf/hr	Pilot flow with safety factor
Flare pilot annual	1.00E-04	MMscf/hr	
	0.88	MMscf/yr	Engineering estimation (assumed)
	0%		Safety factor
	0.88	MMscf/yr	Pilot flow with safety factor
Hours of Operation	0.01	lb/lbmol	Molecular weight
Pipeline Gas HHV	8760	hrs	
Flare Heat Input	1275.78	Btu/scf	Facility specification
	0.13	MMBtu/hr	
	0.88	MMscf/yr	
Total Flare Flow Rate	16890.22	scf/d	
Heating Rate + Pilot	1.60	MMBtu/hr	

Emission Rates Per Unit										
	NO _x	CO	VOC ¹	SO ₂ ²	H ₂ S ³	PM ₁₀	PM _{2.5}	HAPs ¹	Units	Notes
Emission Factors	100.00	84.00	5.50			7.60	7.60		lb/MMscf	NO _x , CO, and VOC: AP-42 Chapter 1.4 Table 1.4-1 and 1.4-2
	125.08	105.06	6.88			9.51	9.51		lb/MMscf	Adjusted for Pilot
	217.80	182.95				16.55	16.55		lb/MMscf	Adjusted for Max Hourly Stream
				2.00	0.0004				lb S/Mscf or lb H2S/Mscf	NMED
					-				or S / 100 scf	NMED
Pilot Emissions			123.94		0.123			27.42	lb/hr	
	0.013	0.011	6.88E-04	5.71E-04	4.00E-05	9.51E-04	9.51E-04	-	lb/hr	
	0.05	0.05	3.013E-03	2.503E-03	1.75E-04	4.164E-03	4.164E-03	-	tpy	
Process Emissions	0.131	0.110	0.94	0.05	5.60E-04	9.99E-03	9.99E-03	0.125	lb/hr	
	0.576	0.484	4.12	0.226	2.45E-03	0.04	0.04	0.55	tpy	
Total Emissions	0.14	0.121	0.94	0.052	6.00E-04	0.01	0.01	0.125	lb / hr	
	0.63	0.53	4.12	0.229	2.63E-03	0.048	0.048	0.55	tpy	

1 TEG BTEX vapors are controlled by ECD-1: 98% DRE
2 Fuel sulfur content is assumed to be 2 gr/100 scf
3 H2S pilot emissions based on 0.25 g H2S/100 scf, or 0.0004 lb H2S/Mscf in fuel
0.0004 lb H2S/Mscf fuel * fuel consumption (Mscf/hr) = lb H2S/hr
- Indicates emissions of this pollutant are not expected.

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	1577.241	0.033	0.003		tpy	
	1577.241	9.16E-01	7.88E-01	1578.944	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)
CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP - Lariat Compressor Station

Enclosed Combustion Device

Emission Unit: ECD-2
 Source Description: TEG Dehydrator (DEHY-2)
 Control Efficiency: 98% DRE
 Capture Efficiency: 100%

VOC Heat Input and Flow Rate Calculation Per Unit

Process Parameters	Value	Unit	Notes
VOC Emissions	205.87	tpy	TEG BTEX Vapors
HAP Emissions	70.13	tpy	TEG BTEX Vapors
H2S Emissions	0.123	tpy	TEG BTEX Vapors
Total Flared Gas Heating Value	2221.54	Btu/scf	Heating Value
Total Flared Gas Flow	483.01	scf/hr	Stream to Flare
Total Flared Gas Heating Rate	1.07	MMBtu/hr	Calculated based on heating value and steady-state flow
Combusted Gas Flow Rate with Safety Factor	25.00% 603.76 4.23	% scf/hr MMscf/yr	Safety factor Flow with safety factor
Short-Term Safety Factor	10%	-	Applied to emissions to account for variations in heat content
Max hourly Heating Rate	1.48	MMBtu/hr	
Pilot Parameters	Value	Unit	Notes
Flare pilot	100	scf/hr	Engineering estimation (assumed)
	0%		Safety factor
	100	scf/hr	Pilot flow with safety factor
Flare pilot annual	1.00E-04	MMscf/hr	
	0.88	MMscf/yr	Engineering estimation (assumed)
	0%		Safety factor
	0.88	MMscf/yr	Pilot flow with safety factor
	0.01	lb/lbmol	Molecular weight
Hours of Operation	8760	hrs	
Pipeline Gas HHV	1275.78	Btu/scf	Facility specification
Flare Heat Input	0.13	MMBtu/hr	
	0.88	MMscf/yr	
Total Flare Flow Rate	16890.22	scf/d	
Heating Rate + Pilot	1.60	MMBtu/hr	

Emission Rates Per Unit										
	NO _x	CO	VOC ¹	SO ₂ ²	H ₂ S ³	PM ₁₀	PM _{2.5}	HAPs ¹	Units	Notes
Emission Factors	100.00	84.00	5.50			7.60	7.60		lb/MMscf	NO _x , CO, and VOC: AP-42 Chapter 1.4 Table 1.4-1 and 1.4-2 Adjusted for Pilot Adjusted for Max Hourly Stream NMED NMED
	125.08	105.06	6.88			9.51	9.51		lb/MMscf	
	217.80	182.95				16.55	16.55		lb/MMscf	
				2.00	0.0004				lb S/MMscf or lb H2S/MMscf	
					-				gr S / 100 scf	
			205.87		0.123			70.13	lb/hr	
									tpy	
Pilot Emissions	0.013	0.011	6.88E-04	5.71E-04	4.00E-05	9.51E-04	9.51E-04	-	lb/hr	
	0.05	0.05	3.013E-03	2.503E-03	1.75E-04	4.164E-03	4.164E-03	-	tpy	
Process Emissions	0.13	0.11	0.94	0.05	5.60E-04	9.994E-03	9.994E-03	0.320	lb/hr	
	0.58	0.48	4.12	0.226	2.45E-03	0.044	0.044	1.403	tpy	
Total Emissions	0.14	0.121	0.94	0.052	6.00E-04	0.011	0.011	0.320	lb/hr	
	0.63	0.53	4.12	0.229	2.63E-03	0.048	0.048	1.40	tpy	

¹ TEG BTEX vapors are controlled by ECD-2: 98% DRE

² Fuel sulfur content is assumed to be 2 gr/100 scf

³ H2S pilot emissions based on 0.25 g H2S/100 scf, or 0.0004 lb H2S/MMscf in fuel

0.0004 lb H2S/MMscf fuel * fuel consumption (Mscf/hr) = lb H2S/hr

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
Emission Factors	53.06	1.10E-03	1.00E-04	-	kg/MMBtu	40 CFR 98 Subpart C Tables C-1 & C-2
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	1577.241	0.033	0.003		tpy	
	1577.241	9.16E-01	7.88E-01	1578.944	tpy CO ₂ e	

⁶ N₂O, CH₄, and CO₂ tpy Emission Rate= EF (kg/MMBtu) * Fuel Usage (MMBtu/hr) * (2.20462 lb/kg) / (2000 lb/ton)

CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor

- Indicates emissions of this pollutant are not expected.



Delek Logistics Partners LP - Lariat Compressor Station

Process Flare

Emission Unit: FL-1
 Source Description: Controls blowdowns and SSM emissions from the process.
 Control Efficiency: 98% DRE
 Ideal gas 379.40 scf/lbmol

Pilot Parameters	Value	Unit	Notes
Flare pilot hourly	500.00	scf/hr	Engineering Estimate
	25%		Safety factor
	625.00	scf/hr	Pilot flow with safety factor
	6.25E-04	MMscf/hr	
Flare pilot annual	4.38	MMscf/yr	Annual pilot gas
	25%		Safety factor
	5.48	MMscf/yr	Annual pilot gas with safety factor
Pilot Composition	23.54	lb/lbmol	ProMax Report
	0.98	HAP wt%	ProMax Report
	27.80	VOC wt%	ProMax Report
Hours of Operation	8760	hrs	ProMax Report
Fuel Gas HHV	1275.78	Btu/scf	
Flare Heat Input	0.80	MMBtu/hr	
	5.48	MMscf/yr	
Compressor Blowdowns	Value	Unit	Notes
Blowdown event information	5.00	Mscf/event	
	1080.00	events/yr	
Hourly	5000.00	scf/hr	Engineering Estimate
	25%		Safety factor
	6250.00	scf/hr	Flow with safety factor
	6.25E-03	MMscf/hr	
Annual	5.40	MMscf/yr	Annual Flow
	25%		Safety factor
	6.75	MMscf/yr	Annual Flow with safety factor
Composition	24.71	lb/lbmol	Gas Analysis
	2.56	HAP wt%	Gas Analysis
	32.37	VOC wt%	Gas Analysis
Pipeline Gas HHV	1338.25	Btu/scf	Gas Analysis
	8.36	MMBtu/hr	Max hourly heat rating
	6.75	MMscf/yr	
Plant Blowdowns	Value	Unit	Notes
Blowdown event information	1000.00	Mscf/event	
	5.00	events/yr	
Hourly	1000000.00	scf/hr	Engineering Estimate
	25%		Safety factor
	1250000.00	scf/hr	Flow with safety factor
	1.25	MMscf/hr	
Annual	5.00	MMscf/yr	Annual Flow
	25%		Safety factor
	6.25	MMscf/yr	Annual Flow with safety factor
Composition	24.71	lb/lbmol	Gas Analysis
	2.56	HAP wt%	Gas Analysis
	32.37	VOC wt%	Gas Analysis
Pipeline Gas HHV	1338.25	Btu/scf	Gas Analysis
	1672.81	MMBtu/hr	Max hourly heat rating
	6.25	MMscf/yr	



Delek Logistics Partners LP - Lariat Compressor Station
Process Flare

Emission Rates Per Unit							
	NO _x	CO	VOC	SO ₂ ¹	H ₂ S ²	HAPs	Units
Emission Factors	0.14	0.28		2.00	1.00E-03		lb/MMBtu lb H2S/Mscf gr S/100 scf
Pilot Emissions	0.11 0.48	0.22 0.96	0.22 0.94	3.57E-03 0.016	6.27E-04 2.75E-03	7.62E-03 0.033	lb/hr tpy
Compressor blowdowns	1.15 0.62	2.30 1.24	2.64 1.42	3.57E-08 1.56E-07	6.27E-09 2.75E-08	0.21 0.11	lb/hr tpy
Plant blowdowns	230.85 0.58	460.86 1.15	527.22 1.32	7.14E-06 3.13E-05	1.25E-06 5.49E-06	41.76 0.10	lb/hr tpy
Total Emissions	230.96 1.68	461.08 3.36	527.44 3.69	3.58E-03 0.016	6.28E-04 2.75E-03	41.77 0.25	lb/hr tpy

¹ Fuel sulfur content is assumed to be

² H2S pilot emissions based on 0.25 g H2S/100 scf, or 0.0004 lb H2S/Mscf in fuel

0.0004 lb H2S/Mscf fuel * fuel consumption (Mscf/hr) = lb H2S/hr

³ "-" Indicates emissions of this pollutant are not expected.

Emission rates per unit						
	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	
Pilot Emissions	7.38E-03 0.032	4.02E-03 0.018	4.67E-04 2.04E-03	2.48E-04 4.67E-03	6.95E-03 0.030	lb/hr tpy
Compressor Blowdowns	0.077 0.042	0.042 0.023	4.90E-03 2.65E-03	0.011 6.05E-03	0.073 0.039	lb/hr tpy
Plant Blowdowns	15.50 0.039	8.44 0.021	0.98 2.45E-03	2.24 5.60E-03	14.60 0.036	lb/hr tpy
Total Emissions	15.51 0.11	8.45 0.062	0.98 7.14E-03	2.24 0.016	14.61 0.11	lb/hr tpy



Delek Logistics Partners LP - Lariat Compressor Station

Process Flare

Factors	Source	Value					
Volume of Gas in scf/yr	Total Gas to Flare	18,475,000.00					
DRE %	Manufactuer Spec.	98%					
Mole Fraction of CO ₂	Inlet Gas	0.029					
Mole Fraction of CH ₄	Inlet Gas	0.68					
Methane	Inlet Gas	0.68					
Ethane	Inlet Gas	0.12					
Propane	Inlet Gas	0.071					
Butane	Inlet Gas	0.033					
Pentanes Plus	Inlet Gas	0.035					
Density of CO ₂	40 CFR 98	0.053					
Density of CH ₄	40 CFR 98	0.019					
HHV of Fuel (MMBtu/scf)	Inlet Gas	1.28E-03					
Volume of Fuel Combusted	Total Gas to Flare	18475000.00					
Emission Factor for N ₂ O	40 CFR 98	1.00E-04					

R _i = Number of carbon ato in each Molecule	
Constituent j, Methane =	1.00
Constituent j, Ethane =	2.00
Constituent j, Propane =	3.00
Constituent j, Butane =	4.00
Constituent j, Pentanes Plus=	5.00



Delek Logistics Partners LP - Lariat Compressor Station

Tank Flare

Emission Unit: FL-2
 Source Description: TK-1, TK-2 through TK-5, PWTK-1 through PWTK-4
 Control Efficiency: 98% DRE

VOC Heat Input and Flow Rate Calculation Per Unit

Parameters	Value	Unit	Notes
VOC Emissions	443.16	tpy	TK-1, TK-2 through TK-5, PWTK-1 through PWTK-4
HAP Emissions	47.21	tpy	TK-1, TK-2 through TK-5, PWTK-1 through PWTK-4
H2S Emissions	0.0182	tpy	TK-1, TK-2 through TK-5, PWTK-1 through PWTK-4
Total Flared Gas Heating Value	2175.90	Btu/scf	Weighted average heating value from all streams
Total Flared Gas Flow	1375.81	scf/hr	Total flow from all streams to flare
Total Flared Gas Heating Rate	2.99	MMBtu/hr	Calculated based on heating value and steady-state flow
Flared Gas Flow Rate with Safety Factor	10%	%	Safety factor
	1513.39	scf/hr	Flow with safety factor
	13.26	MMscf/yr	
Short-Term Safety Factor	10%	-	Applied to emissions to account for variations in heat content.
Heating Rate	3.29	MMBtu/hr	
Pilot Parameters	Value	Unit	Notes
Flare pilot	500	scf/hr	Engineering Estimate
	25%		Safety factor
	625	scf/hr	Pilot flow with safety factor
	6.25E-04	MMscf/hr	
Flare pilot annual	4.38	MMscf/yr	Annual pilot gas
	25%		Safety factor
	5.475	MMscf/yr	Annual pilot gas with safety factor
Pilot Composition	23.54378392	lb/lbmol	Gas Analysis
	0.98	HAP wt%	
	27.80	VOC wt%	Gas Analysis
Hours of Operation	8760	hrs	
Pipeline Gas HHV	1276	Btu/scf	Facility specification
Flare Heat Input	0.80	MMBtu/hr	
	5.48	MMscf/yr	
Total Flare Flow Rate	51321.31	SCF/D	
Heating Rate + Pilot	4.09	MMBtu/hr	

Emission Rates Per Unit								
	NO _x	CO	VOC	SO ₂ ¹	H ₂ S ²	HAPs	Units	Notes
Emission Factors	0.14	0.28					lb/MMBtu	TNRCC RG-109 (high Btu; other)
			443.1556		1.00E-03		lb H2S/Mscf	
				2.00	0.0182	47.21	tpy	Promax
							gr S/100 scf	Engineering assumption
Pilot Emissions	0.11	0.22	0.22	3.57E-03	6.27E-04	7.620E-03	lb/hr	
	0.48	0.96	0.94	0.016	2.75E-03	0.033	tpy	
Process Emissions	0.45	0.91	38.82	7.65E-03	8.29E-05	0.100	lb/hr	
	1.99	3.97	8.86	0.03	3.63E-04	0.44	tpy	
Total Emissions	0.56	1.13	39.04	0.011	7.10E-04	0.108	lb/hr	
	2.47	4.94	9.81	0.049	3.11E-03	0.47	tpy	

¹ Fuel sulfur content is assumed to be

2 gr/100 scf

² H2S pilot emissions based on 0.25 g H2S/100 scf, or 0.0004 lb H2S/Mscf in fuel

0.0004 lb H2S/Mscf fuel * fuel consumption (Mscf/hr) = lb H2S/hr

³ "-" Indicates emissions of this pollutant are not expected.



Delek Logistics Partners LP - Lariat Compressor Station

Tank Flare

Emission rates per unit					
	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane
Pilot Emissions	7.38E-03	4.02E-03	4.67E-04	2.48E-04	6.95E-03
	0.032	0.018	2.04E-03	4.67E-03	0.030
Process Emissions	0.050	0.013	5.15E-04	1.08E-03	0.035
	0.22	0.058	2.25E-03	4.73E-03	0.15
Total Emissions	0.058	0.017	9.81E-04	1.33E-03	0.042
	0.25	0.075	4.30E-03	9.40E-03	0.18

Mole fraction CH ₄	Pilot Gas 0.67704	Process gas 0.26112919
Mole fraction CO ₂	Pilot Gas 0.02868	Process gas 0.033534811

Hydrocarbon Constituents		
Constituents	Pilot Gas	process gas
Constituent j, Methane =	0.67704	0.26112919
Constituent j, Ethane =	0.1176	0.204106725
Constituent j, Propane =	0.07106	0.202821414
Constituent j, Butane =	0.03273	0.126253313
Constituent j, Pentanes Plus =	0.03455	0.147758601

R_j = Number of carbon atoms in the hydrocarbon constituent j in the feed gas to the flare

Constituent j, Methane =	1
Constituent j, Ethane =	2
Constituent j, Propane =	3
Constituent j, Butane =	4
Constituent j, Pentanes Plus =	5

Density of CO ₂	40 CFR 98	0.0526
Density of CH ₄	40 CFR 98	0.0192
Emission Factor for N ₂ O	40 CFR 98	0.0001

Gas Sent to Flare	Gas Sent to Flare (scf/yr)	Annual CO ₂ Emissions (scf)	Annual CH ₄ Emissions (scf)	Combusted CO ₂ Mass Emissions (mtpy)	Uncombusted CH ₄ Mass Emissions (mtpy)	N ₂ O Mass Emissions (mtpy)	Combusted CO ₂ Mass Emissions (tpy)	Uncombusted CH ₄ Mass Emissions (tpy)	N ₂ O Mass Emissions (tpy)	CO ₂ e Mass Emissions (tpy)
Pilot Gas	5,475,000.00	7,824,805.40	74,135.88	411.58	1.42	4.12E-03	452.74	1.57	4.53E-03	497.79
process tank emissions	13,257,279.70	18,947,147.71	69,237.25	996.62	1.33	2.42E-03	1096.28	1.46	2.66E-03	1137.93
Total								3.03	7.19E-03	1635.72

⁴ Equations W-36, W-19 & W-20 used.

⁵ Equation W-40 used.

$$E_{s,CH_4} = V_s * X_{CH_4} * [(1 - \eta) * Z_L + Z_U] \quad (\text{Equation W-19})$$

$$E_{s,CO_2} = V_s * X_{CO_2} * \sum (\eta * V_s * Y_i * R_i * Z_L) \quad (\text{Equation W-20})$$

$$Mass_i = E_{s,i} * \rho_i * 10^{-3} \quad (\text{Equation W-36})$$

$$Mass_{N_2O} = (1 * 10^{-3}) * Fuel * HHV * EF \quad (\text{Equation W-40})$$



Delek Logistics Partners LP - Lariat Compressor Station

Fugitives

Emission unit number(s): FUG-1

Source description: Facility-wide Fugitive Emissions

Total Operating Hours 8,760

Component		Emission factor ¹	VOC	HAP	H ₂ S Content ²	CO ₂ Content	CH ₄ Content	Subcomponent	VOC Emissions ^{4,5}		HAP Emissions ^{4,5}		CO ₂ emissions		CH ₄ emissions		H ₂ S Emissions ^{4,5}	
		(lb / hr / source)	Content ² (wt %)	Content ² (wt %)	(wt %)	(wt %)	(wt %)		lb / hr	tpy	lb / hr	tpy	lb / hr	tpy	lb / hr	tpy	lb / hr	tpy
Valves	Inlet Gas	9.92E-03	32.37%	2.56%	0.00138%	5.10945%	43.96773%	889	2.86	12.51	0.23	0.99	0.45	1.97	3.88	16.98	1.22E-04	5.33E-04
	Light Liquid	5.51E-03	15.82%	0.53%	5.782466%	4.900761%	41.308475%	33	0.03	0.13	9.622E-04	4.21E-03	8.913E-03	0.04	0.075	0.33	0.01	0.05
Connectors	Inlet Gas	4.41E-04	32.37%	2.56%	0.00138%	5.10945%	43.96773%	2495	0.36	1.56	0.028	0.124	0.056	0.246	0.484	2.119	1.52E-05	6.65E-05
	Light Liquid	4.63E-04	15.82%	0.53%	5.782466%	4.900761%	41.308475%	56	4.100E-03	0.02	1.37E-04	6.008E-04	1.27E-03	5.565E-03	0.01	0.047	1.50E-03	6.57E-03
Flanges	Inlet Gas	8.60E-04	32.37%	2.56%	0.00138%	5.10945%	43.96773%	0	-	-	-	-	-	-	-	-	-	-
	Light Liquid	2.43E-04	15.82%	0.53%	5.782466%	4.900761%	41.308475%	66	2.531E-03	0.011	8.47E-05	3.709E-04	7.84E-04	3.436E-03	6.61E-03	0.029	9.26E-04	4.05E-03
Open-ended Lines	Inlet Gas	4.41E-03	32.37%	2.56%	0.00138%	5.10945%	43.96773%	57	0.081	0.36	6.45E-03	0.028	0.01	0.056	0.11	0.484	3.47E-06	1.52E-05
	Light Liquid	3.09E-03	15.82%	0.53%	5.782466%	4.900761%	41.308475%	0	-	-	-	-	-	-	-	-	-	-
Other	Inlet Gas	1.94E-02	32.37%	2.56%	0.00138%	5.10945%	43.96773%	56	0.35	1.54	0.028	0.122	0.056	0.243	0.478	2.092	1.50E-05	6.56E-05
	Light Liquid	1.65E-02	15.82%	0.53%	5.782466%	4.900761%	41.308475%	8	0.02	0.09	6.998E-04	3.07E-03	6.483E-03	0.03	0.055	0.24	7.65E-03	0.03
Total:									3.70	16.21	0.29	1.27	0.59	2.60	5.10	22.32	0.02	0.09

¹ Emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

² Weight percent of gas and liquid components from site specific liquids and gas analyses.

³ Component counts are based on facility design.

⁴ Hourly Emissions [lb/hr] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count.

⁵ Annual Emissions [ton/yr] = Hourly Emissions [lb/hr] * Operating Hours [hr/yr] * 1/2000 [ton/lb].

Green House Gas Emissions	CO ₂ ⁶	CH ₄ ⁶	N ₂ O ⁶	CO ₂ e ⁶	Units	Notes
	1	28	265	-	GWP	40 CFR 98 Subpart A Table A-1
	2.60	22.32	-	-	tpy	
	2.60	625.06	-	627.65	tpy CO ₂ e	

⁶ CO₂e tpy Emission Rate = CO₂ Emission Rate + N₂O Emission Rate*GWP Factor + CH₄ Emission Rate*GWP Factor



Delek Logistics Partners LP, Lariat Compressor station

SSM Summary

Uncontrolled Emissions

Description	NO _x		CO		VOC		PM		PM ₁₀		PM _{2.5}		SO ₂		H ₂ S		Total HAPs		CO ₂	CH ₄	N ₂ O	CO ₂ e
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Compressor Blowdowns ¹	-	-	-	-	2371.87	71.16	-	-	-	-	-	-	-	-	0.10	0.003	187.88	5.64	11.23	96.64	-	2717.03
Plant Blowdowns ¹	-	-	-	-	23883.24	59.71	-	-	-	-	-	-	-	-	1.02	0.003	1891.81	4.73	9.42	81.09	-	2279.90
Pigging	-	-	-	-	8.64	0.16	-	-	-	-	-	-	-	-	3.85E-04	6.94E-06	0.37	0.007	0.03	0.22	-	6.30
Total	-	-	-	-	26263.76	131.02	-	-	-	-	-	-	-	-	1.12	0.006	2080.06	10.37	20.68	177.95	-	5003.23

¹Compressor Blowdowns and Plant Blowdowns are controlled by the process flare (Unit FL-1) with 100% capture efficiency and a 98% DRE. However, these are considered SSM activities and are represented here as well.

Controlled Emissions

Description	NO _x		CO		VOC		PM		PM ₁₀		PM _{2.5}		SO ₂		H ₂ S		Total HAPs		CO ₂	CH ₄	N ₂ O	CO ₂ e
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Compressor Blowdowns ¹	-	-	-	-	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00
Plant Blowdowns ¹	-	-	-	-	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00
Pigging	-	-	-	-	8.64	0.16	-	-	-	-	-	-	-	-	3.85E-04	6.94E-06	0.37	0.007	0.03	0.22	-	6.30
Total	-	-	-	-	8.64	0.16	-	-	-	-	-	-	-	-	3.85E-04	6.94E-06	0.37	0.007	0.03	0.22	-	6.30

¹Compressor Blowdowns and Plant Blowdowns are controlled by the process flare (Unit FL-1) with 100% capture efficiency and a 98% DRE. However, these are considered SSM activities and are represented here as well.



Delek Logistics Partners LP - Lariat Compressor Station

Emission Calculation Inputs

Compressor Blowdowns		
Blowdown event information	5.00	Mscf/event
	1080.00	events/yr
Hourly	5000.00	scf/hr
	25%	
	6250.00	scf/hr
	6.25E-03	MMscf/hr
Annual	5.40	MMscf/yr
	25%	
	6.75	MMscf/yr
Composition	22.40	lb/lbmol
	0.48%	HAP mol%
	10.15%	VOC mol%
Pipeline Gas HHV	1296.74	Btu/scf
	8.10	MMBtu/hr
	6.75	MMscf/yr
Plant Blowdowns		
Blowdown event information	1000.00	Mscf/event
	5.00	events/yr
Hourly	1000000.00	scf/hr
	25%	
	1250000.00	scf/hr
	1.25	MMscf/hr
Annual	5.00	MMscf/yr
	25%	
	6.25	MMscf/yr
Composition	22.40	lb/lbmol
	0.48%	HAP mol%
	10.15%	VOC mol%
Pipeline Gas HHV	1296.74	Btu/scf
	1620.93	MMBtu/hr
	6.25	MMscf/yr
Pigging		
Volume Vented	426.48	scf/event
Maximum hourly number of pigging events	1	events/hr
Annual Number of Events	36	events/yr
Actual Pressure	1200	psig
Maximum Temperature	100	°F
Annual Temperature	80	°F
Annual Temperature	80.00	°F



Delek Logistics Partners LP - Lariat Compressor Station

Compressor Blowdowns

Basis of Calculation:

Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Volume of blowdown (scf/event/unit)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowdown simultaneously (units)] / [event duration (hr/event)] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of blowdown (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] x [# compressors blowdown at site (units)] x [frequency of events (events/yr/unit)] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Estimated Hourly Blowdown Volume ¹ =	6,250	scf/event
Number of Units =	18	units
Compressors Blowdown Simultaneously =	1	units
Assumed Blowdown Duration =	1	hr/event
Blowdowns Per Year =	60	event/yr/unit
Molecular Weight of Stream =	24.71	lb/lb-mol

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
Methane	43.97	178.96	96.64	100.00%	0.00	0.00
Ethane	14.31	1048.72	31.46	100.00%	0.00	0.00
Propane	12.68	929.29	27.88	100.00%	0.00	0.00
n-Butane	5.61	410.77	12.32	100.00%	0.00	0.00
i-Pentane	1.83	134.16	4.02	100.00%	0.00	0.00
i-Butane	2.09	153.41	4.60	100.00%	0.00	0.00
n-Pentane	3.36	246.50	7.39	100.00%	0.00	0.00
Cyclohexane	0.80	58.41	1.75	100.00%	0.00	0.00
n-Hexane	0.90	65.68	1.97	100.00%	0.00	0.00
n-Heptane	1.94	142.35	4.27	100.00%	0.00	0.00
C8	0.26	19.31	0.58	100.00%	0.00	0.00
Water	0.00	0.00	0.00	100.00%	0.00	0.00
N2	4.23	310.06	9.30	100.00%	0.00	0.00
CO2	5.11	374.33	11.23	100.00%	0.00	0.00
H2S	0.00	0.10	0.00	100.00%	0.00	0.00
Triethylene Glycol	0.00	0.00	0.00	100.00%	0.00	0.00
EG	0.00	0.00	0.00	100.00%	0.00	0.00
MeOH	0.00	0.00	0.00	100.00%	0.00	0.00
MDEA	0.00	0.00	0.00	100.00%	0.00	0.00
2,2,4-Trimethylpentane	0.00	0.00	0.00	100.00%	0.00	0.00
Benzene	0.95	69.73	2.09	100.00%	0.00	0.00
Toluene	0.52	37.98	1.14	100.00%	0.00	0.00
Ethylbenzene	0.06	4.41	0.13	100.00%	0.00	0.00
m-Xylene	0.10	7.56	0.23	100.00%	0.00	0.00
o-Xylene	0.03	2.52	0.08	100.00%	0.00	0.00
Nonane	0.38	27.77	0.83	100.00%	0.00	0.00
Decane	0.85	62.03	1.86	100.00%	0.00	0.00
Undecane	0.00	0.00	0.00	100.00%	0.00	0.00
Dodecane	0.00	0.00	0.00	100.00%	0.00	0.00
Total VOC	32.37	2371.87	71.16	-	0.00	0.00
H₂S	0.00	0.10	0.00	-	0.00	0.00
Total HAP	2.56	187.88	5.64	-	0.00	0.00
Total CO₂	5.11	374.33	11.23	-	0.00	0.00
Total CH₄	43.97	178.96	96.64	-	0.00	0.00

¹ This is a representative estimate of the amount of gas vented per blowdown event.



Delek Logistics Partners LP - Lariat Compressor Station

Plant Blowdowns

Basis of Calculation:

Emissions from blowdowns are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (lb/hr) = [Estimated blowdown volume (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] / [hour/event] / [379.5 (scf/lb-mol)]

Maximum Uncontrolled Annual Emissions (tpy) = [Estimated blowdown volume (scf/event)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] * [event/yr] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

The hourly volume is calculated from the sum of the blowdown volumes from each component of the dehydrator (i.e. the contactor, scrubber, flash tank, and filters).

Plant Blowdown Emissions

Estimated Hourly Blowdown Volume ¹ =	1,250,000	scf/event
Number of Units =	1	units
Assumed Blowdown Duration =	1	hr/event
Blowdowns Per Year =	5	event/yr
Molecular Weight of Stream =	22.40	lb/lb-mol

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
Methane	43.97	32435.42	81.09	100%	0.00	0.00
Ethane	14.31	10559.93	26.40	100%	0.00	0.00
Propane	12.68	9357.39	23.39	100%	0.00	0.00
n-Butane	5.61	4136.19	10.34	100%	0.00	0.00
i-Pentane	1.83	1350.92	3.38	100%	0.00	0.00
i-Butane	2.09	1544.78	3.86	100%	0.00	0.00
n-Pentane	3.36	2482.08	6.21	100%	0.00	0.00
Cyclohexane	0.80	588.10	1.47	100%	0.00	0.00
n-Hexane	0.90	661.38	1.65	100%	0.00	0.00
n-Heptane	1.94	1433.33	3.58	100%	0.00	0.00
C8	0.26	194.44	0.49	100%	0.00	0.00
Water	0.00	0.00	0.00	100%	0.00	0.00
N2	4.23	3122.06	7.81	100%	0.00	0.00
CO2	5.11	3769.29	9.42	100%	0.00	0.00
H2S	0.00	1.02	0.00	100%	0.00	0.00
Triethylene Glycol	0.00	0.00	0.00	100%	0.00	0.00
EG	0.00	0.00	0.00	100%	0.00	0.00
MeOH	0.00	0.00	0.00	100%	0.00	0.00
MDEA	0.00	0.00	0.00	100%	0.00	0.00
2,2,4-Trimethylpentane	0.00	0.00	0.00	100%	0.00	0.00
Benzene	0.95	702.13	1.76	100%	0.00	0.00
Toluene	0.52	382.46	0.96	100%	0.00	0.00
Ethylbenzene	0.06	44.39	0.11	100%	0.00	0.00
m-Xylene	0.10	76.09	0.19	100%	0.00	0.00
o-Xylene	0.03	25.36	0.06	100%	0.00	0.00
Nonane	0.38	279.60	0.70	100%	0.00	0.00
Decane	0.85	624.60	1.56	100%	0.00	0.00
Undecane	0.00	0.00	0.00	100%	0.00	0.00
Dodecane	0.00	0.00	0.00	100%	0.00	0.00
Total VOC	32.37	23883.24	59.71	-	0.00	0.00
H₂S	0.00	1.02	2.54E-03	-	0.00	0.00
Total HAP	2.56	1891.81	4.73	-	0.00	0.00
Total CO₂	5.11	3769.29	9.42	-	0.00	0.00
Total CH₄	43.97	32435.42	81.09	-	0.00	0.00

¹ This is a representative estimate of the amount of gas vented per blowdown event.



Delek Logistics Partners LP - Lariat Compressor Station

Pigging Emissions

Basis of Calculation:

Emissions from pigging operations are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions for each Unit (lb/hr) = [Volume of gas in pipe (scf/event)] x [MW of stream (lb/lb-mol) / [wt % VOC or speciated constituent] x [events per hour (event/hr) / [379.5 (scf/lb-mol)]]

Maximum Uncontrolled Annual Emissions for each Unit (tpy) = [Volume of gas in pipe (scf/event)] x [MW of stream (lb/lb-mol) / [wt % VOC or speciated constituent] x [frequency of events (events/yr) / [379.5 (scf/lb-mol)]] / [2,000 (lb/ton)]

For sites with multiple units, the total annual emissions are calculated by summing emissions for all units. It is assumed only unit can be pigged/purged in one hour; therefore, the maximum volume of the units is used for the hourly calculations.

Pigging and Purging Emissions

Volume Vented =	426.48	scf/event
Maximum Number of Hourly Pigging/Purging Events	1	events/hr
Annual Number of Events =	36	events/yr
Pipelines Purged Simultaneously =	1	lines
Molecular Weight of Stream =	24.71	lb/lb-mol
Control Type =	None	

Compound	Composition (wt %)	Maximum Uncontrolled Hourly Emissions (lb/hr)	Maximum Uncontrolled Annual Emissions (tpy)	Control Efficiency (%)	Maximum Controlled Hourly Emissions (lb/hr)	Maximum Controlled Annual Emissions (tpy)
Methane	44.79	12.44	0.22	--	--	--
Ethane	14.57	4.05	0.07	--	--	--
Propane	12.89	3.58	0.06	--	--	--
n-Butane	5.65	1.57	0.03	--	--	--
i-Pentane	1.82	0.50	0.01	--	--	--
i-Butane	2.12	0.59	0.01	--	--	--
n-Pentane	3.30	0.92	0.02	--	--	--
Cyclohexane	0.68	0.19	0.00	--	--	--
n-Hexane	0.80	0.22	0.00	--	--	--
n-Heptane	1.49	0.41	0.01	--	--	--
C8	0.19	0.05	0.00	--	--	--
Water	0.00	0.00	0.00	--	--	--
N2	4.31	1.20	0.02	--	--	--
CO2	5.20	1.44	0.03	--	--	--
H2S	0.00	0.00	0.00	--	--	--
Triethylene Glycol	0.00	0.00	0.00	--	--	--
EG	0.00	0.00	0.00	--	--	--
MeOH	0.00	0.00	0.00	--	--	--
MDEA	0.00	0.00	0.00	--	--	--
2,2,4-Trimethylpentane	0.00	0.00	0.00	--	--	--
Benzene	0.81	0.22	0.00	--	--	--
Toluene	0.38	0.11	0.00	--	--	--
Ethylbenzene	0.04	0.01	0.00	--	--	--
m-Xylene	0.07	0.02	0.00	--	--	--
o-Xylene	0.02	0.01	0.00	--	--	--
Nonane	0.27	0.07	0.00	--	--	--
Decane	0.59	0.16	0.00	--	--	--
Undecane	0.00	0.00	0.00	--	--	--
Dodecane	0.00	0.00	0.00	--	--	--
Total VOC	31.12	8.64	0.16	--	--	--
H2S	0.00	0.00	0.00	--	--	--
Total HAP	1.33	0.37	0.01	--	--	--
Total CO2	5.20	1.44	0.03	--	--	--
Total CH4	44.79	12.44	0.22	--	--	--

¹ This is a representative estimate of the amount of gas vented per blow down event.



Delek Logistics Partners LP - Lariat Compressor Station

Diesel Engine Emissions (Exempt per 20.2.72.202.B.3 NMAC)

Emission Unit: GEN-1
 Source Description: Diesel Fired Generator
 Manufacturer: TBD
 Model: TBD
 Type: Compression Ignited

Fuel Consumption

Site horsepower	644 hp	Maximum horsepower of generator engine
Site power (kW)	480 kW	Maximum kW of generator engine
Fuel heat value	137000 Btu/gal	Fuel heat value of typical diesel
Heat input	6.44 MMBtu/hr	Fuel consumption * Fuel heat value
Hours of Operation	499 hrs/yr	Assume ~3 weeks/yr of runtime
Fuel Consumption	10000 Btu/hp-hr	Engineering Estimate

Emission Calculations

<i>Uncontrolled</i>	NO _x ¹	CO ¹	VOC ^{1,2}	SO ₂ ³	HCHO ⁴	PM ₁₀ ^{1,5}	PM _{2.5} ^{1,5}	Total HAPs ⁴	Units	Notes
Emission Factors	4.77	2.61	0.75	0.403	1.18E-03	0.403	0.403		g/hp-hr lb/MMBtu	Tier 4 Emissions Standards for Non-Road Engines AP-42 Table 3.3-1.2
Emissions	6.77 1.69	3.71 0.92	1.08 0.27	2.60 0.65	7.60E-03 1.90E-03	0.57 0.14	0.57 0.14	0.024 5.95E-03	lb/hr tpy	

<i>Controlled</i>	NO _x ¹	CO ¹	VOC ^{1,2}	SO ₂ ³	HCHO ⁴	PM ₁₀ ^{1,5}	PM _{2.5} ^{1,5}	Total HAPs ⁴	Units	Notes
Emission Factors	4.77 0%	2.61 0%	0.75 0%	0.403	1.18E-03	0.403 0%	0.403 0%		g/hp-hr lb/MMBtu	Tier 4 Emissions Standards for Non-Road Engines % Reduction AP-42 Table 3.3-1.2
Emissions	6.77 1.69	3.71 0.92	1.08 0.27	2.60 0.65	7.60E-03 1.90E-03	0.57 0.14	0.57 0.14	0.024 5.95E-03	lb/hr tpy	

Acetaldehyde ⁴	Acrolein ⁴	Benzene ⁴	1-3 Butadiene ⁴	Toluene ⁴	Xylene ⁴	Units	Notes
7.67E-04	9.25E-05	9.33E-04	3.91E-05	4.09E-04	2.85E-04	lb/MMBtu	AP-42 Table 3.2-2
4.94E-03	5.96E-04	6.01E-03	2.52E-04	2.63E-03	1.84E-03	lb/hr	
1.23E-03	1.49E-04	1.50E-03	6.28E-05	6.57E-04	4.58E-04	tpy	

NOTES

¹ NO_x, CO, VOC, and PM emission factors are referenced from Final Tier 4 Emissions Standards for Non-Road Engines.

² Formaldehyde and acetaldehyde emissions conservatively included in VOC total.

³ AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines

⁴ HAPs emissions factors are referenced from AP-42 Table 3.3-2 Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines.

⁵ Assumes PM (Filterable + Condensable) = PM₁₀ = PM_{2.5}

Exhaust Parameters

Exhaust temperature	782 deg F	0.000
Exhaust Mass Flow	169 lb/min	Mfg data
Exhaust Volumetric Flow	1667.1 acfm	NMED modeling guidelines
Stack diameter	0.70 ft	NMED modeling guidelines
Exhaust velocity	72.2 ft/sec	NMED modeling guidelines
Stack height	14.8 ft	NMED modeling guidelines
	27.8	

Site Data

Site Elevation	3602 ft MSL	
Standard Pressure (Ps)	29.92 in Hg	
Pressure at Elevation (Pa)	26.22 in Hg	Hess, Introduction to Theoretical Meteorology, eqn. 6.8
Standard Temperature (Ts)	528 R	



Delek Logistics Partners LP - Lariat Compressor Station

Haul Road

Unit: HR-1
Description: Haul Road (exempt under 20.2.72.202.B.(5) NMAC)
Control Equipmen N/A

Input Data

Empty vehicle weight ¹	16	tons
Load weight ²	31.5	tons
Loaded vehicle ³	47.5	tons
Mean vehicle weight ⁴	31.8	tons
Vehicle frequency	2.0	trips/hour
Round-trip distance	0.25	mile/trip
Vehicle miles traveled ⁵	353.70	miles/yr
Operating hours	8760	hours/yr
Surface silt content ⁶	4.8	%
Annual wet days ⁷	70	days/yr
Vehicle miles traveled ⁸	0.50	mile/hr
Control percentage	0.0%	nominal, base course chemical treatment

Emission Factors and Constants

Parameter	PM ₁₀	PM _{2.5}
k, lb/VMT ⁹	1.5	0.15
a, lb/VMT ⁹	0.90	0.90
b, lb/VMT ⁹	0.45	0.45
Hourly EF, lb/VMT ¹⁰	1.90	0.19
Annual EF, lb/VMT ¹¹	1.54	0.15

Uncontrolled Emissions

PM ₁₀	PM _{2.5}
0.95	0.10 lb/hr ¹²
0.27	0.027 ton/yr ¹³

Notes

- ¹ Empty vehicle weight includes driver and occupants and full fuel load; this is assumed for both produced water and condensate loading.
- ² Cargo, transported materials, etc. (8.3434 lb/gal RVP5 *7560 gal truck/ 2000lb/ton)
- ³ Loaded vehicle weight = Empty + Load Size
- ⁴ Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
- ⁵ VMT/yr = Daily Throughput [bbl/d]*42 [gal/bbl] *(1/7560) [truck/ gal]*[VMT/trip]*1 [trip/day]* 365 [days/year]
- ⁶ AP-42 Table 13.2.2-1
- ⁷ AP-42 Figure 13.2.2-1
- ⁸ VMT/hr = Vehicle Miles Traveled per hour = Trips per hour * Segment Length
- ⁹ Table 13.2.2-2, Industrial Roads
- ¹⁰ AP-42 13.2.2, Equation 1a
- ¹¹ AP-42 13.2.2, Equation 2
- ¹² lb/hr = Hourly EF (lb/VMT) * VMT (mile/hr)
- ¹³ ton/yr = Annual EF (lb/VMT) * Truck/day * Mile/truck * 365day/yr * 1ton/2000lb

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.
-

The following items were used to calculate the emissions for this application:

- Compressor manufacturer and catalyst specification sheets (for 2100 through 3800)
- Generator manufacturer specification sheets (for GEN-1)
- Vapor combustion unit manufacturer specification sheet (for ECD-1 & ECD-2)
- ProMax report
- Inlet gas analysis (September 19, 2024)
- Current version of AP-42 located online at: EPA AP-42 Compilation Air Emissions Factors
- Specific sections used in this application:
- Section 1.3 – Natural Gas external Combustion Sources-Natural Gas (Table 1.4-1 through 1.4-3)
- Section 3.2 – Natural Gas-fired Reciprocating Engines (Table 3.2-2)
- Section 3.3 – Gasoline and Diesel Industrial Engines (Tables 3.3-1 & 2)
- Section 5.2 – Transportation And Marketing Of Petroleum Liquids
- Section 13.2-2 - Unpaved Haul Roads
- EPA Protocol for Equipment Leak Emissions Estimates, 1995 Table 2-4
- 40 CFR 98 Subpart C Tables C-1 and C-2
- 40 CFR 98 Subpart A Table A-1



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EXTENDED GAS REPORT SUMMARY OF CHROMATOGRAPHIC ANALYSIS

Sample Name:	LCS INLET TO DEHY	For:	25373G
Sample Date:	06/25/2025	Cyl. Ident.:	2025114777
Sampled By:	SW	Company:	DELEK
Time Sampled:	15:30	Analysis Date:	06/26/2025
Sample Temp:	90 F	Analysis By:	LC
Sample Press:	1064 PSI	Data File:	LS2_1343.D

H2S (PPM) = 10.0

Component	Mole%	GPM REAL	GPM IDEAL
H2S	0.001		
Nitrogen	3.732		
Methane	67.704		
CO2	2.868		
Ethane	11.760	3.144	3.137
Propane	7.106	1.957	1.953
Isobutane	0.890	0.291	0.290
N-Butane	2.383	0.751	0.749
Isopentane	0.627	0.229	0.229
N-Pentane	0.635	0.230	0.230
Hexanes+	2.294	0.911	0.907
Total	100.000	7.513	7.495

CALCULATED PARAMETERS

TOTAL ANALYSIS SUMMARY

MOLE WT: 24.784
VAPOR PRESS PSIA: 3494.9
SPECIFIC GRAVITY
AIR = 1 (REAL): 0.8593
AIR = 1 (IDEAL): 0.8556
H2O = 1 (IDEAL): 0.395

REPORTED BASIS: 14.73
Unnormalized Total: 99.990

HEATING VALUE

BTU/CUFT (DRY) 1350.9
BTU/CUFT (WET) 1328.0

BTEX SUMMARY

WT% BENZENE 16.996
WT% TOLUENE 6.067
WT% E BENZENE 0.697
WT% XYLENES 1.593

LAB MANAGER



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Sample Name: LCS INLET TO DEHY
Company: DELEK

Data File: LS2_1343.D

***ANALYSIS OF HEXANES PLUS**

Component	MOLE%	WT%
2,2 DIMETHYL BUTANE	0.005	0.017
CYCLOPENTANE	0.130	0.409
2-METHYLPENTANE	0.237	0.824
3-METHYLPENTANE	0.145	0.504
HEXANE (C6)	0.257	0.892
DIMETHYLPENTANES	0.002	0.007
METHYLCYCLOPENTANE	0.190	0.645
2,2,3 TRIMETHYLBUTANE	0.000	0.000
BENZENE	0.301	0.941
CYCLOHEXANE	0.234	0.794
2-METHYLHEXANE	0.000	0.000
3-METHYLHEXANE	0.047	0.192
DIMETHYCYCLOPENTANES	0.030	0.120
HEPTANE (C7)	0.061	0.246
METHYLCYCLOHEXANE	0.135	0.541
2,5 DIMETHYLHEXANE	0.002	0.010
TOLUENE	0.139	0.518
2-METHYLHEPTANE	0.000	0.000
OTHER OCTANES	0.037	0.171
OCTANE (C8)	0.020	0.090
ETHYLCYCLOHEXANE	0.012	0.055
ETHYL BENZENE	0.014	0.062
M,P-XYLENE	0.024	0.102
O-XYLENE	0.008	0.033
OTHER NONANES	0.036	0.186
NONANE (C-9)	0.023	0.119
IC3 BENZENE	0.001	0.004
CYCLOOCTANE	0.005	0.024
NC3 BENZENE	0.002	0.010
TM BENZENE(S)	0.000	0.004
IC4 BENZENE	0.006	0.033
NC4 BENZENE	0.000	0.000
DECANES + (C10+)	0.147	0.856

***HEXANES PLUS SUMMARY**

AVG MOLE WT	92.968
VAPOR PRESS PSIA	9.860
API GRAVITY @ 60F	58.4
SPECIFIC GRAVITY	
AIR = 1 (IDEAL):	2.975
H2O = 1 (IDEAL):	0.745

COMPONENT RATIOS

HEXANES (C6)	MOLE%	33.713
HEPTANES (C7)	MOLE%	39.581
OCTANES (C8)	MOLE%	14.565
NONANES (C9)	MOLE%	5.152
DECANES+ (C10+)	MOLE%	6.989
HEXANES (C6)	WT%	30.761
HEPTANES (C7)	WT%	36.520
OCTANES (C8)	WT%	15.445
NONANES (C9)	WT%	6.466
DECANES+ (C10+)	WT%	10.808



Remarks: NR=NOT REPORTED ON FIELD TAG

* Hexane+ portion calculated by Allocation Process

Permian Lab Services

25373G

LCS Inlet to Dehy

LCS Inlet to Dehy

Sample Point Code

Sample Point Name

Sample Point Location

Associated Well Location

GR Elev(m)

KB Elev(m)

License #

Pool/Zone

Laboratory Services

2025114785

Bag

SW

Source Laboratory

Lab File No

Container Identity

Sampler

USA

USA

USA

New Mexico

District

Area Name

Field Name

Facility Name

Delek Logistics

Jun 25, 2025

Jun 26, 2025

Jun 26, 2025

Operator

Analyst

Date Sampled

Date Received

Date Reported

Press kPa @ Temp °C
Source Conditions

Well Name

NG
Lab Source Description

Total Sulfur

11.7 PPMV S

0.694 Grains/100 cu.ft

Odorant Concentration

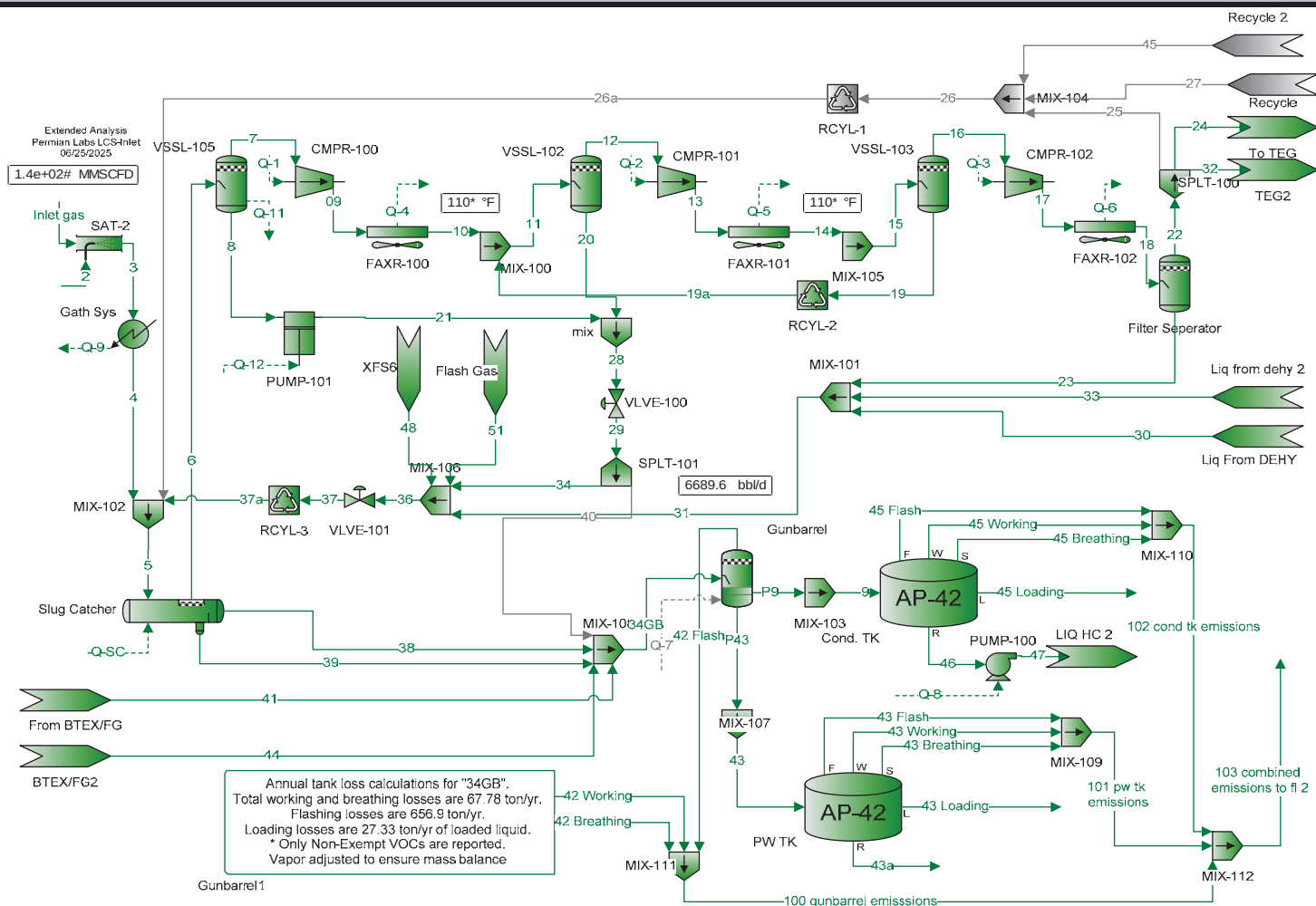
0.000 PPMV

0.000 Grains/100 cu.ft

Source	Date	Notes
--------	------	-------

Lariat CS Plant Schematic

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	



* User Specified Values
? Extrapolated or Approximate Values

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	Inlet gas	P9	P43	2	3
From Block	--	Gunbarrel	Gunbarrel	--	SAT-2
To Block	SAT-2	MIX-103	MIX-107	SAT-2	Gath Sys

Stream Composition

Mole Fraction	Inlet gas %	P9 %	P43 %	2 %	3 %
Methane	67.7338 *	0.182254	0.00098045	0 *	66.7108
Ethane	11.7652 *	0.739365	0.000897803	0 *	11.5875
Propane	7.10913 *	2.33611	0.000554345	0 *	7.00176
n-Butane	2.38405 *	4.06468	0.000213053	0 *	2.34804
i-Pentane	0.627276 *	3.30763	4.84975E-05	0 *	0.617802
i-Butane	0.890392 *	0.949003	6.36928E-05	0 *	0.876944
n-Pentane	1.15251 *	8.55799	3.16216E-05	0 *	1.1351
Cyclohexane	0.234103 *	7.88789	9.63741E-05	0 *	0.230567
n-Hexane	0.257113 *	6.8892	4.89914E-06	0 *	0.25323
n-Heptane	0.479211 *	25.3974	4.05272E-06	0 *	0.471973
C8	0.0570251 *	3.67857	6.7586E-08	0 *	0.0561638
Water	0 *	0.0417223	99.988	100 *	1.51035
N2	3.73364 *	0.000737262	7.78319E-06	0 *	3.67725
CO2	2.86926 *	0.0579858	0.0021325	0 *	2.82593
H2S	0.00100044 *	0.000156965	5.38081E-06	0 *	0.00098533
Triethylene Glycol	0 *	9.83288E-09	7.83519E-05	0 *	0
EG	0 *	0	0	0 *	0
MeOH	0 *	0	0	0 *	0
MDEA	0 *	0	0	0 *	0
2,2,4-Trimethylpentane	0 *	0	0	0 *	0
Benzene	0.301132 *	10.0745	0.00587328	0 *	0.296584
Toluene	0.139061 *	8.03592	0.000913463	0 *	0.136961
Ethylbenzene	0.0140062 *	0.920928	2.75124E-05	0 *	0.0137946
m-Xylene	0.0240106 *	1.58156	2.65098E-05	0 *	0.0236479
o-Xylene	0.00800352 *	0.529918	1.98121E-05	0 *	0.00788264
Nonane	0.0730321 *	4.88568	3.6902E-08	0 *	0.0719291
Decane	0.147065 *	9.88078	6.21338E-09	0 *	0.144844
Undecane	0 *	0	0	0 *	0
Dodecane	0 *	0	0	0 *	0

Mass Fraction	Inlet gas %	P9 %	P43 %	2 %	3 %
Methane	43.9677 *	0.0311595	0.000872821	0 *	43.4817
Ethane	14.3145 *	0.236931	0.00149806	0 *	14.1562
Propane	12.6844 *	1.09782	0.00135645	0 *	12.5442
n-Butane	5.6068 *	2.51774	0.00068716	0 *	5.54481
i-Pentane	1.83124 *	2.54324	0.000194168	0 *	1.811
i-Butane	2.09402 *	0.587831	0.000205429	0 *	2.07087
n-Pentane	3.36458 *	6.58027	0.000126602	0 *	3.32738
Cyclohexane	0.797201 *	7.07467	0.000450083	0 *	0.788388
n-Hexane	0.89653 *	6.32695	2.34279E-05	0 *	0.886619
n-Heptane	1.94294 *	27.1211	2.25347E-05	0 *	1.92147
C8	0.263571 *	4.47812	4.28411E-07	0 *	0.260658
Water	0 *	0.00801036	99.9581	100 *	1.1055
N2	4.2321 *	0.000220105	1.20991E-05	0 *	4.18532
CO2	5.10945 *	0.0271964	0.00520793	0 *	5.05297
H2S	0.00137962 *	5.70108E-05	1.01762E-05	0 *	0.00136437
Triethylene Glycol	0 *	1.57368E-08	0.000652936	0 *	0
EG	0 *	0	0	0 *	0
MeOH	0 *	0	0	0 *	0
MDEA	0 *	0	0	0 *	0
2,2,4-Trimethylpentane	0 *	0	0	0 *	0
Benzene	0.95177 *	8.38656	0.0254581	0 *	0.941248
Toluene	0.518447 *	7.89076	0.00467047	0 *	0.512716

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	Inlet gas %	P9 %	P43 %	2 %	3 %
Ethylbenzene	0.060167 *	1.04196	0.000162084	0 *	0.0595018
m-Xylene	0.103143 *	1.78941	0.000156177	0 *	0.102003
o-Xylene	0.0343811 *	0.59956	0.000116719	0 *	0.034001
Nonane	0.379006 *	6.67794	2.62635E-07	0 *	0.374816
Decane	0.846672 *	14.9824	4.90576E-08	0 *	0.837312
Undecane	0 *	0	0	0 *	0
Dodecane	0 *	0	0	0 *	0

Mass Flow	Inlet gas lb/h	P9 lb/h	P43 lb/h	2 lb/h	3 lb/h
Methane	169132 *	2.97367	0.0163876	0 *	169132
Ethane	55064.1 *	22.6112	0.0281267	0 *	55064.1
Propane	48793.5 *	104.77	0.0254679	0 *	48793.5
n-Butane	21567.9 *	240.278	0.0129017	0 *	21567.9
i-Pentane	7044.3 *	242.712	0.00364558	0 *	7044.3
i-Butane	8055.15 *	56.0991	0.00385701	0 *	8055.15
n-Pentane	12942.6 *	627.982	0.00237701	0 *	12942.6
Cyclohexane	3066.62 *	675.165	0.00845048	0 *	3066.62
n-Hexane	3448.72 *	603.807	0.000439867	0 *	3448.72
n-Heptane	7474 *	2588.28	0.000423098	0 *	7474
C8	1013.89 *	427.365	8.04359E-06	0 *	1013.89
Water	0 *	0.764461	1876.75	4300.09 *	4300.09
N2	16279.8 *	0.0210055	0.000227165	0 *	16279.8
CO2	19654.7 *	2.59546	0.0977809	0 *	19654.7
H2S	5.30704 *	0.00544077	0.000191063	0 *	5.30704
Triethylene Glycol	0 *	1.50182E-06	0.0122591	0 *	0
EG	0 *	0	0	0 *	0
MeOH	0 *	0	0	0 *	0
MDEA	0 *	0	0	0 *	0
2,2,4-Trimethylpentane	0 *	0	0	0 *	0
Benzene	3661.21 *	800.363	0.477986	0 *	3661.21
Toluene	1994.33 *	753.048	0.08769	0 *	1994.33
Ethylbenzene	231.447 *	99.4382	0.00304318	0 *	231.447
m-Xylene	396.766 *	170.771	0.00293228	0 *	396.766
o-Xylene	132.255 *	57.2184	0.00219145	0 *	132.255
Nonane	1457.94 *	637.303	4.93108E-06	0 *	1457.94
Decane	3256.92 *	1429.84	9.21075E-07	0 *	3256.92
Undecane	0 *	0	0	0 *	0
Dodecane	0 *	0	0	0 *	0

Stream Properties

Property	Units	Inlet gas	P9	P43	2	3
Temperature	°F	90 *	59.4098	59.4098	276.792	90
Pressure	psig	32 *	0.125	0.125	32	32
Mole Fraction Vapor	%	99.7218	0	0	91.7771	99.7324
Mole Fraction Light Liquid	%	0.278214	100	100	8.22293	0.267587
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	24.714	93.8334	18.0207	18.0153	24.6128
Mass Density	lb/ft^3	0.198807	45.2133	62.3745	0.118531	0.197961
Molar Flow	lbmol/h	15565	101.706	104.188	238.691	15803.7
Mass Flow	lb/h	384674	9543.41	1877.54	4300.09	388974
Vapor Volumetric Flow	ft^3/h	1.93491E+06	211.075	30.101	36278.1	1.9649E+06
Liquid Volumetric Flow	gpm	241236	26.3159	3.75286	4522.98	244974
Std Vapor Volumetric Flow	MMSCFD	141.76 *	0.926298	0.948905	2.17391	143.934
Std Liquid Volumetric Flow	sgpm	1953.49	26.5638	3.7538	8.59619	1962.09
Compressibility		0.984067	0.00552165	0.000768673	0.897993	0.984224
Specific Gravity			0.724936	1.00009		
API Gravity			63.7687	9.99778		
Enthalpy	Btu/h	-5.87756E+08	-7.1624E+06	-1.28345E+07	-2.47813E+07	-6.12538E+08

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	Inlet gas	P9	P43	2	3
Mass Enthalpy	Btu/lb	-1527.93	-750.507	-6835.82	-5762.98	-1574.75
Mass Cp	Btu/(lb*°F)	0.452305	0.480671	0.979757	0.510601	0.452238
Ideal Gas CpCv Ratio		1.22013	1.06398	1.32952	1.31939	1.22123
Dynamic Viscosity	cP		0.4816	1.14313		
Kinematic Viscosity	cSt		0.664965	1.1441		
Thermal Conductivity	Btu/(h*ft*°F)		0.0737065	0.341792		
Surface Tension	lbf/ft		0.00149988 ?	0.00511123 ?		
Net Ideal Gas Heating Value	Btu/ft^3	1218.65	4682.19	0.308617	0	1200.24
Net Liquid Heating Value	Btu/lb	18634.4	18771	-1052.89	-1059.76	18416.6
Gross Ideal Gas Heating Value	Btu/ft^3	1338.25	5021.82	50.6285	50.31	1318.8
Gross Liquid Heating Value	Btu/lb	20471.3	20144.8	6.76313	0	20244.9
Remarks						
Inlet gas: Data taken from LCS inlet 06/25/2025. The sample temperature is 90F and the sample pressure is 32 psig.						

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	4	5	6	7	8
From Block	Gath Sys	MIX-102	Slug Catcher	VSSL-105	VSSL-105
To Block	MIX-102	Slug Catcher	VSSL-105	CMPR-100	PUMP-101

Stream Composition

Mole Fraction	4 %	5 %	6 %	7 %	8 %
Methane	66.7108	63.5866	65.2831	65.2848	0.00472131
Ethane	11.5875	11.5759	11.8711	11.8714	0.00137116
Propane	7.00176	7.51239	7.67709	7.67729	0.000629268
n-Butane	2.34804	2.92387	2.94436	2.94444	0.000218093
i-Pentane	0.617802	0.891557	0.86918	0.869203	4.86436E-05
i-Butane	0.876944	1.03823	1.05226	1.05229	6.62919E-05
n-Pentane	1.1351	1.72454	1.65146	1.6515	3.17848E-05
Cyclohexane	0.230567	0.414382	0.316908	0.316916	9.60461E-05
n-Hexane	0.25323	0.445847	0.361685	0.361695	4.93078E-06
n-Heptane	0.471973	0.721442	0.385334	0.385344	4.11184E-06
C8	0.0561638	0.0661566	0.0163529	0.0163534	6.89149E-08
Water	1.51035	1.89754	0.65321	0.650655	99.9822
N2	3.67725	3.46072	3.55356	3.55365	0.000125859
CO2	2.82593	2.75106	2.82325	2.82332	0.00444009
H2S	0.00098533	0.0010014	0.00102624	0.00102627	4.95817E-06
Triethylene Glycol	0	1.17895E-07	1.37573E-13	7.70398E-17	5.34387E-09
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.296584	0.522337	0.418017	0.418028	0.00504741
Toluene	0.136961	0.20265	0.100627	0.100629	0.000897227
Ethylbenzene	0.0137946	0.0157302	0.00335579	0.00335588	2.83681E-05
m-Xylene	0.0236479	0.0266899	0.00539815	0.00539828	2.71599E-05
o-Xylene	0.00788264	0.00876697	0.00163215	0.00163219	2.01614E-05
Nonane	0.0719291	0.0734465	0.00687835	0.00687852	3.71799E-08
Decane	0.144844	0.139137	0.00424641	0.00424651	6.28464E-09
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	4 %	5 %	6 %	7 %	8 %
Methane	43.4817	38.9649	41.3077	41.3085	0.00420303
Ethane	14.1562	13.2957	14.0789	14.0792	0.0022879
Propane	12.5442	12.6535	13.3522	13.3524	0.00153979
n-Butane	5.54481	6.49137	6.74983	6.74996	0.000703418
i-Pentane	1.811	2.45705	2.47342	2.47347	0.000194753
i-Butane	2.07087	2.30501	2.41227	2.41232	0.000213812
n-Pentane	3.32738	4.75267	4.69955	4.69964	0.000127256
Cyclohexane	0.788388	1.33211	1.05195	1.05197	0.000448551
n-Hexane	0.886619	1.46759	1.22934	1.22937	2.35791E-05
n-Heptane	1.92147	2.7613	1.52291	1.52293	2.28634E-05
C8	0.260658	0.288658	0.0736767	0.073678	4.36834E-07
Water	1.1055	1.30578	0.464145	0.462326	99.9523
N2	4.18532	3.70313	3.92635	3.92642	0.000195649
CO2	5.05297	4.6247	4.90067	4.90076	0.0108434
H2S	0.00136437	0.00130363	0.0013795	0.00137952	9.37693E-06
Triethylene Glycol	0	6.76275E-07	8.14865E-13	4.56313E-16	4.45324E-08
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.941248	1.55849	1.28787	1.28789	0.0218783
Toluene	0.512716	0.713222	0.36569	0.365696	0.00458746

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Mass Fraction	4 %	5 %	6 %	7 %	8 %	
Ethylbenzene	0.0595018	0.0637899	0.0140519	0.0140522	0.000167125	
m-Xylene	0.102003	0.108234	0.022604	0.0226044	0.000160007	
o-Xylene	0.034001	0.0355523	0.00683441	0.00683453	0.000118777	
Nonane	0.374816	0.359817	0.0347951	0.0347958	2.64614E-07	
Decane	0.837312	0.756184	0.0238303	0.0238308	4.96202E-08	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	4 lb/h	5 lb/h	6 lb/h	7 lb/h	8 lb/h	
Methane	169132	173183	173150	173150	0.000322196	
Ethane	55064.1	59094	59014.9	59014.9	0.000175386	
Propane	48793.5	56239.7	55968.5	55968.5	0.000118037	
n-Butane	21567.9	28851.6	28293.4	28293.4	5.39227E-05	
i-Pentane	7044.3	10920.6	10367.9	10367.9	1.49294E-05	
i-Butane	8055.15	10244.9	10111.6	10111.6	1.63904E-05	
n-Pentane	12942.6	21123.7	19699.2	19699.2	9.75519E-06	
Cyclohexane	3066.62	5920.7	4409.48	4409.48	3.43851E-05	
n-Hexane	3448.72	6522.86	5153.07	5153.07	1.80753E-06	
n-Heptane	7474	12272.9	6383.59	6383.59	1.75267E-06	
C8	1013.89	1282.97	308.832	308.832	3.34869E-08	
Water	4300.09	5803.66	1945.56	1937.9	7.66215	
N2	16279.8	16458.9	16458.1	16458.1	1.49981E-05	
CO2	19654.7	20554.9	20542.2	20542.2	0.000831237	
H2S	5.30704	5.79413	5.78247	5.78247	7.18818E-07	
Triethylene Glycol	0	0.00300577	3.41568E-09	1.9127E-12	3.41377E-09	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	3661.21	6926.87	5398.37	5398.36	0.00167715	
Toluene	1994.33	3169.99	1532.87	1532.87	0.000351666	
Ethylbenzene	231.447	283.521	58.9017	58.9017	1.28115E-05	
m-Xylene	396.766	481.058	94.7496	94.7496	1.22658E-05	
o-Xylene	132.255	158.016	28.6479	28.6479	9.10519E-06	
Nonane	1457.94	1599.24	145.851	145.851	2.02848E-08	
Decane	3256.92	3360.93	99.89	99.89	3.80379E-09	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	4	5	6	7	8
Temperature	°F	60 *	46.9097	60 *	59.7493	59.7493
Pressure	psig	25 *	25	25	24.8	24.8
Mole Fraction Vapor	%	98.4762	96.4618	100	100	0
Mole Fraction Light Liquid	%	0.657087	2.03124	0	0	100
Mole Fraction Heavy Liquid	%	0.866749	1.50699	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	24.6128	26.1796	25.3536	25.3538	18.0207
Mass Density	lb/ft^3	0.180245	0.201176	0.183129	0.182286	62.3703
Molar Flow	lbmol/h	15803.7	16977.3	16533	16532.6	0.42539
Mass Flow	lb/h	388974	444460	419172	419164	7.66581
Vapor Volumetric Flow	ft^3/h	2.15802E+06	2.20931E+06	2.28894E+06	2.29949E+06	0.122908
Liquid Volumetric Flow	gpm	269052	275446	285375	286689	0.0153236
Std Vapor Volumetric Flow	MMSCFD	143.934	154.623	150.576	150.572	0.00387429
Std Liquid Volumetric Flow	sgpm	1962.09	2160.09	2092.31	2092.29	0.015328
Compressibility		0.971967	0.950214	0.985459	0.98551	0.00204722
Specific Gravity				0.875395	0.875402	1.00002
API Gravity						10.0012
Enthalpy	Btu/h	-6.21164E+08	-6.88918E+08	-6.41157E+08	-6.41154E+08	-52398.3

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat CS						
Stream Properties							
Property	Units	4	5	6	7	8	
Mass Enthalpy	Btu/lb	-1596.93	-1550.01	-1529.58	-1529.6	-6835.33	
Mass Cp	Btu/(lb*°F)	0.44488	0.441034	0.435479	0.435354	0.979706	
Ideal Gas CpCv Ratio		1.22895	1.21963	1.22265	1.22271	1.32952	
Dynamic Viscosity	cP			0.0102707	0.010266	1.13771	
Kinematic Viscosity	cSt			3.50126	3.51582	1.13876	
Thermal Conductivity	Btu/(h*ft*°F)			0.0154424	0.0154323	0.341878	
Surface Tension	lbf/ft					0.00510818 ?	
Net Ideal Gas Heating Value	Btu/ft^3	1200.24	1277.98	1247.55	1247.58	0.319046	
Net Liquid Heating Value	Btu/lb	18416.6	18425.4	18585.6	18586	-1052.6	
Gross Ideal Gas Heating Value	Btu/ft^3	1318.8	1401.8	1369.31	1369.35	50.6391	
Gross Liquid Heating Value	Btu/lb	20244.9	20220.6	20408.5	20408.8	7.05084	
Remarks							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	9	09	10	11	12
From Block	MIX-103	CMPR-100	FAXR-100	MIX-100	VSSL-102
To Block	Cond. TK	FAXR-100	MIX-100	VSSL-102	CMPR-101

Stream Composition

Mole Fraction	9 %	09 %	10 %	11 %	12 %
Methane	0.182254	65.2848	65.2848	64.566	64.5817
Ethane	0.739365	11.8714	11.8714	11.7698	11.7724
Propane	2.33611	7.67729	7.67729	7.65527	7.65646
n-Butane	4.06468	2.94444	2.94444	2.99485	2.99467
i-Pentane	3.30763	0.869203	0.869203	0.915566	0.915105
i-Butane	0.949003	1.05229	1.05229	1.06165	1.06168
n-Pentane	8.55799	1.6515	1.6515	1.76922	1.76793
Cyclohexane	7.88789	0.316916	0.316916	0.413007	0.411506
n-Hexane	6.8892	0.361695	0.361695	0.443111	0.441858
n-Heptane	25.3974	0.385344	0.385344	0.634717	0.629098
C8	3.67857	0.0163534	0.0163534	0.0436926	0.0425353
Water	0.0417223	0.650655	0.650655	0.644468	0.644615
N2	0.000737262	3.55365	3.55365	3.51306	3.51392
CO2	0.0579858	2.82332	2.82332	2.79481	2.79546
H2S	0.000156965	0.00102627	0.00102627	0.00101855	0.00101876
Triethylene Glycol	9.83288E-09	7.70398E-17	7.70398E-17	7.61449E-17	4.76449E-17
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	10.0745	0.418028	0.418028	0.525015	0.523444
Toluene	8.03592	0.100629	0.100629	0.176678	0.174867
Ethylbenzene	0.920928	0.00335588	0.00335588	0.00994042	0.00962684
m-Xylene	1.58156	0.00539828	0.00539828	0.0163715	0.0158164
o-Xylene	0.529918	0.00163219	0.00163219	0.00515943	0.00496738
Nonane	4.88568	0.00687852	0.00687852	0.0292158	0.0271654
Decane	9.88078	0.00424651	0.00424651	0.0173442	0.0142387
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	9 %	09 %	10 %	11 %	12 %
Methane	0.0311595	41.3085	41.3085	39.8663	39.9026
Ethane	0.236931	14.0792	14.0792	13.6213	13.6334
Propane	1.09782	13.3524	13.3524	12.9923	13.003
n-Butane	2.51774	6.74996	6.74996	6.69959	6.70365
i-Pentane	2.54324	2.47347	2.47347	2.54243	2.54285
i-Butane	0.587831	2.41232	2.41232	2.37495	2.37661
n-Pentane	6.58027	4.69964	4.69964	4.91293	4.91264
Cyclohexane	7.07467	1.05197	1.05197	1.3378	1.33383
n-Hexane	6.32695	1.22937	1.22937	1.46969	1.46652
n-Heptane	27.1211	1.52293	1.52293	2.44786	2.42781
C8	4.47812	0.073678	0.073678	0.192094	0.187131
Water	0.00801036	0.462326	0.462326	0.446862	0.447262
N2	0.000220105	3.92642	3.92642	3.78776	3.79122
CO2	0.0271964	4.90076	4.90076	4.73401	4.73828
H2S	5.70108E-05	0.00137952	0.00137952	0.00133606	0.00133723
Triethylene Glycol	1.57368E-08	4.56313E-16	4.56313E-16	4.40112E-16	2.75568E-16
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	8.38656	1.28789	1.28789	1.57841	1.57474
Toluene	7.89076	0.365696	0.365696	0.626546	0.620538

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	9 %	09 %	10 %	11 %	12 %
Ethylbenzene	1.04196	0.0140522	0.0140522	0.0406179	0.0393628
m-Xylene	1.78941	0.0226044	0.0226044	0.0668961	0.064671
o-Xylene	0.59956	0.00683453	0.00683453	0.0210821	0.0203109
Nonane	6.67794	0.0347958	0.0347958	0.144219	0.134187
Decane	14.9824	0.0238308	0.0238308	0.0949804	0.0780263
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	9 lb/h	09 lb/h	10 lb/h	11 lb/h	12 lb/h
Methane	2.3033	173150	173150	173256	173256
Ethane	17.5139	59014.9	59014.9	59197.5	59195.7
Propane	81.1509	55968.5	55968.5	56463.8	56458.7
n-Butane	186.111	28293.4	28293.4	29116	29107
i-Pentane	187.996	10367.9	10367.9	11049.3	11041
i-Butane	43.4524	10111.6	10111.6	10321.4	10319.1
n-Pentane	486.413	19699.2	19699.2	21351.3	21330.5
Cyclohexane	522.959	4409.48	4409.48	5814	5791.44
n-Hexane	467.688	5153.07	5153.07	6387.2	6367.55
n-Heptane	2004.79	6383.59	6383.59	10638.3	10541.5
C8	331.022	308.832	308.832	834.828	812.515
Water	0.592125	1937.9	1937.9	1942.03	1942
N2	0.0162702	16458.1	16458.1	16461.4	16461.3
CO2	2.01035	20542.2	20542.2	20573.7	20573.4
H2S	0.00421423	5.78247	5.78247	5.80642	5.80619
Triethylene Glycol	1.16326E-06	1.9127E-12	1.9127E-12	1.9127E-12	1.19651E-12
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	619.934	5398.36	5398.36	6859.67	6837.45
Toluene	583.285	1532.87	1532.87	2722.93	2694.35
Ethylbenzene	77.0214	58.9017	58.9017	176.523	170.912
m-Xylene	132.273	94.7496	94.7496	290.726	280.799
o-Xylene	44.3194	28.6479	28.6479	91.6215	88.1892
Nonane	493.633	145.851	145.851	626.768	582.636
Decane	1107.5	99.89	99.89	412.779	338.787
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	9	09	10	11	12
Temperature	°F	59.4098	130.709	110 *	98.4491	98.4491
Pressure	psig	0.125	58 *	53	53	53
Mole Fraction Vapor	%	0	100	100	99.9753	100
Mole Fraction Light Liquid	%	100	0	0	0.0246894	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	93.8334	25.3538	25.3538	25.9818	25.9644
Mass Density	lb/ft^3	45.2133	0.296147	0.286052	0.299976	0.299704
Molar Flow	lbmol/h	78.7778	16532.6	16532.6	16726.9	16722.7
Mass Flow	lb/h	7391.99	419164	419164	434594	434196
Vapor Volumetric Flow	ft^3/h	163.491	1.41539E+06	1.46534E+06	1.44876E+06	1.44875E+06
Liquid Volumetric Flow	gpm	20.3833	176465	182692	180625	180624
Std Vapor Volumetric Flow	MMSCFD	0.717479	150.572	150.572	152.342	152.304
Std Liquid Volumetric Flow	sgpm	20.5754	2092.29	2092.29	2137.27	2136.15
Compressibility		0.00552165	0.982319	0.981463	0.978936	0.979172
Specific Gravity		0.724936	0.875402	0.875402		0.896485
API Gravity		63.7687				
Enthalpy	Btu/h	-5.54774E+06	-6.28299E+08	-6.32243E+08	-6.43965E+08	-6.43662E+08

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? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat CS						
Stream Properties							
Property	Units	9	09	10	11	12	
Mass Enthalpy	Btu/lb	-750.507	-1498.93	-1508.34	-1481.76	-1482.42	
Mass Cp	Btu/(lb*°F)	0.480671	0.46839	0.45909	0.452054	0.452002	
Ideal Gas CpCv Ratio		1.06398	1.20474	1.20986	1.208	1.20814	
Dynamic Viscosity	cP	0.4816	0.0115301	0.0111746		0.0109147	
Kinematic Viscosity	cSt	0.664965	2.43055	2.43874		2.27352	
Thermal Conductivity	Btu/(h*ft*°F)	0.0737065	0.0183337	0.0174772		0.0168854	
Surface Tension	lbf/ft	0.00149988	?				
Net Ideal Gas Heating Value	Btu/ft^3	4682.19	1247.58	1247.58	1279.2	1278.33	
Net Liquid Heating Value	Btu/lb	18771	18586	18586	18593.7	18593.5	
Gross Ideal Gas Heating Value	Btu/ft^3	5021.82	1369.35	1369.35	1402.94	1402.01	
Gross Liquid Heating Value	Btu/lb	20144.8	20408.8	20408.8	20401.4	20401.6	
Remarks							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	13	14	15	16	17
From Block	CMPR-101	FAXR-101	MIX-105	VSSL-103	CMPR-102
To Block	FAXR-101	MIX-105	VSSL-103	CMPR-102	FAXR-102

Stream Composition

Mole Fraction	13 %	14 %	15 %	16 %	17 %
Methane	64.5817	64.5817	64.5817	65.3007	65.3007
Ethane	11.7724	11.7724	11.7724	11.874	11.874
Propane	7.65646	7.65646	7.65646	7.67849	7.67849
n-Butane	2.99467	2.99467	2.99467	2.94424	2.94424
i-Pentane	0.915105	0.915105	0.915105	0.868729	0.868729
i-Butane	1.06168	1.06168	1.06168	1.05232	1.05232
n-Pentane	1.76793	1.76793	1.76793	1.65018	1.65018
Cyclohexane	0.411506	0.411506	0.411506	0.315385	0.315385
n-Hexane	0.441858	0.441858	0.441858	0.360415	0.360415
n-Heptane	0.629098	0.629098	0.629098	0.379606	0.379606
C8	0.0425353	0.0425353	0.0425353	0.0151774	0.0151774
Water	0.644615	0.644615	0.644615	0.650804	0.650804
N2	3.51392	3.51392	3.51392	3.55453	3.55453
CO2	2.79546	2.79546	2.79546	2.82399	2.82399
H2S	0.00101876	0.00101876	0.00101876	0.00102649	0.00102649
Triethylene Glycol	4.76449E-17	4.76449E-17	4.76449E-17	1.11817E-18	1.11817E-18
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.523444	0.523444	0.523444	0.416424	0.416424
Toluene	0.174867	0.174867	0.174867	0.0987906	0.0987906
Ethylbenzene	0.00962684	0.00962684	0.00962684	0.00303715	0.00303715
m-Xylene	0.0158164	0.0158164	0.0158164	0.00483411	0.00483411
o-Xylene	0.00496738	0.00496738	0.00496738	0.00143701	0.00143701
Nonane	0.0271654	0.0271654	0.0271654	0.00479159	0.00479159
Decane	0.0142387	0.0142387	0.0142387	0.00109052	0.00109052
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	13 %	14 %	15 %	16 %	17 %
Methane	39.9026	39.9026	39.9026	41.3474	41.3474
Ethane	13.6334	13.6334	13.6334	14.0921	14.0921
Propane	13.003	13.003	13.003	13.3638	13.3638
n-Butane	6.70365	6.70365	6.70365	6.75421	6.75421
i-Pentane	2.54285	2.54285	2.54285	2.47385	2.47385
i-Butane	2.37661	2.37661	2.37661	2.41407	2.41407
n-Pentane	4.91264	4.91264	4.91264	4.69916	4.69916
Cyclohexane	1.33383	1.33383	1.33383	1.04762	1.04762
n-Hexane	1.46652	1.46652	1.46652	1.22587	1.22587
n-Heptane	2.42781	2.42781	2.42781	1.50131	1.50131
C8	0.187131	0.187131	0.187131	0.0684277	0.0684277
Water	0.447262	0.447262	0.447262	0.462755	0.462755
N2	3.79122	3.79122	3.79122	3.93014	3.93014
CO2	4.73828	4.73828	4.73828	4.90534	4.90534
H2S	0.00133723	0.00133723	0.00133723	0.00138078	0.00138078
Triethylene Glycol	2.75568E-16	2.75568E-16	2.75568E-16	6.62764E-18	6.62764E-18
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	1.57474	1.57474	1.57474	1.28384	1.28384
Toluene	0.620538	0.620538	0.620538	0.359266	0.359266

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	13 %	14 %	15 %	16 %	17 %
Ethylbenzene	0.0393628	0.0393628	0.0393628	0.0127265	0.0127265
m-Xylene	0.064671	0.064671	0.064671	0.0202562	0.0202562
o-Xylene	0.0203109	0.0203109	0.0203109	0.00602146	0.00602146
Nonane	0.134187	0.134187	0.134187	0.0242557	0.0242557
Decane	0.0780263	0.0780263	0.0780263	0.00612408	0.00612408
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	13 lb/h	14 lb/h	15 lb/h	16 lb/h	17 lb/h
Methane	173256	173256	173256	173149	173149
Ethane	59195.7	59195.7	59195.7	59013.2	59013.2
Propane	56458.7	56458.7	56458.7	55963.4	55963.4
n-Butane	29107	29107	29107	28284.4	28284.4
i-Pentane	11041	11041	11041	10359.7	10359.7
i-Butane	10319.1	10319.1	10319.1	10109.3	10109.3
n-Pentane	21330.5	21330.5	21330.5	19678.5	19678.5
Cyclohexane	5791.44	5791.44	5791.44	4387.09	4387.09
n-Hexane	6367.55	6367.55	6367.55	5133.55	5133.55
n-Heptane	10541.5	10541.5	10541.5	6286.98	6286.98
C8	812.515	812.515	812.515	286.553	286.553
Water	1942	1942	1942	1937.86	1937.86
N2	16461.3	16461.3	16461.3	16458.1	16458.1
CO2	20573.4	20573.4	20573.4	20541.9	20541.9
H2S	5.80619	5.80619	5.80619	5.78224	5.78224
Triethylene Glycol	1.19651E-12	1.19651E-12	1.19651E-12	2.77544E-14	2.77544E-14
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	6837.45	6837.45	6837.45	5376.32	5376.32
Toluene	2694.35	2694.35	2694.35	1504.49	1504.49
Ethylbenzene	170.912	170.912	170.912	53.2943	53.2943
m-Xylene	280.799	280.799	280.799	84.8263	84.8263
o-Xylene	88.1892	88.1892	88.1892	25.2159	25.2159
Nonane	582.636	582.636	582.636	101.575	101.575
Decane	338.787	338.787	338.787	25.6457	25.6457
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	13	14	15	16	17
Temperature	°F	218.19	110 *	110	110	341.353
Pressure	psig	168 *	163	163	163	1000 *
Mole Fraction Vapor	%	100	98.8383	98.8383	100	100
Mole Fraction Light Liquid	%	0	1.16175	1.16175	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	25.9644	25.9644	25.9644	25.3361	25.3361
Mass Density	lb/ft^3	0.671127	0.801965	0.801965	0.773994	3.1734
Molar Flow	lbmol/h	16722.7	16722.7	16722.7	16528.5	16528.5
Mass Flow	lb/h	434196	434196	434196	418767	418767
Vapor Volumetric Flow	ft^3/h	646966	541416	541416	541047	131962
Liquid Volumetric Flow	gpm	80660.7	67501.2	67501.2	67455.2	16452.4
Std Vapor Volumetric Flow	MMSCFD	152.304	152.304	152.304	150.535	150.535
Std Liquid Volumetric Flow	sgpm	2136.15	2136.15	2136.15	2091.18	2091.18
Compressibility		0.971627	0.941054	0.941054	0.951467	0.942417
Specific Gravity		0.896485			0.874791	0.874791
API Gravity						
Enthalpy	Btu/h	-6.20325E+08	-6.45593E+08	-6.45593E+08	-6.33872E+08	-5.90677E+08

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat CS						
Stream Properties							
Property	Units	13	14	15	16	17	
Mass Enthalpy	Btu/lb	-1428.67	-1486.87	-1486.87	-1513.66	-1410.52	
Mass Cp	Btu/(lb*°F)	0.514716	0.474675	0.474675	0.472816	0.6176	
Ideal Gas CpCv Ratio		1.1805	1.20526	1.20526	1.21	1.16214	
Dynamic Viscosity	cP	0.0130324			0.0113548	0.0162191	
Kinematic Viscosity	cSt	1.21227			0.915841	0.319066	
Thermal Conductivity	Btu/(h*ft*°F)	0.0222765			0.0178633	0.0304268	
Surface Tension	lbf/ft						
Net Ideal Gas Heating Value	Btu/ft^3	1278.33	1278.33	1278.33	1246.69	1246.69	
Net Liquid Heating Value	Btu/lb	18593.5	18593.5	18593.5	18585.7	18585.7	
Gross Ideal Gas Heating Value	Btu/ft^3	1402.01	1402.01	1402.01	1368.4	1368.4	
Gross Liquid Heating Value	Btu/lb	20401.6	20401.6	20401.6	20409	20409	
Remarks							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	18	19	19a	20	21
From Block	FAXR-102	VSSL-103	RCYL-2	VSSL-102	PUMP-101
To Block	Filter Seperator	RCYL-2	MIX-100	mix	mix

Stream Composition

Mole Fraction	18 %	19 %	19a %	20 %	21 %
Methane	65.3007	3.40805	3.40802	1.32565	0.00472131
Ethane	11.874	3.12455	3.12452	1.37665	0.00137116
Propane	7.67849	5.7819	5.78186	2.83006	0.000629268
n-Butane	2.94424	7.28489	7.28491	3.76062	0.000218093
i-Pentane	0.868729	4.8607	4.86076	2.78072	4.86436E-05
i-Butane	1.05232	1.85806	1.85806	0.932911	6.62919E-05
n-Pentane	1.65018	11.7857	11.7859	6.98483	3.17848E-05
Cyclohexane	0.315385	8.5892	8.58969	6.49069	9.60461E-05
n-Hexane	0.360415	7.37081	7.37111	5.51974	4.93078E-06
n-Heptane	0.379606	21.8551	21.8547	23.3903	4.11184E-06
C8	0.0151774	2.37007	2.37008	4.73004	6.89149E-08
Water	0.650804	0.118061	0.118062	0.0514007	99.9822
N2	3.55453	0.0593445	0.0593437	0.0214834	0.000125859
CO2	2.82399	0.368313	0.368311	0.154782	0.00444009
H2S	0.00102649	0.000361813	0.000361813	0.00016431	4.95817E-06
Triethylene Glycol	1.11817E-18	4.00601E-15	0	1.15482E-13	5.34387E-09
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.416424	9.62838	9.62895	6.88854	0.00504741
Toluene	0.0987906	6.6472	6.64788	7.51013	0.000897227
Ethylbenzene	0.00303715	0.57026	0.57024	1.27973	2.83681E-05
m-Xylene	0.00483411	0.950158	0.950117	2.26419	2.71599E-05
o-Xylene	0.00143701	0.305321	0.305303	0.782851	2.01614E-05
Nonane	0.00479159	1.93066	1.92996	8.33207	3.71799E-08
Decane	0.00109052	1.13285	1.13187	12.5925	6.28464E-09
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	18 %	19 %	19a %	20 %	21 %
Methane	41.3474	0.688418	0.68842	0.220865	0.00420303
Ethane	14.0921	1.18299	1.183	0.429902	0.0022879
Propane	13.3638	3.21027	3.21028	1.29604	0.00153979
n-Butane	6.75421	5.33139	5.33147	2.27001	0.000703418
i-Pentane	2.47385	4.41574	4.41584	2.08359	0.000194753
i-Butane	2.41407	1.3598	1.35982	0.563129	0.000213812
n-Pentane	4.69916	10.7068	10.7071	5.23371	0.000127256
Cyclohexane	1.04762	9.10188	9.1025	5.67309	0.000448551
n-Hexane	1.22587	7.99786	7.99828	4.94	2.35791E-05
n-Heptane	1.50131	27.5743	27.5741	24.3409	2.28634E-05
C8	0.0684277	3.40887	3.40892	5.61132	4.36834E-07
Water	0.462755	0.0267807	0.0267813	0.00961691	99.9523
N2	3.93014	0.0209325	0.0209325	0.0062502	0.000195649
CO2	4.90534	0.204098	0.204099	0.0707443	0.0108434
H2S	0.00138078	0.000155264	0.000155265	5.81568E-05	9.37693E-06
Triethylene Glycol	6.62764E-18	7.57494E-15	0	1.80108E-13	4.45324E-08
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	1.28384	9.4699	9.47057	5.58817	0.0218783

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	18 %	19 %	19a %	20 %	21 %
Toluene	0.359266	7.71178	7.71266	7.18644	0.00458746
Ethylbenzene	0.0127265	0.762306	0.762289	1.411	0.000167125
m-Xylene	0.0202562	1.27014	1.2701	2.49643	0.000160007
o-Xylene	0.00602146	0.408144	0.408125	0.863149	0.000118777
Nonane	0.0242557	3.11786	3.11676	11.0982	2.64614E-07
Decane	0.00612408	2.02954	2.0278	18.6074	4.96202E-08
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	18 lb/h	19 lb/h	19a lb/h	20 lb/h	21 lb/h
Methane	173149	106.217	106.223	0.878265	0.000322196
Ethane	59013.2	182.526	182.536	1.7095	0.000175386
Propane	55963.4	495.319	495.346	5.15366	0.000118037
n-Butane	28284.4	822.591	822.645	9.02664	5.39227E-05
i-Pentane	10359.7	681.313	681.364	8.28535	1.49294E-05
i-Butane	10109.3	209.807	209.82	2.23927	1.63904E-05
n-Pentane	19678.5	1651.98	1652.11	20.8118	9.75519E-06
Cyclohexane	4387.09	1404.35	1404.52	22.5589	3.43851E-05
n-Hexane	5133.55	1234.01	1234.13	19.6438	1.80753E-06
n-Heptane	6286.98	4254.5	4254.68	96.7911	1.75267E-06
C8	286.553	525.962	525.996	22.3133	3.34869E-08
Water	1937.86	4.13205	4.13235	0.0382415	7.66215
N2	16458.1	3.22972	3.22988	0.0248538	1.49981E-05
CO2	20541.9	31.4907	31.4925	0.281313	0.000831237
H2S	5.78224	0.0239559	0.0239574	0.000231259	7.18818E-07
Triethylene Glycol	2.77544E-14	1.16875E-12	0	7.16194E-13	3.41377E-09
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	5376.32	1461.13	1461.31	22.2213	0.00167715
Toluene	1504.49	1189.87	1190.06	28.5767	0.000351666
Ethylbenzene	53.2943	117.618	117.621	5.61081	1.28115E-05
m-Xylene	84.8263	195.973	195.977	9.92702	1.22658E-05
o-Xylene	25.2159	62.9733	62.9736	3.4323	9.10519E-06
Nonane	101.575	481.061	480.916	44.1318	2.02848E-08
Decane	25.6457	313.142	312.889	73.9919	3.80379E-09
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	18	19	19a	20	21
Temperature	°F	110 *	110	110	98.4491	59.7778
Pressure	psig	995	163	163	53	50 *
Mole Fraction Vapor	%	93.0125	0	0	0	0
Mole Fraction Light Liquid	%	6.4912	100	100	100	100
Mole Fraction Heavy Liquid	%	0.496308	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	25.3361	79.4191	79.4181	96.2885	18.0207
Mass Density	lb/ft^3	5.62248	41.8665	41.8666	43.927	62.3714
Molar Flow	lbmol/h	16528.5	194.276	194.288	4.12976	0.42539
Mass Flow	lb/h	418767	15429.2	15430	397.648	7.66581
Vapor Volumetric Flow	ft^3/h	74480.9	368.533	368.551	9.05248	0.122906
Liquid Volumetric Flow	gpm	9285.93	45.947	45.9493	1.12862	0.0153233
Std Vapor Volumetric Flow	MMSCFD	150.535	1.76939	1.7695	0.0376122	0.00387429
Std Liquid Volumetric Flow	sgpm	2091.18	44.9733	44.9755	1.11157	0.015328
Compressibility		0.744246	0.0551377	0.055137	0.0247751	0.00335318
Specific Gravity			0.671274	0.671275	0.704311	1.00004
API Gravity			70.9536	70.9533	64.0566	9.99812

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Stream Properties

Property	Units	18	19	19a	20	21
Enthalpy	Btu/h	-6.54899E+08	-1.17215E+07	-1.17219E+07	-303053	-52397.5
Mass Enthalpy	Btu/lb	-1563.87	-759.695	-759.68	-762.112	-6835.23
Mass Cp	Btu/(lb*°F)	0.6314	0.525139	0.525137	0.508164	0.979662
Ideal Gas CpCv Ratio		1.21	1.07025	1.07025	1.05753	1.32951
Dynamic Viscosity	cP		0.266337	0.266335	0.384358	1.13766
Kinematic Viscosity	cSt		0.397141	0.397136	0.54624	1.1387
Thermal Conductivity	Btu/(h*ft*°F)		0.0657707	0.0657706	0.0700393	0.341892
Surface Tension	lbf/ft		0.00107711 ?	0.00107711 ?	0.00131565 ?	0.00510793 ?
Net Ideal Gas Heating Value	Btu/ft^3	1246.69	3969.53	3969.47	4812.48	0.319046
Net Liquid Heating Value	Btu/lb	18585.7	18802.9	18802.9	18803.1	-1052.6
Gross Ideal Gas Heating Value	Btu/ft^3	1368.4	4261.65	4261.59	5165.46	50.6391
Gross Liquid Heating Value	Btu/lb	20409	20199	20199	20194.6	7.05084

Remarks

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	22	23	24	25	26
From Block	Filter Seperator	Filter Seperator	SPLT-100	SPLT-100	MIX-104
To Block	SPLT-100	MIX-101	To TEG	MIX-104	RCYL-1

Stream Composition

Mole Fraction	22 %	23 %	24 %	25 %	26 %
Methane	68.5978	21.4119	68.5978	68.5978	
Ethane	11.9096	11.4002	11.9096	11.9096	
Propane	7.1709	14.4353	7.1709	7.1709	
n-Butane	2.35765	10.7525	2.35765	2.35765	
i-Pentane	0.58716	4.61676	0.58716	0.58716	
i-Butane	0.888454	3.2336	0.888454	0.888454	
n-Pentane	1.04234	9.74135	1.04234	1.04234	
Cyclohexane	0.121178	2.90053	0.121178	0.121178	
n-Hexane	0.157873	3.0565	0.157873	0.157873	
n-Heptane	0.104347	4.04366	0.104347	0.104347	
C8	0.00237837	0.185549	0.00237837	0.00237837	
Water	0.159827	7.18632	0.159827	0.159827	
N2	3.78054	0.546019	3.78054	3.78054	
CO2	2.91247	1.64618	2.91247	2.91247	
H2S	0.00101741	0.00114723	0.00101741	0.00101741	
Triethylene Glycol	2.44097E-20	1.99544E-15	2.44097E-20	2.44097E-20	
EG	0	0	0	0	
MeOH	0	0	0	0	
MDEA	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	
Benzene	0.179016	3.57662	0.179016	0.179016	
Toluene	0.0256655	1.07218	0.0256655	0.0256655	
Ethylbenzene	0.000447419	0.0375098	0.000447419	0.000447419	
m-Xylene	0.000692143	0.059969	0.000692143	0.000692143	
o-Xylene	0.000194618	0.0179749	0.000194618	0.000194618	
Nonane	0.000389734	0.0633858	0.000389734	0.000389734	
Decane	5.12975E-05	0.0149238	5.12975E-05	5.12975E-05	
Undecane	0	0	0	0	
Dodecane	0	0	0	0	

Mass Fraction	22 %	23 %	24 %	25 %	26 %
Methane	46.4512	7.27222	46.4512	46.4512	
Ethane	15.1159	7.25727	15.1159	15.1159	
Propane	13.347	13.476	13.347	13.347	
n-Butane	5.78412	13.2309	5.78412	5.78412	
i-Pentane	1.78814	7.05192	1.78814	1.78814	
i-Butane	2.17968	3.97896	2.17968	2.17968	
n-Pentane	3.17433	14.8795	3.17433	3.17433	
Cyclohexane	0.430471	5.16798	0.430471	0.430471	
n-Hexane	0.574258	5.57632	0.574258	0.574258	
n-Heptane	0.441338	8.57811	0.441338	0.441338	
C8	0.0114675	0.448719	0.0114675	0.0114675	
Water	0.121537	2.74087	0.121537	0.121537	
N2	4.47029	0.323828	4.47029	4.47029	
CO2	5.41033	1.53379	5.41033	5.41033	
H2S	0.00146361	0.000827759	0.00146361	0.00146361	
Triethylene Glycol	1.54729E-19	6.34414E-15	1.54729E-19	1.54729E-19	
EG	0	0	0	0	
MeOH	0	0	0	0	
MDEA	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	
Benzene	0.590236	5.91468	0.590236	0.590236	

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Mass Fraction	22 %	23 %	24 %	25 %	26 %	
Toluene	0.0998176	2.09145	0.0998176	0.0998176		
Ethylbenzene	0.00200499	0.0843077	0.00200499	0.00200499		
m-Xylene	0.00310165	0.134787	0.00310165	0.00310165		
o-Xylene	0.000872128	0.0404006	0.000872128	0.000872128		
Nonane	0.00210989	0.172111	0.00210989	0.00210989		
Decane	0.000308078	0.0449542	0.000308078	0.000308078		
Undecane	0	0	0	0		
Dodecane	0	0	0	0		
Mass Flow	22 lb/h	23 lb/h	24 lb/h	25 lb/h	26 lb/h	
Methane	169182	3967.17	84581.3	0	0	
Ethane	55054.2	3959.01	27523.9	0	0	
Propane	48611.9	7351.47	24303.1	0	0	
n-Butane	21066.6	7217.79	10532.1	0	0	
i-Pentane	6512.67	3846.99	3255.96	0	0	
i-Butane	7938.72	2170.62	3968.9	0	0	
n-Pentane	11561.4	8117.13	5780.03	0	0	
Cyclohexane	1567.84	2819.26	783.828	0	0	
n-Hexane	2091.53	3042.01	1045.65	0	0	
n-Heptane	1607.42	4679.56	803.616	0	0	
C8	41.7664	244.787	20.8808	0	0	
Water	442.654	1495.21	221.302	0	0	
N2	16281.5	176.656	8139.79	0	0	
CO2	19705.2	836.717	9851.47	0	0	
H2S	5.33067	0.451562	2.66503	0	0	
Triethylene Glycol	5.63544E-16	3.46087E-12	2.8174E-16	0	0	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	2149.73	3226.6	1074.74	0	0	
Toluene	363.55	1140.94	181.754	0	0	
Ethylbenzene	7.30246	45.9918	3.6508	0	0	
m-Xylene	11.2967	73.5296	5.64768	0	0	
o-Xylene	3.17642	22.0395	1.58803	0	0	
Nonane	7.68452	93.8904	3.84181	0	0	
Decane	1.12207	24.5236	0.560968	0	0	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	22	23	24	25	26
Temperature	°F	110	110	110	110	
Pressure	psig	995	995	995	995	
Mole Fraction Vapor	%	100	0	100		
Mole Fraction Light Liquid	%	0	92.8972	0		
Mole Fraction Heavy Liquid	%	0	7.1028	0		
Phase Mole Fraction	%	100	100	100	100	
Molecular Weight	lb/lbmol	23.691	47.2345	23.691	23.691	
Mass Density	lb/ft^3	4.9989	33.6344	4.9989		
Molar Flow	lbmol/h	15373.5	1154.93	7685.87	0	0
Mass Flow	lb/h	364215	54552.3	182086	0	0
Vapor Volumetric Flow	ft^3/h	72859	1621.92	36425.3	0	0
Liquid Volumetric Flow	gpm	9083.72	202.213	4541.33	0	0
Std Vapor Volumetric Flow	MMSCFD	140.016	10.5186	70 *	0 *	0
Std Liquid Volumetric Flow	sgpm	1896.44	194.744	948.108	0	0
Compressibility		0.782732	0.231942	0.782732		
Specific Gravity		0.81799	0.539283	0.81799		
API Graviv			113.128			

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek				Job: 253201.0051	
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	22	23	24	25	26
Enthalpy	Btu/h	-5.88262E+08	-6.66366E+07	-2.94097E+08	0	
Mass Enthalpy	Btu/lb	-1615.15	-1221.52	-1615.15		
Mass Cp	Btu/(lb*°F)	0.629837	0.641833	0.629837		
Ideal Gas CpCv Ratio		1.22396	1.11477	1.22396	1.22396	
Dynamic Viscosity	cP	0.0139225	0.122031	0.0139225		
Kinematic Viscosity	cSt	0.173868	0.226499	0.173868		
Thermal Conductivity	Btu/(h*ft*°F)	0.0222233	0.0630792	0.0222233		
Surface Tension	lbf/ft		0.000357929 ?			
Net Ideal Gas Heating Value	Btu/ft^3	1165.76	2324.09	1165.76	1165.76	
Net Liquid Heating Value	Btu/lb	18598.9	18498.2	18598.9	18598.9	
Gross Ideal Gas Heating Value	Btu/ft^3	1281.97	2518.82	1281.97	1281.97	
Gross Liquid Heating Value	Btu/lb	20460.9	20063.1	20460.9	20460.9	
Remarks						

		Process Streams Report All Streams Tabulated by Total Phase			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station				
Flowsheet:	Lariat CS				
Connections					
	26a	27	28	29	30
From Block	RCYL-1	Recycle	mix	VLVE-100	Liq From DEHY
To Block	MIX-102	MIX-104	VLVE-100	SPLT-101	MIX-101
Stream Composition					
Mole Fraction	26a %	27 %	28 %	29 %	30 %
Methane		68.7682	1.2023	1.2023	23.0062
Ethane		11.9285	1.24822	1.24822	12.2668
Propane		7.17611	2.56583	2.56583	15.5462
n-Butane		2.35559	3.40945	3.40945	11.5881
i-Pentane		0.58595	2.52104	2.52104	4.97701
i-Butane		0.888683	0.845796	0.845796	3.48447
n-Pentane		1.03902	6.33254	6.33254	10.5012
Cyclohexane		0.118176	5.88456	5.88456	3.12351
n-Hexane		0.156756	5.00427	5.00427	3.29322
n-Heptane		0.102912	21.2059	21.2059	4.34869
C8		0.00232265	4.28832	4.28832	0.19861
Water		0.00503452	9.3836	9.3836	0.101777
N2		3.79127	0.0194889	0.0194889	0.586109
CO2		2.90849	0.140742	0.140742	1.76652
H2S		0.00100189	0.000149429	0.000149429	0.00123106
Triethylene Glycol		0.000116397	4.9915E-10	4.9915E-10	1.45399E-17
EG		0	0	0	0
MeOH		0	0	0	0
MDEA		0	0	0	0
2,2,4-Trimethylpentane		0	0	0	0
Benzene		0.150931	6.24572	6.24572	3.85199
Toluene		0.019621	6.80887	6.80887	1.15228
Ethylbenzene		0.000307213	1.16023	1.16023	0.0401052
m-Xylene		0.000486438	2.05275	2.05275	0.0640986
o-Xylene		0.000121842	0.709745	0.709745	0.0191984
Nonane		0.000373752	7.55397	7.55397	0.0671013
Decane		4.79156E-05	11.4165	11.4165	0.0155277
Undecane		0	0	0	0
Dodecane		0	0	0	0
Mass Fraction	26a %	27 %	28 %	29 %	30 %
Methane		46.6226	0.216767	0.216767	7.45859
Ethane		15.158	0.421815	0.421815	7.45404
Propane		13.3728	1.27155	1.27155	13.8535
n-Butane		5.78601	2.22709	2.22709	13.6111
i-Pentane		1.7866	2.04419	2.04419	7.25667
i-Butane		2.18286	0.552482	0.552482	4.09278
n-Pentane		3.16803	5.13473	5.13473	15.3112
Cyclohexane		0.420311	5.5658	5.5658	5.31234
n-Hexane		0.570882	4.84657	4.84657	5.73515
n-Heptane		0.435793	23.8805	23.8805	8.80592
C8		0.0112123	5.50519	5.50519	0.458475
Water		0.00383299	1.89986	1.89986	0.0370536
N2		4.48837	0.00613569	0.00613569	0.331806
CO2		5.40943	0.0696114	0.0696114	1.5711
H2S		0.00144301	5.72342E-05	5.72342E-05	0.000847873
Triethylene Glycol		0.000738704	8.4243E-10	8.4243E-10	4.4126E-17
EG		0	0	0	0
MeOH		0	0	0	0
MDEA		0	0	0	0
2,2,4-Trimethylpentane		0	0	0	0
Benzene		0.498233	5.48289	5.48289	6.08054

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Mass Fraction	26a %	27 %	28 %	29 %	30 %	
Toluene		0.076401	7.0506	7.0506	2.14555	
Ethylbenzene		0.00137835	1.38432	1.38432	0.0860443	
m-Xylene		0.00218246	2.44922	2.44922	0.137521	
o-Xylene		0.000546658	0.846826	0.846826	0.0411895	
Nonane		0.0020258	10.8883	10.8883	0.173918	
Decane		0.000288114	18.2555	18.2555	0.0446474	
Undecane		0	0	0	0	
Dodecane		0	0	0	0	
Mass Flow	26a lb/h	27 lb/h	28 lb/h	29 lb/h	30 lb/h	
Methane	0	0	0.878587	0.878587	3.80055	
Ethane	0	0	1.70967	1.70967	3.79823	
Propane	0	0	5.15378	5.15378	7.05909	
n-Butane	0	0	9.02669	9.02669	6.9356	
i-Pentane	0	0	8.28537	8.28537	3.69766	
i-Butane	0	0	2.23929	2.23929	2.08549	
n-Pentane	0	0	20.8118	20.8118	7.80187	
Cyclohexane	0	0	22.559	22.559	2.70692	
n-Hexane	0	0	19.6438	19.6438	2.92236	
n-Heptane	0	0	96.7911	96.7911	4.48709	
C8	0	0	22.3133	22.3133	0.233617	
Water	0	0	7.70039	7.70039	0.0188808	
N2	0	0	0.0248688	0.0248688	0.169073	
CO2	0	0	0.282145	0.282145	0.80056	
H2S	0	0	0.000231978	0.000231978	0.000432036	
Triethylene Glycol	0	0	3.41449E-09	3.41449E-09	2.24845E-17	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	0	0	22.2229	22.2229	3.09836	
Toluene	0	0	28.5771	28.5771	1.09327	
Ethylbenzene	0	0	5.61082	5.61082	0.0438442	
m-Xylene	0	0	9.92703	9.92703	0.0700745	
o-Xylene	0	0	3.4323	3.4323	0.0209882	
Nonane	0	0	44.1318	44.1318	0.0886207	
Decane	0	0	73.9919	73.9919	0.0227502	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	26a	27	28	29	30
Temperature	°F			96.8523	96.8523	109.892
Pressure	psig		983	50	50	993
Mole Fraction Vapor	%			0.100744	0.100744	0
Mole Fraction Light Liquid	%			90.61	90.61	100
Mole Fraction Heavy Liquid	%			9.28925	9.28925	0
Phase Mole Fraction	%		100	100	100	100
Molecular Weight	lb/lbmol		23.6626	88.9794	88.9794	49.4834
Mass Density	lb/ft^3			42.3274	42.3274	33.2229
Molar Flow	lbmol/h	0	0	4.55515	4.55515	1.02975
Mass Flow	lb/h	0	0	405.314	405.314	50.9553
Vapor Volumetric Flow	ft^3/h	0	0	9.57569	9.57569	1.53374
Liquid Volumetric Flow	gpm	0	0	1.19385	1.19385	0.19122
Std Vapor Volumetric Flow	MMSCFD	0	0	0.0414865	0.0414865	0.00937853
Std Liquid Volumetric Flow	sgpm	0	0	1.1269	1.1269	0.184104
Compressibility				0.0227719	0.0227719	0.245555
Specific Gravity						0.532684
API Gravity						115.973

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek				Job: 253201.0051	
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	26a	27	28	29	30
Enthalpy	Btu/h		0	-355450	-355450	-54350.7
Mass Enthalpy	Btu/lb			-876.975	-876.975	-1066.63
Mass Cp	Btu/(lb*°F)			0.51597	0.51597	0.632354
Ideal Gas CpCv Ratio				1.06249	1.06249	1.10932
Dynamic Viscosity	cP					0.114487
Kinematic Viscosity	cSt					0.215129
Thermal Conductivity	Btu/(h*ft*°F)					0.0586175
Surface Tension	lbf/ft					0.00029343 ?
Net Ideal Gas Heating Value	Btu/ft^3		1165.97	4363.09	4363.09	2502.57
Net Liquid Heating Value	Btu/lb		18626.2	18427.6	18427.6	19042.9
Gross Ideal Gas Heating Value	Btu/ft^3		1282.23	4687.81	4687.81	2708.4
Gross Liquid Heating Value	Btu/lb		20491.1	19812.8	19812.8	20621.9
Remarks						

		Process Streams Report All Streams Tabulated by Total Phase			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station				
Flowsheet:	Lariat CS				
Connections					
	31	32	33	34	34GB
From Block	MIX-101	SPLT-100	Liq from dehy 2	SPLT-101	MIX-108
To Block	MIX-106	TEG2	MIX-101	MIX-106	Gunbarrel
Stream Composition					
Mole Fraction	31 %	32 %	33 %	34 %	34GB %
Methane	21.4147	68.5978	23.0062	1.2023	0.436941
Ethane	11.4017	11.9096	12.2668	1.24822	0.558996
Propane	14.4372	7.1709	15.5462	2.56583	1.31292
n-Butane	10.7539	2.35765	11.5881	3.40945	2.06013
i-Pentane	4.6174	0.58716	4.97701	2.52104	1.63939
i-Butane	3.23405	0.888454	3.48447	0.845796	0.489418
n-Pentane	9.7427	1.04234	10.5012	6.33254	4.22704
Cyclohexane	2.90092	0.121178	3.12351	5.88456	3.86641
n-Hexane	3.05692	0.157873	3.29322	5.00427	3.37885
n-Heptane	4.0442	0.104347	4.34869	21.2059	12.433
C8	0.185572	0.00237837	0.19861	4.28832	1.79986
Water	7.17371	0.159827	0.101777	9.3836	50.1424
N2	0.546091	3.78054	0.586109	0.0194889	0.00602251
CO2	1.6464	2.91247	1.76652	0.140742	0.0639702
H2S	0.00114738	0.00101741	0.00123106	0.000149429	0.000107749
Triethylene Glycol	1.99192E-15	2.44097E-20	1.45399E-17	4.9915E-10	3.92682E-05
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	3.57711	0.179016	3.85199	6.24572	4.94314
Toluene	1.07232	0.0256655	1.15228	6.80887	3.93395
Ethylbenzene	0.0375144	0.000447419	0.0401052	1.16023	0.450589
m-Xylene	0.0599763	0.000692143	0.0640986	2.05275	0.773805
o-Xylene	0.0179771	0.000194618	0.0191984	0.709745	0.259272
Nonane	0.0633924	0.000389734	0.0671013	7.55397	2.39013
Decane	0.0149249	5.12975E-05	0.0155277	11.4165	4.83354
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0
	31 %	32 %	33 %	34 %	34GB %
Methane	7.27257	46.4512	7.45859	0.216767	0.126806
Ethane	7.25764	15.1159	7.45404	0.421815	0.30407
Propane	13.4767	13.347	13.8535	1.27155	1.04732
n-Butane	13.2317	5.78412	13.6111	2.22709	2.16612
i-Pentane	7.0523	1.78814	7.25667	2.04419	2.13973
i-Butane	3.97917	2.17968	4.09278	0.552482	0.514598
n-Pentane	14.8803	3.17433	15.3112	5.13473	5.51711
Cyclohexane	5.16825	0.430471	5.31234	5.5658	5.8865
n-Hexane	5.57662	0.574258	5.73515	4.84657	5.26742
n-Heptane	8.57854	0.441338	8.80592	23.8805	22.5372
C8	0.448737	0.0114675	0.458475	5.50519	3.71927
Water	2.73583	0.121537	0.0370536	1.89986	16.3415
N2	0.323843	4.47029	0.331806	0.00613569	0.00305203
CO2	1.53386	5.41033	1.5711	0.0696114	0.0509296
H2S	0.000827796	0.00146361	0.000847873	5.72342E-05	6.64308E-05
Triethylene Glycol	6.33239E-15	1.54729E-19	4.4126E-17	8.4243E-10	0.000106679
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	5.91499	0.590236	6.08054	5.48289	6.98498

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	31 %	32 %	33 %	34 %	34GB %
Toluene	2.09156	0.0998176	2.14555	7.0506	6.55715
Ethylbenzene	0.0843109	0.00200499	0.0860443	1.38432	0.865382
m-Xylene	0.134792	0.00310165	0.137521	2.44922	1.48614
o-Xylene	0.0404021	0.000872128	0.0411895	0.846826	0.497947
Nonane	0.172114	0.00210989	0.173918	10.8883	5.5455
Decane	0.0449537	0.000308078	0.0446474	18.2555	12.4411
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	31 lb/h	32 lb/h	33 lb/h	34 lb/h	34GB lb/h
Methane	3974.77	84581.3	3.80055	0.878587	14.5738
Ethane	3966.61	27523.9	3.79823	1.70967	34.9469
Propane	7365.59	24303.1	7.05909	5.15378	120.369
n-Butane	7231.66	10532.1	6.9356	9.02669	248.953
i-Pentane	3854.38	3255.96	3.69766	8.28537	245.919
i-Butane	2174.79	3968.9	2.08549	2.23929	59.1429
n-Pentane	8132.73	5780.03	7.80187	20.8118	634.083
Cyclohexane	2824.67	783.828	2.70692	22.559	676.537
n-Hexane	3047.86	1045.65	2.92236	19.6438	605.387
n-Heptane	4688.53	803.616	4.48709	96.7911	2590.2
C8	245.254	20.8808	0.233617	22.3133	427.457
Water	1495.25	221.302	0.0188808	7.70039	1878.13
N2	176.994	8139.79	0.169073	0.0248688	0.350771
CO2	838.318	9851.47	0.80056	0.282145	5.85335
H2S	0.452426	2.66503	0.000432036	0.000231978	0.00763492
Triethylene Glycol	3.46092E-12	2.8174E-16	2.24845E-17	3.41449E-09	0.0122606
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	3232.79	1074.74	3.09836	22.2229	802.786
Toluene	1143.12	181.754	1.09327	28.5771	753.615
Ethylbenzene	46.0795	3.6508	0.0438442	5.61082	99.4586
m-Xylene	73.6698	5.64768	0.0700745	9.92703	170.802
o-Xylene	22.0815	1.58803	0.0209882	3.4323	57.2292
Nonane	94.0676	3.84181	0.0886207	44.1318	637.347
Decane	24.5691	0.560968	0.0227502	73.9919	1429.87
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	31	32	33	34	34GB
Temperature	°F	109.963	110	109.892	96.8523	61.0678
Pressure	psig	993	995	993	50	25
Mole Fraction Vapor	%	0.0881474	100	0	0.100744	0
Mole Fraction Light Liquid	%	92.8217	0	100	90.61	49.8699
Mole Fraction Heavy Liquid	%	7.09017	0	0	9.28925	50.1301
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	47.2385	23.691	49.4834	88.9794	55.2783
Mass Density	lb/ft^3	33.5598	4.9989	33.2229	42.3274	47.1949
Molar Flow	lbmol/h	1156.99	7685.87	1.02975	4.55515	207.912
Mass Flow	lb/h	54654.2	182086	50.9553	405.314	11493
Vapor Volumetric Flow	ft^3/h	1628.56	36425.3	1.53374	9.57569	243.523
Liquid Volumetric Flow	gpm	203.042	4541.33	0.19122	1.19385	30.3613
Std Vapor Volumetric Flow	MMSCFD	10.5374	70	0.00937853	0.0414865	1.89359
Std Liquid Volumetric Flow	sgpm	195.112	948.108	0.184104	1.1269	30.625
Compressibility		0.232032	0.782732	0.245555	0.0227719	0.00831998
Specific Gravity			0.81799	0.532684		0.756708
API Gravity				115.973		55.3695

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	31	32	33	34	34GB
Enthalpy	Btu/h	-6.67453E+07	-2.94097E+08	-54350.7	-355450	-2.00892E+07
Mass Enthalpy	Btu/lb	-1221.23	-1615.15	-1066.63	-876.975	-1747.95
Mass Cp	Btu/(lb*°F)	0.641647	0.629837	0.632354	0.51597	0.563832
Ideal Gas CpCv Ratio		1.11476	1.22396	1.10932	1.06249	1.10813
Dynamic Viscosity	cP		0.0139225	0.114487		0.545365
Kinematic Viscosity	cSt		0.173868	0.215129		0.721391
Thermal Conductivity	Btu/(h*ft*°F)		0.0222233	0.0586175		0.10665
Surface Tension	lbf/ft			0.00029343	?	0.00191901
Net Ideal Gas Heating Value	Btu/ft^3	2324.41	1165.76	2502.57	4363.09	2307.83
Net Liquid Heating Value	Btu/lb	18499.2	18598.9	19042.9	18427.6	15532.4
Gross Ideal Gas Heating Value	Btu/ft^3	2519.16	1281.97	2708.4	4687.81	2500.73
Gross Liquid Heating Value	Btu/lb	20064.2	20460.9	20621.9	19812.8	16856.9
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	36	37	37a	38	39
From Block	MIX-106	VLVE-101	RCYL-3	Slug Catcher	Slug Catcher
To Block	VLVE-101	RCYL-3	MIX-102	MIX-108	MIX-108

Stream Composition

Mole Fraction	36 %	37 %	37a %	38 %	39 %
Methane	21.5221	21.5221	21.5164	0.890364	0.00473604
Ethane	11.4228	11.4228	11.4197	1.14039	0.00137349
Propane	14.3926	14.3926	14.3886	2.67049	0.000630125
n-Butane	10.6808	10.6808	10.678	4.17103	0.000218389
i-Pentane	4.5786	4.5786	4.57796	3.32751	4.86441E-05
i-Butane	3.21106	3.21106	3.21016	0.996077	6.62607E-05
n-Pentane	9.66267	9.66267	9.66193	8.57593	3.18627E-05
Cyclohexane	2.88824	2.88824	2.88964	7.79929	9.59936E-05
n-Hexane	3.03849	3.03849	3.03964	6.90415	4.93863E-06
n-Heptane	4.07324	4.07324	4.0808	25.5285	4.1134E-06
C8	0.199704	0.199704	0.20072	3.70412	6.90055E-08
Water	7.11417	7.11417	7.11153	0.0412425	99.9822
N2	0.545062	0.545062	0.544911	0.0122182	0.000126253
CO2	1.74339	1.74339	1.74293	0.121334	0.00444794
H2S	0.00121814	0.00121814	0.00121781	0.000143978	4.96573E-06
Triethylene Glycol	1.7082E-06	1.7082E-06	1.70548E-06	1.12497E-09	9.34741E-06
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	3.56089	3.56089	3.56234	8.49472	0.005041
Toluene	1.08491	1.08491	1.08723	7.71669	0.000896144
Ethylbenzene	0.0415133	0.0415133	0.0417947	0.918947	2.83005E-05
m-Xylene	0.0671353	0.0671353	0.0676531	1.58046	2.71289E-05
o-Xylene	0.020489	0.020489	0.0206753	0.529257	2.01175E-05
Nonane	0.0918502	0.0918502	0.0938796	4.92205	3.70808E-08
Decane	0.0590445	0.0590445	0.0622886	9.9551	6.2732E-09
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	36 %	37 %	37a %	38 %	39 %
Methane	7.30512	7.30512	7.30086	0.153453	0.00421614
Ethane	7.26713	7.26713	7.26288	0.36839	0.00229179
Propane	13.4279	13.4279	13.4198	1.26509	0.00154188
n-Butane	13.1346	13.1346	13.127	2.60448	0.00070437
i-Pentane	6.98928	6.98928	6.98611	2.5792	0.000194755
i-Butane	3.94876	3.94876	3.94642	0.621972	0.000213711
n-Pentane	14.7502	14.7502	14.7444	6.64732	0.000127568
Cyclohexane	5.1429	5.1429	5.14375	7.05171	0.000448305
n-Hexane	5.54003	5.54003	5.54037	6.39189	2.36167E-05
n-Heptane	8.63551	8.63551	8.64879	27.4813	2.28721E-05
C8	0.482649	0.482649	0.484953	4.54564	4.37408E-07
Water	2.71167	2.71167	2.7098	0.0079822	99.9522
N2	0.32306	0.32306	0.322868	0.00367713	0.000196261
CO2	1.62335	1.62335	1.62241	0.0573673	0.0108626
H2S	0.000878376	0.000878376	0.000877856	5.27161E-05	9.39124E-06
Triethylene Glycol	5.42752E-06	5.42752E-06	5.41715E-06	1.81497E-09	7.78954E-05
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	5.885	5.885	5.88554	7.12856	0.0218505
Toluene	2.11498	2.11498	2.11883	7.63849	0.00458192

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Mass Fraction	36 %	37 %	37a %	38 %	39 %	
Ethylbenzene	0.0932479	0.0932479	0.0938504	1.04811	0.000166726	
m-Xylene	0.150801	0.150801	0.151916	1.80261	0.000159824	
o-Xylene	0.0460229	0.0460229	0.0464267	0.603649	0.000118518	
Nonane	0.249245	0.249245	0.254671	6.78199	2.63908E-07	
Decane	0.177746	0.177746	0.187453	15.2171	4.95298E-08	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	36 lb/h	37 lb/h	37a lb/h	38 lb/h	39 lb/h	
Methane	4050.77	4050.77	4050.97	32.8852	0.162668	
Ethane	4029.7	4029.7	4029.9	78.9467	0.0884225	
Propane	7445.9	7445.9	7446.15	271.112	0.0594892	
n-Butane	7283.26	7283.26	7283.68	558.146	0.0271762	
i-Pentane	3875.63	3875.63	3876.33	552.727	0.00751408	
i-Butane	2189.63	2189.63	2189.72	133.29	0.00824545	
n-Pentane	8179.14	8179.14	8181.1	1424.53	0.00492184	
Cyclohexane	2851.79	2851.79	2854.07	1511.19	0.0172966	
n-Hexane	3072.01	3072.01	3074.14	1369.8	0.000911184	
n-Heptane	4788.48	4788.48	4798.89	5889.3	0.000882457	
C8	267.634	267.634	269.082	974.14	1.68762E-05	
Water	1503.65	1503.65	1503.57	1.7106	3856.38	
N2	179.14	179.14	179.147	0.788016	0.00757221	
CO2	900.166	900.166	900.215	12.2939	0.419104	
H2S	0.487069	0.487069	0.487089	0.0112972	0.000362335	
Triethylene Glycol	0.00300962	0.00300962	0.00300577	3.88951E-07	0.00300538	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	3263.3	3263.3	3265.66	1527.66	0.843043	
Toluene	1172.78	1172.78	1175.66	1636.94	0.176781	
Ethylbenzene	51.707	51.707	52.074	224.612	0.00643267	
m-Xylene	83.6206	83.6206	84.2923	386.302	0.00616638	
o-Xylene	25.5202	25.5202	25.7604	129.363	0.00457268	
Nonane	138.209	138.209	141.307	1453.39	1.01822E-05	
Decane	98.5621	98.5621	104.01	3261.04	1.91097E-06	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	36	37	37a	38	39
Temperature	°F	38.9483	38.9483	38.9795	60	60
Pressure	psig	40	40	40	25	25
Mole Fraction Vapor	%	47.6398	47.6398	47.6266	0	0
Mole Fraction Light Liquid	%	45.3542	45.3542	45.3701	100	100
Mole Fraction Heavy Liquid	%	7.00601	7.00601	7.00326	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	47.2638	47.2638	47.2788	93.0816	18.0207
Mass Density	lb/ft^3	1.03325	1.03325	1.03378	44.9472	62.3682
Molar Flow	lbmol/h	1173.22	1173.22	1173.6	230.23	214.1
Mass Flow	lb/h	55451.1	55451.1	55486.2	21430.2	3858.23
Vapor Volumetric Flow	ft^3/h	53666.9	53666.9	53673.4	476.786	61.862
Liquid Volumetric Flow	gpm	6690.93	6690.93	6691.74	59.4435	7.71267
Std Vapor Volumetric Flow	MMSCFD	10.6853	10.6853	10.6887	2.09685	1.94994
Std Liquid Volumetric Flow	sgpm	197.907	197.907	198.005	60.0731	7.71461
Compressibility		0.467572	0.467572	0.467451	0.0147407	0.00205666
Specific Gravity					0.720668	0.999992
API Gravity					64.8456	10.0012
Enthalpy	Btu/h	-6.77281E+07	-6.77281E+07	-6.77541E+07	-1.6534E+07	-2.63713E+07

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? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat CS						
Stream Properties							
Property	Units	36	37	37a	38	39	
Mass Enthalpy	Btu/lb	-1221.4	-1221.4	-1221.1	-771.53	-6835.08	
Mass Cp	Btu/(lb*°F)	0.48914	0.48914	0.48914	0.483861	0.979675	
Ideal Gas CpCv Ratio		1.12815	1.12815	1.1281	1.06403	1.32951	
Dynamic Viscosity	cP				0.465697	1.13389	
Kinematic Viscosity	cSt				0.646816	1.13498	
Thermal Conductivity	Btu/(h*ft*°F)				0.0733604	0.342	
Surface Tension	lbf/ft				0.00146785 ?	0.00510629 ?	
Net Ideal Gas Heating Value	Btu/ft^3	2324.01	2324.01	2324.77	4651.14	0.319316	
Net Liquid Heating Value	Btu/lb	18486.3	18486.3	18486.5	18798	-1052.59	
Gross Ideal Gas Heating Value	Btu/ft^3	2518.68	2518.68	2519.49	4991.25	50.6394	
Gross Liquid Heating Value	Btu/lb	20049.8	20049.8	20049.9	20184.9	7.05724	
Warnings							
ProMax:ProMax!Project!Flowsheets!Lariat CS!PStreams!36							
Warning: The temperature of 38.9483 °F is within 10 °F of ice formation.							
Warning: The temperature of 38.9483 °F is within 10 °F of hydrate formation.							
ProMax:ProMax!Project!Flowsheets!Lariat CS!PStreams!37							
Warning: The temperature of 38.9483 °F is within 10 °F of ice formation.							
Warning: The temperature of 38.9483 °F is within 10 °F of hydrate formation.							
Remarks							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	40	41	42 Breathing	42 Flash	42 Working
From Block	SPLT-101	From BTEX/FG	--	Gunbarrel	--
To Block	MIX-108	MIX-108	MIX-111	MIX-111	MIX-111

Stream Composition

Mole Fraction	40 %	41 %	42 Breathing %	42 Flash %	42 Working %
Methane	1.2023	0.0397883	17.3683 *	35.7746	17.3683 *
Ethane	1.24822	0.0744148	18.7302 *	20.279	18.7302 *
Propane	2.56583	0.254701	22.4061 *	17.4981	22.4061 *
n-Butane	3.40945	0.553995	11.8179 *	7.38348	11.8179 *
i-Pentane	2.52104	0.377529	3.82539 *	2.19998	3.82539 *
i-Butane	0.845796	0.0915584	3.95349 *	2.5913	3.95349 *
n-Pentane	6.33254	1.00329	7.43651 *	4.18806	7.43651 *
Cyclohexane	5.88456	1.26411	1.52212 *	0.802865	1.52212 *
n-Hexane	5.00427	0.42387	1.71735 *	0.907858	1.71735 *
n-Heptane	21.2059	0.607119	1.8813 *	0.950389	1.8813 *
C8	4.28832	0.0222548	0.0822487 *	0.0398558	0.0822487 *
Water	9.3836	79.087	3.54054 *	1.69787	3.54054 *
N2	0.0194889	0.000527559	0.0701896 *	0.582821	0.0701896 *
CO2	0.140742	0.0484571	2.70341 *	3.55755	2.70341 *
H2S	0.000149429	0.000565467	0.00300839 *	0.00291195	0.00300839 *
Triethylene Glycol	4.9915E-10	0.000556664	1.11132E-11 *	2.69456E-12	1.11132E-11 *
EG	0	0	0 *	0	0 *
MeOH	0	0	0 *	0	0 *
MDEA	0	0	0 *	0	0 *
2,2,4-Trimethylpentane	0	0	0 *	0	0 *
Benzene	6.24572	12.9676	2.3222 *	1.23342	2.3222 *
Toluene	6.80887	2.96809	0.508925 *	0.257842	0.508925 *
Ethylbenzene	1.16023	0.069907	0.0167303 *	0.00811737	0.0167303 *
m-Xylene	2.05275	0.102188	0.0270643 *	0.0131319	0.0270643 *
o-Xylene	0.709745	0.0364256	0.00824546 *	0.00398822	0.00824546 *
Nonane	7.55397	0.00518176	0.0360198 *	0.01673	0.0360198 *
Decane	11.4165	0.000905085	0.0227725 *	0.01021	0.0227725 *
Undecane	0	0	0 *	0	0 *
Dodecane	0	0	0 *	0	0 *

Mass Fraction	40 %	41 %	42 Breathing %	42 Flash %	42 Working %
Methane	0.216767	0.020631	6.24797	16.0694	6.24797
Ethane	0.421815	0.0723225	12.6291	17.0734	12.6291
Propane	1.27155	0.363012	22.155	21.6043	22.155
n-Butane	2.22709	1.04074	15.4026	12.0159	15.4026
i-Pentane	2.04419	0.880387	6.18892	4.44429	6.18892
i-Butane	0.552482	0.172002	5.15267	4.2171	5.15267
n-Pentane	5.13473	2.33965	12.0312	8.46049	12.0312
Cyclohexane	5.5658	3.43861	2.87252	1.89191	2.87252
n-Hexane	4.84657	1.18062	3.31858	2.19056	3.31858
n-Heptane	23.8805	1.96627	4.22711	2.66644	4.22711
C8	5.50519	0.082166	0.210675	0.127473	0.210675
Water	1.89986	46.0511	1.43028	0.856445	1.43028
N2	0.00613569	0.000477674	0.0440909	0.457146	0.0440909
CO2	0.0696114	0.0689284	2.6679	4.38381	2.6679
H2S	5.72342E-05	0.000622892	0.00229908	0.00277874	0.00229908
Triethylene Glycol	8.4243E-10	0.00270196	3.74232E-11	1.13301E-11	3.74232E-11
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	5.48289	32.7394	4.0675	2.69763	4.0675

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Mass Fraction	40 %	41 %	42 Breathing %	42 Flash %	42 Working %	
Toluene	7.0506	8.83918	1.05149	0.665193	1.05149	
Ethylbenzene	1.38432	0.239881	0.0398286	0.0241296	0.0398286	
m-Xylene	2.44922	0.350652	0.06443	0.0390357	0.06443	
o-Xylene	0.846826	0.124992	0.0196294	0.0118553	0.0196294	
Nonane	10.8883	0.0214806	0.103592	0.0600794	0.103592	
Decane	18.2555	0.00416229	0.0726557	0.0406749	0.0726557	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	40 lb/h	41 lb/h	42 Breathing lb/h	42 Flash lb/h	42 Working lb/h	
Methane	0	0.0952802	0.0436163 *	11.5838	1.21238 *	
Ethane	0	0.334007	0.0881621 *	12.3075	2.45059 *	
Propane	0	1.6765	0.154661 *	15.5737	4.29903 *	
n-Butane	0	4.80645	0.107524 *	8.66179	2.98877 *	
i-Pentane	0	4.06589	0.0432041 *	3.20371	1.20092 *	
i-Butane	0	0.794359	0.0359702 *	3.03994	0.999842 *	
n-Pentane	0	10.8052	0.0839882 *	6.09882	2.33457 *	
Cyclohexane	0	15.8806	0.0200527 *	1.3638	0.557394 *	
n-Hexane	0	5.45246	0.0231666 *	1.57909	0.643948 *	
n-Heptane	0	9.08085	0.0295089 *	1.92213	0.820243 *	
C8	0	0.379467	0.0014707 *	0.0918904	0.0408802 *	
Water	0	212.678	0.00998459 *	0.617377	0.277536 *	
N2	0	0.00220604	0.000307793 *	0.329538	0.00855554 *	
CO2	0	0.318332	0.0186243 *	3.16011	0.517688 *	
H2S	0	0.0028767	1.60496E-05 *	0.00200308	0.000446122 *	
Triethylene Glycol	0	0.0124785	2.61247E-13 *	8.1674E-12	7.26173E-12 *	
EG	0	0	0 *	0	0 *	
MeOH	0	0	0 *	0	0 *	
MDEA	0	0	0 *	0	0 *	
2,2,4-Trimethylpentane	0	0	0 *	0	0 *	
Benzene	0	151.2	0.0283947 *	1.94461	0.789271 *	
Toluene	0	40.822	0.00734032 *	0.479511	0.204035 *	
Ethylbenzene	0	1.10785	0.000278039 *	0.0173941	0.00772848 *	
m-Xylene	0	1.61942	0.000449778 *	0.0281392	0.0125022 *	
o-Xylene	0	0.577251	0.00013703 *	0.00854604	0.00380895 *	
Nonane	0	0.0992039	0.000723164 *	0.0433088	0.0201014 *	
Decane	0	0.0192227	0.0005072 *	0.0293209	0.0140984 *	
Undecane	0	0	0 *	0	0 *	
Dodecane	0	0	0 *	0	0 *	
Stream Properties						
Property	Units	40	41	42 Breathing	42 Flash	42 Working
Temperature	°F		89.0779	82.4252	59.4098	82.4252
Pressure	psig	50	75	-0.241269	0.125 *	-0.241269
Mole Fraction Vapor	%		0	100	100	100
Mole Fraction Light Liquid	%		20.9289	0	0	0
Mole Fraction Heavy Liquid	%		79.0711	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	88.9794	30.939	44.5953	35.7146	44.5953
Mass Density	lb/ft^3		55.3987	0.112527	0.0961056	0.112527
Molar Flow	lbmol/h	0	14.9271	0.0156538	2.01839	0.43512
Mass Flow	lb/h	0	461.83	0.698088	72.086	19.4043
Vapor Volumetric Flow	ft^3/h	0	8.33648	6.20373	750.07	172.441
Liquid Volumetric Flow	gpm	0	1.03935	0.773452	93.5153	21.4992
Std Vapor Volumetric Flow	MMSCFD	0	0.135951	0.000142569	0.0183827	0.00396291
Std Liquid Volumetric Flow	sgpm	0	1.02923	0.00265856	0.307358	0.0738985
Compressibility			0.00850633	0.984695	0.988726	0.984695
Specific Gravity			0.888245	1.53976	1.23313	1.53976
API Graviti			25.7116			

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	40	41	42 Breathing	42 Flash	42 Working
Enthalpy	Btu/h	0	-1.45605E+06	-771.377	-92331	-21441.5
Mass Enthalpy	Btu/lb	-876.975	-3152.78	-1104.99	-1280.85	-1104.99
Mass Cp	Btu/(lb*°F)		0.675852	0.400314	0.40131	0.400314
Ideal Gas CpCv Ratio			1.21681	1.12617	1.16208	1.12617
Dynamic Viscosity	cP		0.601494	0.00869676	0.00907045	0.00869676
Kinematic Viscosity	cSt		0.677815	4.8248	5.89195	4.8248
Thermal Conductivity	Btu/(h*ft*°F)		0.190634	0.0112185	0.012324	0.0112185
Surface Tension	lbf/ft		0.00295319	?		
Net Ideal Gas Heating Value	Btu/ft^3	4363.09	785.019	2223.17	1778.13	2223.17
Net Liquid Heating Value	Btu/lb	18427.6	9042.54	18756.4	18755.7	18756.4
Gross Ideal Gas Heating Value	Btu/ft^3	4687.81	865.211	2412.9	1937.29	2412.9
Gross Liquid Heating Value	Btu/lb	19812.8	10026.2	20371.4	20447.4	20371.4
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	43	43 Breathing	43 Flash	43 Loading	43 Working
From Block	MIX-107	PW TK	PW TK	PW TK	PW TK
To Block	PW TK	MIX-109	MIX-109	--	MIX-109

Stream Composition

Mole Fraction	43 %	43 Breathing %	43 Flash %	43 Loading %	43 Working %
Methane	0.00098045	7.38471	31.576	0	7.38471
Ethane	0.000897803	7.56547	22.3599	0	7.56547
Propane	0.000554345	4.19755	17.6716	5.46087E-14	4.19755
n-Butane	0.000213053	1.56581	7.17884	0	1.56581
i-Pentane	4.84975E-05	0.306311	2.04308	0	0.306311
i-Butane	6.36928E-05	0.412972	2.59601	0	0.412972
n-Pentane	3.16216E-05	0.123805	1.95161	0	0.123805
Cyclohexane	9.63741E-05	0.955968	1.22637	0	0.955968
n-Hexane	4.89914E-06	0.0144991	0.340568	0	0.0144991
n-Heptane	4.05272E-06	0.00929357	0.303764	0	0.00929357
C8	6.7586E-08	7.60974E-05	0.0057095	0	7.60974E-05
Water	99.988	30.2223	4.27173	64.4122	30.2223
N2	7.78319E-06	0.0430285	0.377908	0	0.0430285
CO2	0.0021325	23.8384	5.22397	0	23.8384
H2S	5.38081E-06	0.040305	0.0044022	0.0319657	0.040305
Triethylene Glycol	7.83519E-05	9.36748E-11	2.69795E-11	1.48024E-10	9.36748E-11
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.00587328	18.9975	2.3359	29.8063	18.9975
Toluene	0.000913463	3.932	0.480416	5.34216	3.932
Ethylbenzene	2.75124E-05	0.129342	0.0165722	0.162185	0.129342
m-Xylene	2.65098E-05	0.197548	0.0239622	0.147913	0.197548
o-Xylene	1.98121E-05	0.063068	0.00801076	0.0972918	0.063068
Nonane	3.6902E-08	3.90676E-05	0.00313763	0	3.90676E-05
Decane	6.21338E-09	2.11049E-06	0.000564754	0	2.11049E-06
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	43 %	43 Breathing %	43 Flash %	43 Loading %	43 Working %
Methane	0.000872821	2.79176	14.3578	0	2.79176
Ethane	0.00149806	5.3608	19.0568	0	5.3608
Propane	0.00135645	4.3618	22.0867	5.98234E-14	4.3618
n-Butane	0.00068716	2.14465	11.8265	0	2.14465
i-Pentane	0.000194168	0.520794	4.17805	0	0.520794
i-Butane	0.000205429	0.565636	4.2767	0	0.565636
n-Pentane	0.000126602	0.210496	3.99099	0	0.210496
Cyclohexane	0.000450083	1.89592	2.9254	0	1.89592
n-Hexane	2.34279E-05	0.0294441	0.831854	0	0.0294441
n-Heptane	2.25347E-05	0.0219449	0.862725	0	0.0219449
C8	4.28411E-07	0.000204842	0.0184855	0	0.000204842
Water	99.9581	12.8305	2.18125	28.8286	12.8305
N2	1.20991E-05	0.0284051	0.300063	0	0.0284051
CO2	0.00520793	24.7228	6.51639	0	24.7228
H2S	1.01762E-05	0.0323701	0.00425246	0.0270651	0.0323701
Triethylene Glycol	0.000652936	3.31504E-10	1.14838E-10	5.52251E-10	3.31504E-10
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.0254581	34.9693	5.17168	57.8414	34.9693
Toluene	0.00467047	8.53746	1.25464	12.2284	8.53746

* User Specified Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	43 %	43 Breathing %	43 Flash %	43 Loading %	43 Working %
Ethylbenzene	0.000162084	0.32359	0.0498678	0.427767	0.32359
m-Xylene	0.000156177	0.494228	0.0721053	0.390123	0.494228
o-Xylene	0.000116719	0.157784	0.0241054	0.256609	0.157784
Nonane	2.62635E-07	0.000118077	0.0114061	0	0.000118077
Decane	4.90576E-08	7.0763E-06	0.00227755	0	7.0763E-06
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	43 lb/h	43 Breathing lb/h	43 Flash lb/h	43 Loading lb/h	43 Working lb/h
Methane	0.0445798	0.00853815	0.0153283	0	0.0207134
Ethane	0.0765142	0.0163951	0.0203449	0	0.0397742
Propane	0.0692815	0.0133398	0.0235795	8.70928E-17	0.0323621
n-Butane	0.035097	0.00655905	0.0126259	0	0.0159121
i-Pentane	0.00991723	0.00159276	0.00446045	0	0.00386401
i-Butane	0.0104924	0.00172991	0.00456577	0	0.00419671
n-Pentane	0.00646628	0.000643766	0.00426075	0	0.00156176
Cyclohexane	0.0229882	0.00579837	0.00312313	0	0.0140667
n-Hexane	0.00119659	9.00498E-05	0.00088808	0	0.000218459
n-Heptane	0.00115097	6.71147E-05	0.000921038	0	0.000162819
C8	2.18813E-05	6.26475E-07	1.9735E-05	0	1.51981E-06
Water	5105.41	0.0392399	0.00232868	0.0419695	0.0951951
N2	0.000617967	8.68722E-05	0.000320345	0	0.00021075
CO2	0.265998	0.0756108	0.00695684	0	0.18343
H2S	0.000519756	9.89986E-05	4.5399E-06	3.94022E-05	0.000240168
Triethylene Glycol	0.033349	1.01385E-12	1.226E-13	8.03984E-13	2.45958E-12
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	1.30029	0.106948	0.00552124	0.0842074	0.259453
Toluene	0.238547	0.0261104	0.00133944	0.0178026	0.0633433
Ethylbenzene	0.0082785	0.000989647	5.32385E-05	0.000622756	0.00240086
m-Xylene	0.00797681	0.00151152	7.6979E-05	0.000567953	0.0036669
o-Xylene	0.00596148	0.000482558	2.57348E-05	0.000373579	0.00117067
Nonane	1.34142E-05	3.6112E-07	1.2177E-05	0	8.76068E-07
Decane	2.50564E-06	2.16417E-08	2.4315E-06	0	5.25022E-08
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	43	43 Breathing	43 Flash	43 Loading	43 Working
Temperature	°F	59.4098	82.4252	82.4252	82.4252	82.4252
Pressure	psig	0.125	-1.81595	-1.81595	-1.81595	-1.81595
Mole Fraction Vapor	%	0	55.3495	100	0	55.3495
Mole Fraction Light Liquid	%	100	16.8357	0	35.6792	16.8357
Mole Fraction Heavy Liquid	%	0	27.8147	0	64.3208	27.8147
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	18.0207	42.4352	35.2809	40.2519	42.4352
Mass Density	lb/ft^3	62.3745	0.170923	0.0787667	56.2174	0.170923
Molar Flow	lbmol/h	283.427	0.00720708	0.00302597	0.0036168	0.0174842
Mass Flow	lb/h	5107.55	0.305834	0.106759	0.145583	0.741945
Vapor Volumetric Flow	ft^3/h	81.8851	1.78931	1.35539	0.00258965	4.34082
Liquid Volumetric Flow	gpm	10.2091	0.223083	0.168983	0.000322865	0.541193
Std Vapor Volumetric Flow	MMSCFD	2.58135	6.56393E-05	2.75594E-05	3.29405E-05	0.000159239
Std Liquid Volumetric Flow	sgpm	10.2116	0.000824785	0.000448269	0.000318726	0.00200091
Compressibility		0.000768673	0.549671	0.991687	0.00158523	0.549671
Specific Gravity		1.00009		1.21816	0.901371	
API Gravity		9.99778			23.7333	
Enthalpy	Btu/h	-3.49143E+07	-581.171	-143.922	-262.077	-1409.91

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	43	43 Breathing	43 Flash	43 Loading	43 Working
Mass Enthalpy	Btu/lb	-6835.82	-1900.29	-1348.1	-1800.19	-1900.29
Mass Cp	Btu/(lb*°F)	0.979757	0.402393	0.401797	0.557473	0.402393
Ideal Gas CpCv Ratio		1.32952	1.18668	1.16386	1.18742	1.18668
Dynamic Viscosity	cP	1.14313		0.0096272	0.647533	
Kinematic Viscosity	cSt	1.1441		7.63021	0.719069	
Thermal Conductivity	Btu/(h*ft*°F)	0.341792		0.0129187	0.151678	
Surface Tension	lbf/ft	0.00511123	?		0.00270067	
Net Ideal Gas Heating Value	Btu/ft^3	0.308617	1273.05	1689.37	1318.94	1273.05
Net Liquid Heating Value	Btu/lb	-1052.89	11122.6	18019.5	11995.6	11122.6
Gross Ideal Gas Heating Value	Btu/ft^3	50.6285	1362.35	1839.94	1408.11	1362.35
Gross Liquid Heating Value	Btu/lb	6.76313	11921.3	19639.5	12836.3	11921.3
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	43a	44	45	45 Breathing	45 Flash
From Block	PW TK	BTEX/FG2	Recycle 2	Cond. TK	Cond. TK
To Block	--	MIX-108	MIX-104	MIX-110	MIX-110

Stream Composition

Mole Fraction	43a %	44 %	45 %	45 Breathing %	45 Flash %
Methane	0	0.0397883	68.7682	11.5613	13.2816
Ethane	0	0.0744148	11.9285	22.8782	20.9732
Propane	5.37951E-20	0.254701	7.17611	25.4781	24.431
n-Butane	0	0.553995	2.35559	12.1482	12.2413
i-Pentane	0	0.377529	0.58595	3.80017	3.96187
i-Butane	0	0.0915584	0.888683	4.15575	4.13031
n-Pentane	0	1.00329	1.03902	7.34566	7.76062
Cyclohexane	0	1.26411	0.118176	1.48185	1.64334
n-Hexane	0	0.42387	0.156756	1.67381	1.85451
n-Heptane	0	0.607118	0.102912	1.82714	2.11603
C8	0	0.0222548	0.00232265	0.0797788	0.096512
Water	99.9951	79.087	0.00503452	1.68471	1.5281
N2	0	0.000527559	3.79127	0.0163229	0.0684173
CO2	0	0.0484571	2.90849	2.99575	2.69811
H2S	1.82274E-06	0.000565467	0.00100189	0.0036403	0.00340015
Triethylene Glycol	7.83596E-05	0.000556664	0.000116397	6.0935E-12	8.41994E-12
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.00419375	12.9676	0.150931	2.26685	2.50421
Toluene	0.000565846	2.96809	0.019621	0.495145	0.573031
Ethylbenzene	1.60692E-05	0.069907	0.000307213	0.0162737	0.0197331
m-Xylene	9.04512E-06	0.102188	0.000486438	0.0263203	0.0319155
o-Xylene	1.42337E-05	0.0364256	0.000121842	0.00801826	0.00975448
Nonane	0	0.00518176	0.000373752	0.0348824	0.0440456
Decane	0	0.000905084	4.79156E-05	0.0220842	0.0290622
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	43a %	44 %	45 %	45 Breathing %	45 Flash %
Methane	0	0.020631	46.6226	4.02478	4.57965
Ethane	0	0.0723224	15.158	14.9281	13.5549
Propane	1.31651E-19	0.363012	13.3728	24.3796	23.1552
n-Butane	0	1.04074	5.78601	15.3221	15.2926
i-Pentane	0	0.880387	1.7866	5.94971	6.14387
i-Butane	0	0.172002	2.18286	5.24149	5.15985
n-Pentane	0	2.33965	3.16803	11.5007	12.0348
Cyclohexane	0	3.43861	0.420311	2.70627	2.97264
n-Hexane	0	1.18062	0.570882	3.13007	3.43499
n-Heptane	0	1.96627	0.435793	3.97295	4.55732
C8	0	0.082166	0.0112123	0.197754	0.236956
Water	99.978	46.0512	0.00383299	0.658612	0.591706
N2	0	0.000477673	4.48837	0.00992262	0.0411949
CO2	0	0.0689284	5.40943	2.86098	2.55222
H2S	3.44763E-06	0.000622892	0.00144301	0.00269223	0.0024907
Triethylene Glycol	0.000653083	0.00270196	0.000738704	1.98574E-11	2.71777E-11
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.0181804	32.7394	0.498233	3.8424	4.20437
Toluene	0.0028935	8.83918	0.076401	0.990004	1.13483

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	43a %	44 %	45 %	45 Breathing %	45 Flash %
Ethylbenzene	9.46804E-05	0.239881	0.00137835	0.0374913	0.0450287
m-Xylene	5.32943E-05	0.350652	0.00218246	0.0606367	0.0728275
o-Xylene	8.38657E-05	0.124992	0.000546658	0.0184725	0.0222586
Nonane	0	0.0214806	0.0020258	0.0970833	0.12142
Decane	0	0.00416229	0.000288114	0.0681858	0.0888771
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	43a lb/h	44 lb/h	45 lb/h	45 Breathing lb/h	45 Flash lb/h
Methane	0	0.0952802	0	0.118105	1.62204
Ethane	0	0.334007	0	0.438057	4.80094
Propane	6.7226E-18	1.6765	0	0.715403	8.20119
n-Butane	0	4.80645	0	0.449619	5.41639
i-Pentane	0	4.06589	0	0.174591	2.17606
i-Butane	0	0.794359	0	0.153809	1.82754
n-Pentane	0	10.8052	0	0.33748	4.26252
Cyclohexane	0	15.8806	0	0.079414	1.05286
n-Hexane	0	5.45246	0	0.0918499	1.21662
n-Heptane	0	9.08085	0	0.116584	1.61413
C8	0	0.379467	0	0.00580298	0.0839261
Water	5105.27	212.678	0	0.0193266	0.209572
N2	0	0.00220604	0	0.000291173	0.0145906
CO2	0	0.318332	0	0.0839538	0.903954
H2S	0.000176049	0.0028767	0	7.90018E-05	0.000882164
Triethylene Glycol	0.033349	0.0124785	0	5.82704E-13	9.6259E-12
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.928364	151.2	0	0.112753	1.48912
Toluene	0.147754	40.822	0	0.0290511	0.401939
Ethylbenzene	0.00483475	1.10785	0	0.00110016	0.0159484
m-Xylene	0.00272141	1.61942	0	0.00177935	0.0257943
o-Xylene	0.00428251	0.577251	0	0.000542064	0.00788363
Nonane	0	0.0992039	0	0.00284885	0.0430049
Decane	0	0.0192227	0	0.00200087	0.0314788
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	43a	44	45	45 Breathing	45 Flash
Temperature	°F	82.4252	89.0779		82.4252	82.4252
Pressure	psig	-1.81595	75	983	-1.81595	-1.81595
Mole Fraction Vapor	%	0	0		100	100
Mole Fraction Light Liquid	%	100	20.9289		0	0
Mole Fraction Heavy Liquid	%	0	79.0711		0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	18.0184	30.9389	23.6626	46.0825	46.5251
Mass Density	lb/ft^3	62.1577	55.3987		0.103535	0.104558
Molar Flow	lbmol/h	283.4	14.9271	0	0.0636779	0.761274
Mass Flow	lb/h	5106.39	461.83	0	2.93444	35.4184
Vapor Volumetric Flow	ft^3/h	82.1523	8.33648	0	28.3426	338.745
Liquid Volumetric Flow	gpm	10.2424	1.03935	0	3.53362	42.2331
Std Vapor Volumetric Flow	MMSCFD	2.58109	0.135951	0	0.000579954	0.00693339
Std Liquid Volumetric Flow	sgpm	10.2083	1.02923	0	0.0111995	0.134119
Compressibility		0.000641796	0.00850633		0.985432	0.985164
Specific Gravity		0.996616	0.888245		1.59111	1.60639
API Gravity		9.99616	25.7116			
Enthalpy	Btu/h	-3.4797E+07	-1.45605E+06	0	-3120.22	-36927.7

* User Specified Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	43a	44	45	45 Breathing	45 Flash
Mass Enthalpy	Btu/lb	-6814.4	-3152.78		-1063.31	-1042.62
Mass Cp	Btu/(lb*°F)	0.977666	0.675852		0.397527	0.397499
Ideal Gas CpCv Ratio		1.32878	1.21681		1.12249	1.1212
Dynamic Viscosity	cP	0.854915	0.601494		0.00856521	0.00853329
Kinematic Viscosity	cSt	0.858633	0.677815		5.16453	5.09495
Thermal Conductivity	Btu/(h*ft*°F)	0.352616	0.190634		0.0108429	0.0108825
Surface Tension	lbf/ft	0.00493945	0.00295319	?		
Net Ideal Gas Heating Value	Btu/ft^3	0.179695	785.018	1165.97	2311.08	2338.93
Net Liquid Heating Value	Btu/lb	-1055.78	9042.54	18626.2	18873.5	18920.7
Gross Ideal Gas Heating Value	Btu/ft^3	50.4951	865.211	1282.23	2506.82	2536.25
Gross Liquid Heating Value	Btu/lb	3.90793	10026.2	20491.1	20486	20530.7
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	45 Loading	45 Working	46	47	48
From Block	Cond. TK	Cond. TK	Cond. TK	PUMP-100	XFS6
To Block	--	MIX-110	PUMP-100	LIQ HC 2	MIX-106

Stream Composition

Mole Fraction	45 Loading %	45 Working %	46 %	47 %	48 %
Methane	0	11.5613	0	0	40.0778
Ethane	23.4217	22.8782	0.436266	0.436266	17.4732
Propane	30.2052	25.4781	2.01002	2.01002	14.5868
n-Butane	14.7718	12.1482	3.94628	3.94628	6.26983
i-Pentane	4.60342	3.80017	3.29888	3.29888	1.53794
i-Butane	5.04322	4.15575	0.902644	0.902644	1.85617
n-Pentane	8.86741	7.34566	8.57154	8.57154	3.03602
Cyclohexane	1.76278	1.48185	7.97941	7.97941	0.464216
n-Hexane	1.99101	1.67381	6.96323	6.96323	0.447388
n-Heptane	2.13935	1.82714	25.7371	25.7371	0.269672
C8	0.091928	0.0797788	3.73071	3.73071	0.00503687
Water	1.5298	1.68471	0.0193778	0.0193778	0.33318
N2	0	0.0163229	0	0	0.648112
CO2	2.16651	2.99575	0.0182051	0.0182051	11.9732
H2S	0.00398708	0.0036403	0.000108691	0.000108691	0.00864193
Triethylene Glycol	6.6846E-12	6.0935E-12	9.97568E-09	9.97568E-09	0.000171529
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	2.69943	2.26685	10.1857	10.1857	0.907702
Toluene	0.579904	0.495145	8.14476	8.14476	0.10045
Ethylbenzene	0.0187337	0.0162737	0.934043	0.934043	0.00134565
m-Xylene	0.030299	0.0263203	1.60411	1.60411	0.00192127
o-Xylene	0.00921967	0.00801826	0.537486	0.537486	0.000518545
Nonane	0.0395878	0.0348824	4.9561	4.9561	0.000631908
Decane	0.0246695	0.0220842	10.024	10.024	6.26744E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	45 Loading %	45 Working %	46 %	47 %	48 %
Methane	0	4.02478	0	0	19.1858
Ethane	13.7911	14.9281	0.138782	0.138782	15.6783
Propane	26.0818	24.3796	0.937689	0.937689	19.1938
n-Butane	16.8127	15.3221	2.42657	2.42657	10.8744
i-Pentane	6.50386	5.94971	2.51801	2.51801	3.31112
i-Butane	5.73998	5.24149	0.555036	0.555036	3.21934
n-Pentane	12.5281	11.5007	6.5426	6.5426	6.53641
Cyclohexane	2.90511	2.70627	7.10454	7.10454	1.16581
n-Hexane	3.35982	3.13007	6.34828	6.34828	1.15047
n-Heptane	4.19777	3.97295	27.2834	27.2834	0.80634
C8	0.205629	0.197754	4.50846	4.50846	0.0171689
Water	0.539681	0.658612	0.00369324	0.00369324	0.179113
N2	0	0.00992262	0	0	0.541779
CO2	1.8671	2.86098	0.00847623	0.00847623	15.724
H2S	0.00266089	0.00269223	3.91894E-05	3.91894E-05	0.00878876
Triethylene Glycol	1.96575E-11	1.98574E-11	1.58488E-08	1.58488E-08	0.000768663
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	4.12904	3.8424	8.41722	8.41722	2.11576
Toluene	1.0463	0.990004	7.93928	7.93928	0.276182

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Mass Fraction	45 Loading %	45 Working %	46 %	47 %	48 %
Ethylbenzene	0.0389462	0.0374913	1.04908	1.04908	0.00426305
m-Xylene	0.0629899	0.0606367	1.80168	1.80168	0.00608662
o-Xylene	0.0191672	0.0184725	0.603686	0.603686	0.00164276
Nonane	0.0994253	0.0970833	6.72476	6.72476	0.00241843
Decane	0.0687339	0.0681858	15.0887	15.0887	0.0002661
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	45 Loading lb/h	45 Working lb/h	46 lb/h	47 lb/h	48 lb/h
Methane	0	0.563162	0	0	37.56
Ethane	0.821076	2.0888	10.1861	10.1861	30.6933
Propane	1.55282	3.41128	68.823	68.823	37.5756
n-Butane	1.00097	2.14393	178.101	178.101	21.2887
i-Pentane	0.387217	0.832505	184.813	184.813	6.48216
i-Butane	0.341739	0.733409	40.7377	40.7377	6.30249
n-Pentane	0.745883	1.60922	480.204	480.204	12.7963
Cyclohexane	0.17296	0.378672	521.448	521.448	2.28231
n-Hexane	0.200033	0.43797	465.942	465.942	2.25226
n-Heptane	0.249921	0.555909	2002.51	2002.51	1.57857
C8	0.0122424	0.0276705	330.905	330.905	0.0336114
Water	0.0321308	0.0921554	0.271071	0.271071	0.350648
N2	0	0.00138841	0	0	1.06064
CO2	0.111161	0.400319	0.622125	0.622125	30.7829
H2S	0.00015842	0.000376706	0.00287636	0.00287636	0.0172057
Triethylene Glycol	1.17034E-12	2.77852E-12	1.16325E-06	1.16325E-06	0.00150481
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.245829	0.537643	617.794	617.794	4.14201
Toluene	0.0622934	0.138525	582.715	582.715	0.540681
Ethylbenzene	0.00231873	0.00524592	76.9991	76.9991	0.00834575
m-Xylene	0.0037502	0.00848451	132.237	132.237	0.0119158
o-Xylene	0.00114115	0.00258474	44.3084	44.3084	0.00321602
Nonane	0.00591945	0.0135843	493.574	493.574	0.00473456
Decane	0.00409218	0.0095408	1107.46	1107.46	0.000520944
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	45 Loading	45 Working	46	47	48
Temperature	°F	82.4252	82.4252	82.4252	88.7314	119.129
Pressure	psig	-1.81595	-1.81595	-1.81595	1200 *	40
Mole Fraction Vapor	%	99.9114	100	0	0	100
Mole Fraction Light Liquid	%	0.0886001	0	100	100	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	51.0669	46.0825	94.5231	94.5231	33.5115
Mass Density	lb/ft^3	0.115236	0.103535	44.5694	44.9846	0.302306
Molar Flow	lbmol/h	0.116586	0.303637	77.6493	77.6493	5.84186
Mass Flow	lb/h	5.95366	13.9924	7339.65	7339.65	195.77
Vapor Volumetric Flow	ft^3/h	51.6648	135.147	164.679	163.159	647.587
Liquid Volumetric Flow	gpm	6.44133	16.8494	20.5314	20.3419	80.7381
Std Vapor Volumetric Flow	MMSCFD	0.00106182	0.00276541	0.7072	0.7072	0.0532055
Std Liquid Volumetric Flow	sgpm	0.0218518	0.053403	20.3767	20.3767	0.833874
Compressibility		0.98113	0.985432	0.00469546	0.43369	0.976137
Specific Gravity			1.59111	0.714611	0.721269	1.15707
API Gravity				63.4538	61.0349	
Enthalpy	Btu/h	-5824.99	-14878.2	-5.40173E+06	-5.35313E+06	-313676

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat CS						
Stream Properties							
Property	Units	45 Loading	45 Working	46	47	48	
Mass Enthalpy	Btu/lb	-978.389	-1063.31	-735.966	-729.344	-1602.27	
Mass Cp	Btu/(lb*°F)	0.393821	0.397527	0.494288	0.492826	0.417274	
Ideal Gas CpCv Ratio		1.11052	1.12249	1.06108	1.06043	1.16873	
Dynamic Viscosity	cP		0.00856521	0.421852	0.45512	0.0108814	
Kinematic Viscosity	cSt		5.16453	0.590885	0.631597	2.24707	
Thermal Conductivity	Btu/(h*ft*°F)		0.0108429	0.0715755	0.0709911	0.0151378	
Surface Tension	lbf/ft			0.00143727 ?	0.00101982 ?		
Net Ideal Gas Heating Value	Btu/ft^3	2578.28	2311.08	4716.37	4716.37	1489.27	
Net Liquid Heating Value	Btu/lb	18995.1	18873.5	18770	18770	16747.9	
Gross Ideal Gas Heating Value	Btu/ft^3	2792.64	2506.82	5058.08	5058.08	1625.33	
Gross Liquid Heating Value	Btu/lb	20588.6	20486	20142.2	20142.2	18289.1	
Remarks 45 Loading: the loadout in gph should be multiplied by 10,0000 ie. 87400 check ryans onenote for more information							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat CS	

Connections

	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2
From Block	Flash Gas	MIX-111	MIX-109	MIX-110	MIX-112
To Block	MIX-106	MIX-112	MIX-112	MIX-112	--

Stream Composition

	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2
Mole Fraction	%	%	%	%	%
Methane	40.0778	32.4143	10.0257	12.7217	26.1129
Ethane	17.4732	19.9962	9.18062	21.5932	20.4107
Propane	14.5868	18.3941	5.66855	24.7717	20.2821
n-Butane	6.26983	8.19304	2.1786	12.211	9.39783
i-Pentane	1.53794	2.49672	0.495919	3.90924	2.92113
i-Butane	1.85617	2.83999	0.651301	4.13859	3.2275
n-Pentane	3.03602	4.7811	0.323352	7.62556	5.63248
Cyclohexane	0.464216	0.934174	0.985489	1.59078	1.13896
n-Hexane	0.447388	1.05564	0.050097	1.7957	1.27833
n-Heptane	0.269672	1.12034	0.0414418	2.02201	1.39277
C8	0.00503687	0.0475951	0.000691112	0.091066	0.0607687
Water	0.33318	2.03427	27.3892	1.57907	2.08641
N2	0.648112	0.489234	0.0795883	0.0514624	0.349826
CO2	11.9732	3.40162	21.8062	2.79498	3.35348
H2S	0.00864193	0.00292955	0.0363854	0.00347831	0.00335615
Triethylene Glycol	0.000171529	4.23148E-12	8.63934E-11	7.66277E-12	5.92776E-12
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.907702	1.43219	17.1785	2.42696	1.86224
Toluene	0.10045	0.30368	3.55518	0.547682	0.404495
Ethylbenzene	0.00134565	0.00968976	0.117031	0.0186072	0.0132863
m-Xylene	0.00192127	0.0156754	0.178597	0.0300945	0.0214095
o-Xylene	0.000518545	0.00476543	0.0570572	0.0091894	0.00654236
Nonane	0.000631908	0.0202516	0.000377347	0.0410633	0.0265782
Decane	6.26744E-05	0.0125034	6.35359E-05	0.0267911	0.016856
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2
Mass Fraction	%	%	%	%	%
Methane	19.1858	13.9277	3.86127	4.40022	10.4248
Ethane	15.6783	16.1043	6.62726	13.999	15.2727
Propane	19.1938	21.7244	6.0008	23.5511	22.2561
n-Butane	10.8744	12.7544	3.03992	15.3022	13.5928
i-Pentane	3.31112	4.82472	0.858978	6.08108	5.2447
i-Butane	3.21934	4.42111	0.908795	5.18625	4.66819
n-Pentane	6.53641	9.23911	0.560075	11.8621	10.1127
Cyclohexane	1.16581	2.10574	1.99112	2.8865	2.38536
n-Hexane	1.15047	2.43653	0.103642	3.33638	2.74136
n-Heptane	0.80634	3.00675	0.0996911	4.36835	3.47293
C8	0.0171689	0.145616	0.00189524	0.22428	0.172741
Water	0.179113	0.981574	11.8457	0.613341	0.935365
N2	0.541779	0.367076	0.053525	0.0310824	0.24387
CO2	15.724	4.00964	23.0393	2.65206	3.67267
H2S	0.00878876	0.00267415	0.0297701	0.00255587	0.00284638
Triethylene Glycol	0.000768663	1.70199E-11	3.11469E-10	2.48106E-11	2.21525E-11

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2	
Mass Fraction	%	%	%	%	%	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	2.11576	2.99634	32.2139	4.08732	3.61987	
Toluene	0.276182	0.749428	7.86402	1.088	0.927457	
Ethylbenzene	0.00426305	0.0275529	0.298279	0.0425913	0.0351016	
m-Xylene	0.00608662	0.0445731	0.455195	0.0688854	0.0565625	
o-Xylene	0.00164276	0.0135505	0.145423	0.0210343	0.0172845	
Nonane	0.00241843	0.0695677	0.00116187	0.11355	0.0848283	
Decane	0.0002661	0.0476486	0.000217025	0.0821862	0.0596819	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2	
Mass Flow	lb/h	lb/h	lb/h	lb/h	lb/h	
Methane	37.56	12.8398	0.0445798	2.3033	15.1876	
Ethane	30.6933	14.8463	0.0765142	7.32779	22.2506	
Propane	37.5756	20.0274	0.0692815	12.3279	32.4245	
n-Butane	21.2887	11.7581	0.035097	8.00994	19.8031	
i-Pentane	6.48216	4.44783	0.00991723	3.18315	7.6409	
i-Butane	6.30249	4.07575	0.0104924	2.71475	6.801	
n-Pentane	12.7963	8.51738	0.00646628	6.20921	14.7331	
Cyclohexane	2.28231	1.94125	0.0229882	1.51095	3.47518	
n-Hexane	2.25226	2.2462	0.00119659	1.74644	3.99383	
n-Heptane	1.57857	2.77188	0.00115097	2.28662	5.05965	
C8	0.0336114	0.134241	2.18813E-05	0.1174	0.251663	
Water	0.350648	0.904897	0.136764	0.321054	1.36272	
N2	1.06064	0.338402	0.000617967	0.0162702	0.35529	
CO2	30.7829	3.69642	0.265998	1.38823	5.35065	
H2S	0.0172057	0.00246525	0.000343707	0.00133787	0.00414683	
Triethylene Glycol	0.00150481	1.56904E-11	3.59603E-12	1.29871E-11	3.22735E-11	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	4.14201	2.76228	0.371922	2.13951	5.27371	
Toluene	0.540681	0.690886	0.0907931	0.569515	1.35119	
Ethylbenzene	0.00834575	0.0254006	0.00344375	0.0222945	0.0511389	
m-Xylene	0.0119158	0.0410912	0.0052554	0.0360582	0.0824048	
o-Xylene	0.00321602	0.012492	0.00167897	0.0110104	0.0251814	
Nonane	0.00473456	0.0641334	1.34142E-05	0.059438	0.123585	
Decane	0.000520944	0.0439265	2.50564E-06	0.0430205	0.0869495	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2
Temperature	°F	119.129	64.2975	80.1429	82.4252	67.579
Pressure	psig	40	-0.241269	-1.81595	-1.81595	-1.81595
Mole Fraction Vapor	%	100	100	60.5136	100	99.9799
Mole Fraction Light Liquid	%	0	0	14.5319	0	0.0201495
Mole Fraction Heavy Liquid	%	0	0	24.9545	0	0
Phase Mole Fraction	%	100	100	100	100	100

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat CS					
Stream Properties						
Property	Units	51	100 gunbarrel emisssions	101 pw tk emissions	102 cond tk emissions	103 combined emissions to fl 2
Molecular Weight	lb/lbmol	33.5115	37.3359	41.6541	46.3811	40.1846
Mass Density	lb/ft^3	0.302306	0.0971149	0.154185	0.104225	0.0925915
Molar Flow	lbmol/h	5.84186	2.46916	0.0277173	1.12859	3.62547
Mass Flow	lb/h	195.77	92.1884	1.15454	52.3452	145.688
Vapor Volumetric Flow	ft^3/h	647.587	949.272	7.48802	502.234	1573.45
Liquid Volumetric Flow	gpm	80.7381	118.351	0.933572	62.6162	196.17
Std Vapor Volumetric Flow	MMSCFD	0.0532055	0.0224882	0.000252438	0.0102788	0.0330194
Std Liquid Volumetric Flow	sgpm	0.833874	0.383915	0.00327396	0.198722	0.58591
Compressibility		0.976137	0.988283	0.600656	0.985251	0.987929
Specific Gravity		1.15707	1.28911		1.60142	
API Gravity						
Enthalpy	Btu/h	-313676	-114544	-2135	-54926.2	-171605
Mass Enthalpy	Btu/lb	-1602.27	-1242.5	-1849.23	-1049.31	-1177.89
Mass Cp	Btu/(lb*°F)	0.417274	0.400798	0.400739	0.397508	0.396836
Ideal Gas CpCv Ratio		1.16873	1.15418	1.18451	1.12161	1.14328
Dynamic Viscosity	cP	0.0108814	0.00900597		0.00854366	
Kinematic Viscosity	cSt	2.24707	5.78927		5.11744	
Thermal Conductivity	Btu/(h*ft*°F)	0.0151378	0.0121324		0.0108696	
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	1489.27	1859.38	1318.5	2329.87	2001.7
Net Liquid Heating Value	Btu/lb	16747.9	18755.9	11760.3	18905.4	18754.2
Gross Ideal Gas Heating Value	Btu/ft^3	1625.33	2024.12	1414.49	2526.67	2175.9
Gross Liquid Heating Value	Btu/lb	18289.1	20430.9	12635	20516.2	20399.8
Remarks						

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Connections

Stream	Connection Type	Other Block	Stream	Connection Type	Other Block
9	Inlet	MIX-103	45 Flash	Flashing Losses Stream	MIX-110
45 Working	Working Losses Stream	MIX-110	45 Breathing	Standing Losses Stream	MIX-110
45 Loading	Loading Losses Stream		46	Residual Liquid Stream	PUMP-100

Working and Standing Properties

Tank Geometry	Vertical Cylinder	Roof Type	Cone
* Shell Length	20 ft	Slope of Coned Roof	0.0625
* Shell Diameter	13.4 ft	Breather Vent Pressure	0.03 psi
* Number of Storage Tanks	4	Breather Vacuum Pressure	-0.03 psi
Maximum Fraction Fill of Tank	90 %	* Location	Roswell, NM
Average Fraction Fill of Tank	50 %	Time Frame	Year
Minimum Fraction Fill of Tank	10 %	Known Liquid Bulk Temperature?	False
* Material Category	Light Organics	Liquid Bulk Temperature	66.3494 °F
Insulation	Uninsulated	Use AP 42 Raoult's Vapor Pressure?	False
Bolted or Riveted Construction?	False	Flashing Temperature	82.4252 °F
Vapor Balanced Tank?	False	Average Daily Maximum Ambient Temperature	75.8 °F
Known Sum of Increases in Liquid Level?	False	Average Daily Minimum Ambient Temperature	47.6 °F
Sum of Increases in Liquid Level	2542.92 ft/yr	Atmospheric Pressure at Tank Location	12.88 psia
* Shell Color	Dark Green	Daily Solar Insolation	1722 Btu/(day*ft^2)
Shell Paint Condition	Average	Average Wind Speed	8.7 mph
* Roof Color	Dark Green	Include Short Term Emissions	False
Roof Paint Condition	Average		

Composition Subset Properties

Component Subset	VOCs	Species in Results	Selected Species
Atomic Basis	False	Fraction Denominator	Selected Species

Tabulated Composition Subset Properties

Index	Selected Components			
Methane	False			
Ethane	False			
Propane	True			
n-Butane	True			
i-Pentane	True			
i-Butane	True			
n-Pentane	True			
Cyclohexane	True			
n-Hexane	True			
n-Heptane	True			
C8	True			
Water	False			
N2	False			
CO2	False			
H2S	False			
Triethylene Glycol	True			
EG	True			
MeOH	True			
MDEA	True			
2,2,4-Trimethylpentane	True			

* User Specified Values

? Extrapolated or Approximate Values

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Blocks Cond. TK Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Tabulated Composition Subset Properties

Index	Selected Components			
Benzene	True			
Toluene	True			
Ethylbenzene	True			
m-Xylene	True			
o-Xylene	True			
Nonane	True			
Decane	True			
Undecane	True			
Dodecane	True			

Details Properties

Vapor Space Volume	1429.95 ft ³	Roof Outage	0.139583 ft
Vapor Density	0.0866483 lb/ft ³	Tank Roof Height	0.41875 ft
Vapor Space Expansion Factor	1 1/day	Tank Shell Radius	6.7 ft
Vented Vapor Saturation Factor	0.144097	Vapor Molecular Weight	44.9393 lb/lbmol
Vapor Space Outage	10.1396 ft	Average Vapor Temperature	534.167 °R
Average Daily Vapor Temperature Range	48.0074 °R	Average Daily Ambient Temperature	521.37 °R
Average Daily Vapor Pressure Range	3.42536 psi	Net Working Loss Throughput	358618 ft ³ /yr
Breather Vent Pressure Setting Range	0.06 psi	Working Loss Turnover (Saturation) Factor	1
Vapor Pressure at Average Daily Liquid Surface Temperature	11.0529 psia	Number of Turnovers per Year	158.933
Average Daily Liquid Surface Temperature	530.093 °R	Annual Net Throughput	255517 bbl/yr
Average Daily Ambient Temperature Range	28.2 °R	Maximum Liquid Height	18 ft
Tank Roof Surface Solar Absorptance	0.9	Minimum Liquid Height	2 ft
Tank Shell Surface Solar Absorptance	0.9	Working Loss Product Factor	1
Vapor Pressure at Maximum Liquid Surface Temperature	12.88 psia	Vent Setting Correction Factor	1
Vapor Pressure at Minimum Liquid Surface Temperature	9.45463 psia	Saturation Factor	0.5
Maximum Liquid Surface Temperature	542.095 °R	Vapor Pressure of Liquid Loaded	8.03514 psia
Minimum Liquid Surface Temperature	518.092 °R	Collection Efficiency	70 %
Liquid Height	10 ft	Annual Net Throughput Per Tank	63879.3 bbl/yr

Loading Properties

Cargo Carrier	Tank Truck or Rail Tank Car	Truck Annual Leak Test Passed	None
Land Based Mode of Operation	Submerged Loading of a Clean Cargo Tank	Overall Reduction Efficiency	0 %
* Control Efficiency	0 %		

Results Properties

Flashing Losses	122.055 ton/yr	Standing Losses per Tank	2.49072 ton/yr
Working Losses	47.5062 ton/yr	Flashing Losses per Tank	30.5137 ton/yr
Standing Losses	9.96287 ton/yr	Working and Standing Losses	57.4691 ton/yr

Blocks Cond. TK Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Results Properties

Loading Losses	21.8524 ton/yr	Working and Standing Losses per Tank	14.3673 ton/yr
Working Losses per Tank	11.8766 ton/yr	Loading Losses per Tank	5.4631 ton/yr

Tabulated Results Properties

Index	Flashing Losses Mass Flows ton/yr	Working Losses Mass Flows ton/yr	Standing Losses Mass Flows ton/yr	Loading Losses Mass Flows ton/yr
Propane	35.9212	14.9414	3.13347	6.80137
n-Butane	23.7238	9.39041	1.96933	4.38425
i-Pentane	9.53113	3.64637	0.764707	1.69601
i-Butane	8.00461	3.21233	0.673681	1.49682
n-Pentane	18.6698	7.04837	1.47816	3.26697
Cyclohexane	4.61152	1.65858	0.347833	0.757566
n-Hexane	5.32878	1.91831	0.402303	0.876142
n-Heptane	7.06988	2.43488	0.510637	1.09465
C8	0.367596	0.121197	0.0254171	0.0536218
Triethylene Glycol	4.21615E-11	1.21699E-11	2.55224E-12	5.12609E-12
EG	0	0	0	0
MeOH	0	0	0	0
MDEA	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0
Benzene	6.52234	2.35488	0.493858	1.07673
Toluene	1.76049	0.606739	0.127244	0.272845
Ethylbenzene	0.0698541	0.0229771	0.0048187	0.010156
m-Xylene	0.112979	0.0371621	0.00779354	0.0164259
o-Xylene	0.0345303	0.0113211	0.00237424	0.00499822
Nonane	0.188361	0.059499	0.012478	0.0259272
Decane	0.137877	0.0417887	0.00876381	0.0179238
Undecane	0	0	0	0
Dodecane	0	0	0	0

Index	Working and Standing Losses Mass Flows ton/yr			
Propane	18.0749			
n-Butane	11.3597			
i-Pentane	4.41108			
i-Butane	3.88601			
n-Pentane	8.52653			
Cyclohexane	2.00642			
n-Hexane	2.32061			
n-Heptane	2.94552			
C8	0.146614			
Triethylene Glycol	1.47222E-11			
EG	0			
MeOH	0			
MDEA	0			
2,2,4-Trimethylpentane	0			
Benzene	2.84873			
Toluene	0.733983			
Ethylbenzene	0.0277958			
m-Xylene	0.0449557			
o-Xylene	0.0136954			
Nonane	0.071977			
Decane	0.0505525			
Undecane	0			
Dodecane	0			

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Process Streams

Stream:45 Flash

Composition

Mole Fraction	Total %				
Methane	13.2816				
Ethane	20.9732				
Propane	24.431				
n-Butane	12.2413				
i-Pentane	3.96187				
i-Butane	4.13031				
n-Pentane	7.76062				
Cyclohexane	1.64334				
n-Hexane	1.85451				
n-Heptane	2.11603				
C8	0.096512				
Water	1.5281				
N2	0.0684173				
CO2	2.69811				
H2S	0.00340015				
Triethylene Glycol	8.41994E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	2.50421				
Toluene	0.573031				
Ethylbenzene	0.0197331				
m-Xylene	0.0319155				
o-Xylene	0.00975448				
Nonane	0.0440456				
Decane	0.0290622				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	4.57965				
Ethane	13.5549				
Propane	23.1552				
n-Butane	15.2926				
i-Pentane	6.14387				
i-Butane	5.15985				
n-Pentane	12.0348				
Cyclohexane	2.97264				
n-Hexane	3.43499				
n-Heptane	4.55732				
C8	0.236956				
Water	0.591706				
N2	0.0411949				
CO2	2.55222				
H2S	0.0024907				
Triethylene Glycol	2.71777E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	4.20437				
Toluene	1.13483				
Ethylbenzene	0.0450287				
m-Xylene	0.0728275				
o-Xylene	0.0222586				

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Blocks
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Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Fraction	Total %				
Nonane	0.12142				
Decane	0.0888771				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	1.62204				
Ethane	4.80094				
Propane	8.20119				
n-Butane	5.41639				
i-Pentane	2.17606				
i-Butane	1.82754				
n-Pentane	4.26252				
Cyclohexane	1.05286				
n-Hexane	1.21662				
n-Heptane	1.61413				
C8	0.0839261				
Water	0.209572				
N2	0.0145906				
CO2	0.903954				
H2S	0.000882164				
Triethylene Glycol	9.6259E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	1.48912				
Toluene	0.401939				
Ethylbenzene	0.0159484				
m-Xylene	0.0257943				
o-Xylene	0.00788363				
Nonane	0.0430049				
Decane	0.0314788				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	100			
Mole Fraction Light Liquid	%	0			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	46.5251			
Mass Density	lb/ft^3	0.104558			
Molar Flow	lbmol/h	0.761274			
Mass Flow	lb/h	35.4184			
Vapor Volumetric Flow	ft^3/h	338.745			
Liquid Volumetric Flow	gpm	42.2331			
Std Vapor Volumetric Flow	MMSCFD	0.00693339			
Std Liquid Volumetric Flow	sgpm	0.134119			
Compressibility		0.985164			
Specific Gravity		1.60639			
API Gravity					
Enthalpy	Btu/h	-36927.7			
Mass Enthalpy	Btu/lb	-1042.62			
Mass Cp	Btu/(lb*°F)	0.397499			
Ideal Gas CpCv Ratio		1.1212			

* User Specified Values

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Properties

Property	Units	Total				
Dynamic Viscosity	cP	0.00853329				
Kinematic Viscosity	cSt	5.09495				
Thermal Conductivity	Btu/(h*ft*°F)	0.0108825				
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	2338.93				
Net Liquid Heating Value	Btu/lb	18920.7				
Gross Ideal Gas Heating Value	Btu/ft^3	2536.25				
Gross Liquid Heating Value	Btu/lb	20530.7				

Stream:45 Working**Composition**

Mole Fraction	Total %				
Methane	11.5613				
Ethane	22.8782				
Propane	25.4781				
n-Butane	12.1482				
i-Pentane	3.80017				
i-Butane	4.15575				
n-Pentane	7.34566				
Cyclohexane	1.48185				
n-Hexane	1.67381				
n-Heptane	1.82714				
C8	0.0797788				
Water	1.68471				
N2	0.0163229				
CO2	2.99575				
H2S	0.0036403				
Triethylene Glycol	6.0935E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	2.26685				
Toluene	0.495145				
Ethylbenzene	0.0162737				
m-Xylene	0.0263203				
o-Xylene	0.00801826				
Nonane	0.0348824				
Decane	0.0220842				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	4.02478				
Ethane	14.9281				
Propane	24.3796				
n-Butane	15.3221				
i-Pentane	5.94971				
i-Butane	5.24149				
n-Pentane	11.5007				
Cyclohexane	2.70627				
n-Hexane	3.13007				
n-Heptane	3.97295				
C8	0.197754				
Water	0.658612				
N2	0.00992262				
CO2	2.86098				

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Fraction	Total %				
H2S	0.00269223				
Triethylene Glycol	1.98574E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	3.8424				
Toluene	0.990004				
Ethylbenzene	0.0374913				
m-Xylene	0.0606367				
o-Xylene	0.0184725				
Nonane	0.0970833				
Decane	0.0681858				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0.563162				
Ethane	2.0888				
Propane	3.41128				
n-Butane	2.14393				
i-Pentane	0.832505				
i-Butane	0.733409				
n-Pentane	1.60922				
Cyclohexane	0.378672				
n-Hexane	0.43797				
n-Heptane	0.555909				
C8	0.0276705				
Water	0.0921554				
N2	0.00138841				
CO2	0.400319				
H2S	0.000376706				
Triethylene Glycol	2.77852E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.537643				
Toluene	0.138525				
Ethylbenzene	0.00524592				
m-Xylene	0.00848451				
o-Xylene	0.00258474				
Nonane	0.0135843				
Decane	0.0095408				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	100			
Mole Fraction Light Liquid	%	0			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	46.0825			
Mass Density	lb/ft^3	0.103535			
Molar Flow	lbmol/h	0.303637			
Mass Flow	lb/h	13.9924			

* User Specified Values

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Properties

Property	Units	Total				
Vapor Volumetric Flow	ft ³ /h	135.147				
Liquid Volumetric Flow	gpm	16.8494				
Std Vapor Volumetric Flow	MMSCFD	0.00276541				
Std Liquid Volumetric Flow	sgpm	0.053403				
Compressibility		0.985432				
Specific Gravity		1.59111				
API Gravity						
Enthalpy	Btu/h	-14878.2				
Mass Enthalpy	Btu/lb	-1063.31				
Mass Cp	Btu/(lb*°F)	0.397527				
Ideal Gas CpCv Ratio		1.12249				
Dynamic Viscosity	cP	0.00856521				
Kinematic Viscosity	cSt	5.16453				
Thermal Conductivity	Btu/(h*ft*°F)	0.0108429				
Surface Tension	lb/ft					
Net Ideal Gas Heating Value	Btu/ft ³	2311.08				
Net Liquid Heating Value	Btu/lb	18873.5				
Gross Ideal Gas Heating Value	Btu/ft ³	2506.82				
Gross Liquid Heating Value	Btu/lb	20486				

Stream:45 Breathing

Composition

Mole Fraction	Total %				
Methane	11.5613				
Ethane	22.8782				
Propane	25.4781				
n-Butane	12.1482				
i-Pentane	3.80017				
i-Butane	4.15575				
n-Pentane	7.34566				
Cyclohexane	1.48185				
n-Hexane	1.67381				
n-Heptane	1.82714				
C8	0.0797788				
Water	1.68471				
N2	0.0163229				
CO2	2.99575				
H2S	0.0036403				
Triethylene Glycol	6.0935E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	2.26685				
Toluene	0.495145				
Ethylbenzene	0.0162737				
m-Xylene	0.0263203				
o-Xylene	0.00801826				
Nonane	0.0348824				
Decane	0.0220842				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	4.02478				
Ethane	14.9281				
Propane	24.3796				

* User Specified Values

? Extrapolated or Approximate Values

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Fraction	Total %				
n-Butane	15.3221				
i-Pentane	5.94971				
i-Butane	5.24149				
n-Pentane	11.5007				
Cyclohexane	2.70627				
n-Hexane	3.13007				
n-Heptane	3.97295				
C8	0.197754				
Water	0.658612				
N2	0.00992262				
CO2	2.86098				
H2S	0.00269223				
Triethylene Glycol	1.98574E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	3.8424				
Toluene	0.990004				
Ethylbenzene	0.0374913				
m-Xylene	0.0606367				
o-Xylene	0.0184725				
Nonane	0.0970833				
Decane	0.0681858				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0.118105				
Ethane	0.438057				
Propane	0.715403				
n-Butane	0.449619				
i-Pentane	0.174591				
i-Butane	0.153809				
n-Pentane	0.33748				
Cyclohexane	0.079414				
n-Hexane	0.0918499				
n-Heptane	0.116584				
C8	0.00580298				
Water	0.0193266				
N2	0.000291173				
CO2	0.0839538				
H2S	7.90018E-05				
Triethylene Glycol	5.82704E-13				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.112753				
Toluene	0.0290511				
Ethylbenzene	0.00110016				
m-Xylene	0.00177935				
o-Xylene	0.000542064				
Nonane	0.00284885				
Decane	0.00200087				
Undecane	0				
Dodecane	0				

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Properties

Property	Units	Total				
Temperature	°F	82.4252				
Pressure	psig	-1.81595				
Mole Fraction Vapor	%	100				
Mole Fraction Light Liquid	%	0				
Mole Fraction Heavy Liquid	%	0				
Phase Mole Fraction	%	100				
Molecular Weight	lb/lbmol	46.0825				
Mass Density	lb/ft^3	0.103535				
Molar Flow	lbmol/h	0.0636779				
Mass Flow	lb/h	2.93444				
Vapor Volumetric Flow	ft^3/h	28.3426				
Liquid Volumetric Flow	gpm	3.53362				
Std Vapor Volumetric Flow	MMSCFD	0.000579954				
Std Liquid Volumetric Flow	sgpm	0.0111995				
Compressibility		0.985432				
Specific Gravity		1.59111				
API Gravity						
Enthalpy	Btu/h	-3120.22				
Mass Enthalpy	Btu/lb	-1063.31				
Mass Cp	Btu/(lb*°F)	0.397527				
Ideal Gas CpCv Ratio		1.12249				
Dynamic Viscosity	cP	0.00856521				
Kinematic Viscosity	cSt	5.16453				
Thermal Conductivity	Btu/(h*ft*°F)	0.0108429				
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	2311.08				
Net Liquid Heating Value	Btu/lb	18873.5				
Gross Ideal Gas Heating Value	Btu/ft^3	2506.82				
Gross Liquid Heating Value	Btu/lb	20486				

Stream:45 Loading

Composition

Mole Fraction	Total %				
Methane	0				
Ethane	23.4217				
Propane	30.2052				
n-Butane	14.7718				
i-Pentane	4.60342				
i-Butane	5.04322				
n-Pentane	8.86741				
Cyclohexane	1.76278				
n-Hexane	1.99101				
n-Heptane	2.13935				
C8	0.091928				
Water	1.5298				
N2	0				
CO2	2.16651				
H2S	0.00398708				
Triethylene Glycol	6.6846E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	2.69943				
Toluene	0.579904				
Ethylbenzene	0.0187337				
m-Xylene	0.030299				
o-Xylene	0.00921967				
Nonane	0.0395878				

* User Specified Values

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Stream:45 Loading

Composition

Mole Fraction	Total %				
Decane	0.0246695				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	0				
Ethane	13.7911				
Propane	26.0818				
n-Butane	16.8127				
i-Pentane	6.50386				
i-Butane	5.73998				
n-Pentane	12.5281				
Cyclohexane	2.90511				
n-Hexane	3.35982				
n-Heptane	4.19777				
C8	0.205629				
Water	0.539681				
N2	0				
CO2	1.8671				
H2S	0.00266089				
Triethylene Glycol	1.96575E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	4.12904				
Toluene	1.0463				
Ethylbenzene	0.0389462				
m-Xylene	0.0629899				
o-Xylene	0.0191672				
Nonane	0.0994253				
Decane	0.0687339				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0				
Ethane	0.821076				
Propane	1.55282				
n-Butane	1.00097				
i-Pentane	0.387217				
i-Butane	0.341739				
n-Pentane	0.745883				
Cyclohexane	0.17296				
n-Hexane	0.200033				
n-Heptane	0.249921				
C8	0.0122424				
Water	0.0321308				
N2	0				
CO2	0.111161				
H2S	0.00015842				
Triethylene Glycol	1.17034E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Flow	Total lb/h				
Benzene	0.245829				
Toluene	0.0622934				
Ethylbenzene	0.00231873				
m-Xylene	0.0037502				
o-Xylene	0.00114115				
Nonane	0.00591945				
Decane	0.00409218				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	99.9114			
Mole Fraction Light Liquid	%	0.0886001			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	51.0669			
Mass Density	lb/ft^3	0.115236			
Molar Flow	lbmol/h	0.116586			
Mass Flow	lb/h	5.95366			
Vapor Volumetric Flow	ft^3/h	51.6648			
Liquid Volumetric Flow	gpm	6.44133			
Std Vapor Volumetric Flow	MMSCFD	0.00106182			
Std Liquid Volumetric Flow	sgpm	0.0218518			
Compressibility		0.98113			
Specific Gravity					
API Gravity					
Enthalpy	Btu/h	-5824.99			
Mass Enthalpy	Btu/lb	-978.389			
Mass Cp	Btu/(lb*°F)	0.393821			
Ideal Gas CpCv Ratio		1.11052			
Dynamic Viscosity	cP				
Kinematic Viscosity	cSt				
Thermal Conductivity	Btu/(h*ft*°F)				
Surface Tension	lb/ft				
Net Ideal Gas Heating Value	Btu/ft^3	2578.28			
Net Liquid Heating Value	Btu/lb	18995.1			
Gross Ideal Gas Heating Value	Btu/ft^3	2792.64			
Gross Liquid Heating Value	Btu/lb	20588.6			

Stream:9

Composition

Mole Fraction	Total %				
Methane	0.182254				
Ethane	0.739365				
Propane	2.33611				
n-Butane	4.06468				
i-Pentane	3.30763				
i-Butane	0.949003				
n-Pentane	8.55799				
Cyclohexane	7.88789				
n-Hexane	6.8892				
n-Heptane	25.3974				
C8	3.67857				
Water	0.0417223				
N2	0.000737262				

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Stream:9

Composition

Mole Fraction	Total %				
CO2	0.0579858				
H2S	0.000156965				
Triethylene Glycol	9.83288E-09				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	10.0745				
Toluene	8.03592				
Ethylbenzene	0.920928				
m-Xylene	1.58156				
o-Xylene	0.529918				
Nonane	4.88568				
Decane	9.88078				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	0.0311595				
Ethane	0.236931				
Propane	1.09782				
n-Butane	2.51774				
i-Pentane	2.54324				
i-Butane	0.587831				
n-Pentane	6.58027				
Cyclohexane	7.07467				
n-Hexane	6.32695				
n-Heptane	27.1211				
C8	4.47812				
Water	0.00801036				
N2	0.000220105				
CO2	0.0271964				
H2S	5.70108E-05				
Triethylene Glycol	1.57368E-08				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	8.38656				
Toluene	7.89076				
Ethylbenzene	1.04196				
m-Xylene	1.78941				
o-Xylene	0.59956				
Nonane	6.67794				
Decane	14.9824				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	2.3033				
Ethane	17.5139				
Propane	81.1509				
n-Butane	186.111				
i-Pentane	187.996				
i-Butane	43.4524				
n-Pentane	486.413				

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Flow	Total lb/h				
Cyclohexane	522.959				
n-Hexane	467.688				
n-Heptane	2004.79				
C8	331.022				
Water	0.592125				
N2	0.0162702				
CO2	2.01035				
H2S	0.00421423				
Triethylene Glycol	1.16326E-06				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	619.934				
Toluene	583.285				
Ethylbenzene	77.0214				
m-Xylene	132.273				
o-Xylene	44.3194				
Nonane	493.633				
Decane	1107.5				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total				
Temperature	°F	59.4098				
Pressure	psig	0.125				
Mole Fraction Vapor	%	0				
Mole Fraction Light Liquid	%	100				
Mole Fraction Heavy Liquid	%	0				
Phase Mole Fraction	%	100				
Molecular Weight	lb/lbmol	93.8334				
Mass Density	lb/ft^3	45.2133				
Molar Flow	lbmol/h	78.7778				
Mass Flow	lb/h	7391.99				
Vapor Volumetric Flow	ft^3/h	163.491				
Liquid Volumetric Flow	gpm	20.3833				
Std Vapor Volumetric Flow	MMSCFD	0.717479				
Std Liquid Volumetric Flow	sgpm	20.5754				
Compressibility		0.00552165				
Specific Gravity		0.724936				
API Gravity		63.7687				
Enthalpy	Btu/h	-5.54774E+06				
Mass Enthalpy	Btu/lb	-750.507				
Mass Cp	Btu/(lb*°F)	0.480671				
Ideal Gas CpCv Ratio		1.06398				
Dynamic Viscosity	cP	0.4816				
Kinematic Viscosity	cSt	0.664965				
Thermal Conductivity	Btu/(h*ft*°F)	0.0737065				
Surface Tension	lbf/ft	0.00149988	?			
Net Ideal Gas Heating Value	Btu/ft^3	4682.19				
Net Liquid Heating Value	Btu/lb	18771				
Gross Ideal Gas Heating Value	Btu/ft^3	5021.82				
Gross Liquid Heating Value	Btu/lb	20144.8				

Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Stream:46

Composition

Mole Fraction	Total %				
Methane	0				
Ethane	0.436266				
Propane	2.01002				
n-Butane	3.94628				
i-Pentane	3.29888				
i-Butane	0.902644				
n-Pentane	8.57154				
Cyclohexane	7.97941				
n-Hexane	6.96323				
n-Heptane	25.7371				
C8	3.73071				
Water	0.0193778				
N2	0				
CO2	0.0182051				
H2S	0.000108691				
Triethylene Glycol	9.97568E-09				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	10.1857				
Toluene	8.14476				
Ethylbenzene	0.934043				
m-Xylene	1.60411				
o-Xylene	0.537486				
Nonane	4.9561				
Decane	10.024				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	0				
Ethane	0.138782				
Propane	0.937689				
n-Butane	2.42657				
i-Pentane	2.51801				
i-Butane	0.555036				
n-Pentane	6.5426				
Cyclohexane	7.10454				
n-Hexane	6.34828				
n-Heptane	27.2834				
C8	4.50846				
Water	0.00369324				
N2	0				
CO2	0.00847623				
H2S	3.91894E-05				
Triethylene Glycol	1.58488E-08				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	8.41722				
Toluene	7.93928				
Ethylbenzene	1.04908				
m-Xylene	1.80168				
o-Xylene	0.603686				
Nonane	6.72476				

* User Specified Values

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Blocks
Cond. TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Fraction	Total %				
Decane	15.0887				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0				
Ethane	10.1861				
Propane	68.823				
n-Butane	178.101				
i-Pentane	184.813				
i-Butane	40.7377				
n-Pentane	480.204				
Cyclohexane	521.448				
n-Hexane	465.942				
n-Heptane	2002.51				
C8	330.905				
Water	0.271071				
N2	0				
CO2	0.622125				
H2S	0.00287636				
Triethylene Glycol	1.16325E-06				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	617.794				
Toluene	582.715				
Ethylbenzene	76.9991				
m-Xylene	132.237				
o-Xylene	44.3084				
Nonane	493.574				
Decane	1107.46				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total				
Temperature	°F	82.4252				
Pressure	psig	-1.81595				
Mole Fraction Vapor	%	0				
Mole Fraction Light Liquid	%	100				
Mole Fraction Heavy Liquid	%	0				
Phase Mole Fraction	%	100				
Molecular Weight	lb/lbmol	94.5231				
Mass Density	lb/ft^3	44.5694				
Molar Flow	lbmol/h	77.6493				
Mass Flow	lb/h	7339.65				
Vapor Volumetric Flow	ft^3/h	164.679				
Liquid Volumetric Flow	gpm	20.5314				
Std Vapor Volumetric Flow	MMSCFD	0.7072				
Std Liquid Volumetric Flow	sgpm	20.3767				
Compressibility		0.00469546				
Specific Gravity		0.714611				
API Gravity		63.4538				
Enthalpy	Btu/h	-5.40173E+06				
Mass Enthalpy	Btu/lb	-735.966				
Mass Cp	Btu/(lb*°F)	0.494288				
Ideal Gas CpCv Ratio		1.06108				
Dynamic Viscosity	cP	0.421852				

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		Blocks Cond. TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Properties					
Property	Units	Total			
Kinematic Viscosity	cSt	0.590885			
Thermal Conductivity	Btu/(h*ft*°F)	0.0715755			
Surface Tension	lbf/ft	0.00143727	?		
Net Ideal Gas Heating Value	Btu/ft^3	4716.37			
Net Liquid Heating Value	Btu/lb	18770			
Gross Ideal Gas Heating Value	Btu/ft^3	5058.08			
Gross Liquid Heating Value	Btu/lb	20142.2			
Warnings ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!Cond. TK Warning: Vapor adjusted to ensure mass balance.					
Remarks					

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Connections

Stream	Connection Type	Other Block	Stream	Connection Type	Other Block
43	Inlet	MIX-107	43 Flash	Flashing Losses Stream	MIX-109
43 Working	Working Losses Stream	MIX-109	43 Breathing	Standing Losses Stream	MIX-109
43 Loading	Loading Losses Stream		43a	Residual Liquid Stream	

Working and Standing Properties

Tank Geometry	Vertical Cylinder	Roof Type	Cone
* Shell Length	20 ft	Slope of Coned Roof	0.0625
* Shell Diameter	13.4 ft	Breather Vent Pressure	0.03 psi
* Number of Storage Tanks	4	Breather Vacuum Pressure	-0.03 psi
Maximum Fraction Fill of Tank	90 %	* Location	Roswell, NM
Average Fraction Fill of Tank	50 %	Time Frame	Year
Minimum Fraction Fill of Tank	10 %	Known Liquid Bulk Temperature?	False
* Material Category	Light Organics	Liquid Bulk Temperature	66.3494 °F
Insulation	Uninsulated	Use AP 42 Raoult's Vapor Pressure?	False
Bolted or Riveted Construction?	False	Flashing Temperature	82.4252 °F
Vapor Balanced Tank?	False	Average Daily Maximum Ambient Temperature	75.8 °F
Known Sum of Increases in Liquid Level?	False	Average Daily Minimum Ambient Temperature	47.6 °F
Sum of Increases in Liquid Level	1273.4 ft/yr	Atmospheric Pressure at Tank Location	12.88 psia
* Shell Color	Dark Green	Daily Solar Insolation	1722 Btu/(day*ft^2)
Shell Paint Condition	Average	Average Wind Speed	8.7 mph
* Roof Color	Dark Green	Include Short Term Emissions	False
Roof Paint Condition	Average		

Composition Subset Properties

Component Subset	VOCs	Species in Results	Selected Species
Atomic Basis	False	Fraction Denominator	Selected Species

Tabulated Composition Subset Properties

Index	Selected Components			
Methane	False			
Ethane	False			
Propane	True			
n-Butane	True			
i-Pentane	True			
i-Butane	True			
n-Pentane	True			
Cyclohexane	True			
n-Hexane	True			
n-Heptane	True			
C8	True			
Water	False			
N2	False			
CO2	False			
H2S	False			
Triethylene Glycol	True			
EG	True			
MeOH	True			
MDEA	True			
2,2,4-Trimethylpentane	True			

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Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Tabulated Composition Subset Properties

Index	Selected Components			
Benzene	True			
Toluene	True			
Ethylbenzene	True			
m-Xylene	True			
o-Xylene	True			
Nonane	True			
Decane	True			
Undecane	True			
Dodecane	True			

Details Properties

Vapor Space Volume	1429.95 ft ³	Roof Outage	0.139583 ft
Vapor Density	0.0683431 lb/ft ³	Tank Roof Height	0.41875 ft
Vapor Space Expansion Factor	1 1/day	Tank Shell Radius	6.7 ft
Vented Vapor Saturation Factor	0.141829	Vapor Molecular Weight	34.7955 lb/lbmol
Vapor Space Outage	10.1396 ft	Average Vapor Temperature	534.167 °R
Average Daily Vapor Temperature Range	48.0074 °R	Average Daily Ambient Temperature	521.37 °R
Average Daily Vapor Pressure Range	3.1359 psi	Net Working Loss Throughput	179583 ft ³ /yr
Breather Vent Pressure Setting Range	0.06 psi	Working Loss Turnover (Saturation) Factor	1
Vapor Pressure at Average Daily Liquid Surface Temperature	11.2593 psia	Number of Turnovers per Year	79.5876
Average Daily Liquid Surface Temperature	530.093 °R	Annual Net Throughput	127954 bbl/yr
Average Daily Ambient Temperature Range	28.2 °R	Maximum Liquid Height	18 ft
Tank Roof Surface Solar Absorptance	0.9	Minimum Liquid Height	2 ft
Tank Shell Surface Solar Absorptance	0.9	Working Loss Product Factor	1
Vapor Pressure at Maximum Liquid Surface Temperature	12.88 psia	Vent Setting Correction Factor	1
Vapor Pressure at Minimum Liquid Surface Temperature	9.7441 psia	Saturation Factor	0.5
Maximum Liquid Surface Temperature	542.095 °R	Vapor Pressure of Liquid Loaded	0.497784 psia
Minimum Liquid Surface Temperature	518.092 °R	Collection Efficiency	70 %
Liquid Height	10 ft	Annual Net Throughput Per Tank	31988.4 bbl/yr

Loading Properties

Cargo Carrier	Tank Truck or Rail Tank Car	Truck Annual Leak Test Passed	None
Land Based Mode of Operation	Submerged Loading of a Clean Cargo Tank	Overall Reduction Efficiency	0 %
* Control Efficiency	0 %		

Results Properties

Flashing Losses	0.269263 ton/yr	Standing Losses per Tank	0.181621 ton/yr
Working Losses	1.76243 ton/yr	Flashing Losses per Tank	0.0673158 ton/yr
Standing Losses	0.726483 ton/yr	Working and Standing Losses	2.48891 ton/yr

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Results Properties

Loading Losses	0.453655 ton/yr	Working and Standing Losses per Tank	0.622229 ton/yr
Working Losses per Tank	0.440608 ton/yr	Loading Losses per Tank	0.113414 ton/yr

Tabulated Results Properties

Index	Flashing Losses Mass Flows ton/yr	Working Losses Mass Flows ton/yr	Standing Losses Mass Flows ton/yr	Loading Losses Mass Flows ton/yr
Propane	0.103278	0.141746	0.0584285	3.81466E-16
n-Butane	0.0553014	0.069695	0.0287286	0
i-Pentane	0.0195368	0.0169244	0.00697631	0
i-Butane	0.0199981	0.0183816	0.00757699	0
n-Pentane	0.0186621	0.00684052	0.0028197	0
Cyclohexane	0.0136793	0.0616122	0.0253969	0
n-Hexane	0.00388979	0.00095685	0.000394418	0
n-Heptane	0.00403415	0.000713146	0.000293963	0
C8	8.64394E-05	6.65678E-06	2.74396E-06	0
Triethylene Glycol	5.36988E-13	1.07729E-11	4.44066E-12	3.52145E-12
EG	0	0	0	0
MeOH	0	0	0	0
MDEA	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0
Benzene	0.024183	1.1364	0.468431	0.368828
Toluene	0.00586675	0.277444	0.114364	0.0779752
Ethylbenzene	0.000233185	0.0105158	0.00433465	0.00272767
m-Xylene	0.000337168	0.016061	0.00662044	0.00248764
o-Xylene	0.000112718	0.00512755	0.0021136	0.00163628
Nonane	5.33355E-05	3.83718E-06	1.5817E-06	0
Decane	1.065E-05	2.2996E-07	9.47906E-08	0
Undecane	0	0	0	0
Dodecane	0	0	0	0

Index	Working and Standing Losses Mass Flows ton/yr			
Propane	0.200175			
n-Butane	0.0984237			
i-Pentane	0.0239007			
i-Butane	0.0259586			
n-Pentane	0.00966021			
Cyclohexane	0.087009			
n-Hexane	0.00135127			
n-Heptane	0.00100711			
C8	9.40074E-06			
Triethylene Glycol	1.52136E-11			
EG	0			
MeOH	0			
MDEA	0			
2,2,4-Trimethylpentane	0			
Benzene	1.60483			
Toluene	0.391807			
Ethylbenzene	0.0148504			
m-Xylene	0.0226815			
o-Xylene	0.00724116			
Nonane	5.41888E-06			
Decane	3.2475E-07			
Undecane	0			
Dodecane	0			

		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Process Streams					
Stream:43 Flash					
Composition					
Mole Fraction	Total %				
Methane	31.576				
Ethane	22.3599				
Propane	17.6716				
n-Butane	7.17884				
i-Pentane	2.04308				
i-Butane	2.59601				
n-Pentane	1.95161				
Cyclohexane	1.22637				
n-Hexane	0.340568				
n-Heptane	0.303764				
C8	0.0057095				
Water	4.27173				
N2	0.377908				
CO2	5.22397				
H2S	0.0044022				
Triethylene Glycol	2.69795E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	2.3359				
Toluene	0.480416				
Ethylbenzene	0.0165722				
m-Xylene	0.0239622				
o-Xylene	0.00801076				
Nonane	0.00313763				
Decane	0.000564754				
Undecane	0				
Dodecane	0				
Mass Fraction	Total %				
Methane	14.3578				
Ethane	19.0568				
Propane	22.0867				
n-Butane	11.8265				
i-Pentane	4.17805				
i-Butane	4.2767				
n-Pentane	3.99099				
Cyclohexane	2.9254				
n-Hexane	0.831854				
n-Heptane	0.862725				
C8	0.0184855				
Water	2.18125				
N2	0.300063				
CO2	6.51639				
H2S	0.00425246				
Triethylene Glycol	1.14838E-10				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	5.17168				
Toluene	1.25464				
Ethylbenzene	0.0498678				
m-Xylene	0.0721053				
o-Xylene	0.0241054				

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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Mass Fraction		Total %			
Nonane		0.0114061			
Decane		0.00227755			
Undecane		0			
Dodecane		0			
Mass Flow		Total lb/h			
Methane		0.0153283			
Ethane		0.0203449			
Propane		0.0235795			
n-Butane		0.0126259			
i-Pentane		0.00446045			
i-Butane		0.00456577			
n-Pentane		0.00426075			
Cyclohexane		0.00312313			
n-Hexane		0.00088808			
n-Heptane		0.000921038			
C8		1.9735E-05			
Water		0.00232868			
N2		0.000320345			
CO2		0.00695684			
H2S		4.5399E-06			
Triethylene Glycol		1.226E-13			
EG		0			
MeOH		0			
MDEA		0			
2,2,4-Trimethylpentane		0			
Benzene		0.00552124			
Toluene		0.00133944			
Ethylbenzene		5.32385E-05			
m-Xylene		7.6979E-05			
o-Xylene		2.57348E-05			
Nonane		1.2177E-05			
Decane		2.4315E-06			
Undecane		0			
Dodecane		0			
Properties					
Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	100			
Mole Fraction Light Liquid	%	0			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	35.2809			
Mass Density	lb/ft^3	0.0787667			
Molar Flow	lbmol/h	0.00302597			
Mass Flow	lb/h	0.106759			
Vapor Volumetric Flow	ft^3/h	1.35539			
Liquid Volumetric Flow	gpm	0.168983			
Std Vapor Volumetric Flow	MMSCFD	2.75594E-05			
Std Liquid Volumetric Flow	sgpm	0.000448269			
Compressibility		0.991687			
Specific Gravity		1.21816			
API Gravity					
Enthalpy	Btu/h	-143.922			
Mass Enthalpy	Btu/lb	-1348.1			
Mass Cp	Btu/(lb*°F)	0.401797			
Ideal Gas CpCv Ratio		1.16386			

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Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Properties

Property	Units	Total				
Dynamic Viscosity	cP	0.0096272				
Kinematic Viscosity	cSt	7.63021				
Thermal Conductivity	Btu/(h*ft*°F)	0.0129187				
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	1689.37				
Net Liquid Heating Value	Btu/lb	18019.5				
Gross Ideal Gas Heating Value	Btu/ft^3	1839.94				
Gross Liquid Heating Value	Btu/lb	19639.5				

Stream:43 Working

Composition

Mole Fraction	Total %				
Methane	7.38471				
Ethane	7.56547				
Propane	4.19755				
n-Butane	1.56581				
i-Pentane	0.306311				
i-Butane	0.412972				
n-Pentane	0.123805				
Cyclohexane	0.955968				
n-Hexane	0.0144991				
n-Heptane	0.00929357				
C8	7.60974E-05				
Water	30.2223				
N2	0.0430285				
CO2	23.8384				
H2S	0.040305				
Triethylene Glycol	9.36748E-11				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	18.9975				
Toluene	3.932				
Ethylbenzene	0.129342				
m-Xylene	0.197548				
o-Xylene	0.063068				
Nonane	3.90676E-05				
Decane	2.11049E-06				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	2.79176				
Ethane	5.3608				
Propane	4.3618				
n-Butane	2.14465				
i-Pentane	0.520794				
i-Butane	0.565636				
n-Pentane	0.210496				
Cyclohexane	1.89592				
n-Hexane	0.0294441				
n-Heptane	0.0219449				
C8	0.000204842				
Water	12.8305				
N2	0.0284051				
CO2	24.7228				

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Fraction	Total %				
H2S	0.0323701				
Triethylene Glycol	3.31504E-10				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	34.9693				
Toluene	8.53746				
Ethylbenzene	0.32359				
m-Xylene	0.494228				
o-Xylene	0.157784				
Nonane	0.000118077				
Decane	7.0763E-06				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0.0207134				
Ethane	0.0397742				
Propane	0.0323621				
n-Butane	0.0159121				
i-Pentane	0.00386401				
i-Butane	0.00419671				
n-Pentane	0.00156176				
Cyclohexane	0.0140667				
n-Hexane	0.000218459				
n-Heptane	0.000162819				
C8	1.51981E-06				
Water	0.0951951				
N2	0.00021075				
CO2	0.18343				
H2S	0.000240168				
Triethylene Glycol	2.45958E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.259453				
Toluene	0.0633433				
Ethylbenzene	0.00240086				
m-Xylene	0.0036669				
o-Xylene	0.00117067				
Nonane	8.76068E-07				
Decane	5.25022E-08				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	55.3495			
Mole Fraction Light Liquid	%	16.8357			
Mole Fraction Heavy Liquid	%	27.8147			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	42.4352			
Mass Density	lb/ft^3	0.170923			
Molar Flow	lbmol/h	0.0174842			
Mass Flow	lb/h	0.741945			

* User Specified Values

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		Blocks PW TK Tank Losses				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025		
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025		
Properties						
Property	Units	Total				
Vapor Volumetric Flow	ft^3/h	4.34082				
Liquid Volumetric Flow	gpm	0.541193				
Std Vapor Volumetric Flow	MMSCFD	0.000159239				
Std Liquid Volumetric Flow	sgpm	0.00200091				
Compressibility		0.549671				
Specific Gravity						
API Gravity						
Enthalpy	Btu/h	-1409.91				
Mass Enthalpy	Btu/lb	-1900.29				
Mass Cp	Btu/(lb*°F)	0.402393				
Ideal Gas CpCv Ratio		1.18668				
Dynamic Viscosity	cP					
Kinematic Viscosity	cSt					
Thermal Conductivity	Btu/(h*ft*°F)					
Surface Tension	lb/ft					
Net Ideal Gas Heating Value	Btu/ft^3	1273.05				
Net Liquid Heating Value	Btu/lb	11122.6				
Gross Ideal Gas Heating Value	Btu/ft^3	1362.35				
Gross Liquid Heating Value	Btu/lb	11921.3				
Stream:43 Breathing						
Composition						
Mole Fraction		Total %				
Methane		7.38471				
Ethane		7.56547				
Propane		4.19755				
n-Butane		1.56581				
i-Pentane		0.306311				
i-Butane		0.412972				
n-Pentane		0.123805				
Cyclohexane		0.955968				
n-Hexane		0.0144991				
n-Heptane		0.00929357				
C8		7.60974E-05				
Water		30.2223				
N2		0.0430285				
CO2		23.8384				
H2S		0.040305				
Triethylene Glycol		9.36748E-11				
EG		0				
MeOH		0				
MDEA		0				
2,2,4-Trimethylpentane		0				
Benzene		18.9975				
Toluene		3.932				
Ethylbenzene		0.129342				
m-Xylene		0.197548				
o-Xylene		0.063068				
Nonane		3.90676E-05				
Decane		2.11049E-06				
Undecane		0				
Dodecane		0				
Mass Fraction		Total %				
Methane		2.79176				
Ethane		5.3608				
Propane		4.3618				

* User Specified Values

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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Mass Fraction	Total %				
n-Butane	2.14465				
i-Pentane	0.520794				
i-Butane	0.565636				
n-Pentane	0.210496				
Cyclohexane	1.89592				
n-Hexane	0.0294441				
n-Heptane	0.0219449				
C8	0.000204842				
Water	12.8305				
N2	0.0284051				
CO2	24.7228				
H2S	0.0323701				
Triethylene Glycol	3.31504E-10				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	34.9693				
Toluene	8.53746				
Ethylbenzene	0.32359				
m-Xylene	0.494228				
o-Xylene	0.157784				
Nonane	0.000118077				
Decane	7.0763E-06				
Undecane	0				
Dodecane	0				
Mass Flow	Total lb/h				
Methane	0.00853815				
Ethane	0.0163951				
Propane	0.0133398				
n-Butane	0.00655905				
i-Pentane	0.00159276				
i-Butane	0.00172991				
n-Pentane	0.000643766				
Cyclohexane	0.00579837				
n-Hexane	9.00498E-05				
n-Heptane	6.71147E-05				
C8	6.26475E-07				
Water	0.0392399				
N2	8.68722E-05				
CO2	0.0756108				
H2S	9.89986E-05				
Triethylene Glycol	1.01385E-12				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.106948				
Toluene	0.0261104				
Ethylbenzene	0.000989647				
m-Xylene	0.00151152				
o-Xylene	0.000482558				
Nonane	3.6112E-07				
Decane	2.16417E-08				
Undecane	0				
Dodecane	0				

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Properties

Property	Units	Total				
Temperature	°F	82.4252				
Pressure	psig	-1.81595				
Mole Fraction Vapor	%	55.3495				
Mole Fraction Light Liquid	%	16.8357				
Mole Fraction Heavy Liquid	%	27.8147				
Phase Mole Fraction	%	100				
Molecular Weight	lb/lbmol	42.4352				
Mass Density	lb/ft^3	0.170923				
Molar Flow	lbmol/h	0.00720708				
Mass Flow	lb/h	0.305834				
Vapor Volumetric Flow	ft^3/h	1.78931				
Liquid Volumetric Flow	gpm	0.223083				
Std Vapor Volumetric Flow	MMSCFD	6.56393E-05				
Std Liquid Volumetric Flow	sgpm	0.000824785				
Compressibility		0.549671				
Specific Gravity						
API Gravity						
Enthalpy	Btu/h	-581.171				
Mass Enthalpy	Btu/lb	-1900.29				
Mass Cp	Btu/(lb*°F)	0.402393				
Ideal Gas CpCv Ratio		1.18668				
Dynamic Viscosity	cP					
Kinematic Viscosity	cSt					
Thermal Conductivity	Btu/(h*ft*°F)					
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	1273.05				
Net Liquid Heating Value	Btu/lb	11122.6				
Gross Ideal Gas Heating Value	Btu/ft^3	1362.35				
Gross Liquid Heating Value	Btu/lb	11921.3				

Stream:43 Loading

Composition

Mole Fraction	Total %				
Methane	0				
Ethane	0				
Propane	5.46087E-14				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	64.4122				
N2	0				
CO2	0				
H2S	0.0319657				
Triethylene Glycol	1.48024E-10				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	29.8063				
Toluene	5.34216				
Ethylbenzene	0.162185				
m-Xylene	0.147913				
o-Xylene	0.0972918				
Nonane	0				

* User Specified Values

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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Stream:43 Loading					
Composition					
Mole Fraction	Total %				
Decane	0				
Undecane	0				
Dodecane	0				
Mass Fraction	Total %				
Methane	0				
Ethane	0				
Propane	5.98234E-14				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	28.8286				
N2	0				
CO2	0				
H2S	0.0270651				
Triethylene Glycol	5.52251E-10				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	57.8414				
Toluene	12.2284				
Ethylbenzene	0.427767				
m-Xylene	0.390123				
o-Xylene	0.256609				
Nonane	0				
Decane	0				
Undecane	0				
Dodecane	0				
Mass Flow	Total lb/h				
Methane	0				
Ethane	0				
Propane	8.70928E-17				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	0.0419695				
N2	0				
CO2	0				
H2S	3.94022E-05				
Triethylene Glycol	8.03984E-13				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				

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Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Mass Flow	Total lb/h				
Benzene	0.0842074				
Toluene	0.0178026				
Ethylbenzene	0.000622756				
m-Xylene	0.000567953				
o-Xylene	0.000373579				
Nonane	0				
Decane	0				
Undecane	0				
Dodecane	0				

Properties

Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	0			
Mole Fraction Light Liquid	%	35.6792			
Mole Fraction Heavy Liquid	%	64.3208			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	40.2519			
Mass Density	lb/ft^3	56.2174			
Molar Flow	lbmol/h	0.0036168			
Mass Flow	lb/h	0.145583			
Vapor Volumetric Flow	ft^3/h	0.00258965			
Liquid Volumetric Flow	gpm	0.000322865			
Std Vapor Volumetric Flow	MMSCFD	3.29405E-05			
Std Liquid Volumetric Flow	sgpm	0.000318726			
Compressibility		0.00158523			
Specific Gravity		0.901371			
API Gravity		23.7333			
Enthalpy	Btu/h	-262.077			
Mass Enthalpy	Btu/lb	-1800.19			
Mass Cp	Btu/(lb*°F)	0.557473			
Ideal Gas CpCv Ratio		1.18742			
Dynamic Viscosity	cP	0.647533			
Kinematic Viscosity	cSt	0.719069			
Thermal Conductivity	Btu/(h*ft*°F)	0.151678			
Surface Tension	lbf/ft	0.00270067			
Net Ideal Gas Heating Value	Btu/ft^3	1318.94			
Net Liquid Heating Value	Btu/lb	11995.6			
Gross Ideal Gas Heating Value	Btu/ft^3	1408.11			
Gross Liquid Heating Value	Btu/lb	12836.3			

Stream:43a**Composition**

Mole Fraction	Total %				
Methane	0				
Ethane	0				
Propane	5.37951E-20				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	99.9951				
N2	0				

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Stream:43a

Composition

Mole Fraction	Total %				
CO2	0				
H2S	1.82274E-06				
Triethylene Glycol	7.83596E-05				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.00419375				
Toluene	0.000565846				
Ethylbenzene	1.60692E-05				
m-Xylene	9.04512E-06				
o-Xylene	1.42337E-05				
Nonane	0				
Decane	0				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	0				
Ethane	0				
Propane	1.31651E-19				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	99.978				
N2	0				
CO2	0				
H2S	3.44763E-06				
Triethylene Glycol	0.000653083				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.0181804				
Toluene	0.0028935				
Ethylbenzene	9.46804E-05				
m-Xylene	5.32943E-05				
o-Xylene	8.38657E-05				
Nonane	0				
Decane	0				
Undecane	0				
Dodecane	0				

Mass Flow	Total lb/h				
Methane	0				
Ethane	0				
Propane	6.7226E-18				
n-Butane	0				
i-Pentane	0				
i-Butane	0				
n-Pentane	0				

* User Specified Values

? Extrapolated or Approximate Values

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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Mass Flow	Total lb/h				
Cyclohexane	0				
n-Hexane	0				
n-Heptane	0				
C8	0				
Water	5105.27				
N2	0				
CO2	0				
H2S	0.000176049				
Triethylene Glycol	0.033349				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.928364				
Toluene	0.147754				
Ethylbenzene	0.00483475				
m-Xylene	0.00272141				
o-Xylene	0.00428251				
Nonane	0				
Decane	0				
Undecane	0				
Dodecane	0				
Properties					
Property	Units	Total			
Temperature	°F	82.4252			
Pressure	psig	-1.81595			
Mole Fraction Vapor	%	0			
Mole Fraction Light Liquid	%	100			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	18.0184			
Mass Density	lb/ft^3	62.1577			
Molar Flow	lbmol/h	283.4			
Mass Flow	lb/h	5106.39			
Vapor Volumetric Flow	ft^3/h	82.1523			
Liquid Volumetric Flow	gpm	10.2424			
Std Vapor Volumetric Flow	MMSCFD	2.58109			
Std Liquid Volumetric Flow	sgpm	10.2083			
Compressibility		0.000641796			
Specific Gravity		0.996616			
API Gravity		9.99616			
Enthalpy	Btu/h	-3.4797E+07			
Mass Enthalpy	Btu/lb	-6814.4			
Mass Cp	Btu/(lb*°F)	0.977666			
Ideal Gas CpCv Ratio		1.32878			
Dynamic Viscosity	cP	0.854915			
Kinematic Viscosity	cSt	0.858633			
Thermal Conductivity	Btu/(h*ft*°F)	0.352616			
Surface Tension	lbf/ft	0.00493945			
Net Ideal Gas Heating Value	Btu/ft^3	0.179695			
Net Liquid Heating Value	Btu/lb	-1055.78			
Gross Ideal Gas Heating Value	Btu/ft^3	50.4951			
Gross Liquid Heating Value	Btu/lb	3.90793			

Blocks
PW TK
Tank Losses

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	Modified: 8:45 AM, 8/27/2025
Flowsheet:	Lariat CS	Status: Solved 8:53 AM, 8/27/2025

Stream:43

Composition

Mole Fraction	Total %				
Methane	0.00098045				
Ethane	0.000897803				
Propane	0.000554345				
n-Butane	0.000213053				
i-Pentane	4.84975E-05				
i-Butane	6.36928E-05				
n-Pentane	3.16216E-05				
Cyclohexane	9.63741E-05				
n-Hexane	4.89914E-06				
n-Heptane	4.05272E-06				
C8	6.7586E-08				
Water	99.988				
N2	7.78319E-06				
CO2	0.0021325				
H2S	5.38081E-06				
Triethylene Glycol	7.83519E-05				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.00587328				
Toluene	0.000913463				
Ethylbenzene	2.75124E-05				
m-Xylene	2.65098E-05				
o-Xylene	1.98121E-05				
Nonane	3.6902E-08				
Decane	6.21338E-09				
Undecane	0				
Dodecane	0				

Mass Fraction	Total %				
Methane	0.000872821				
Ethane	0.00149806				
Propane	0.00135645				
n-Butane	0.00068716				
i-Pentane	0.000194168				
i-Butane	0.000205429				
n-Pentane	0.000126602				
Cyclohexane	0.000450083				
n-Hexane	2.34279E-05				
n-Heptane	2.25347E-05				
C8	4.28411E-07				
Water	99.9581				
N2	1.20991E-05				
CO2	0.00520793				
H2S	1.01762E-05				
Triethylene Glycol	0.000652936				
EG	0				
MeOH	0				
MDEA	0				
2,2,4-Trimethylpentane	0				
Benzene	0.0254581				
Toluene	0.00467047				
Ethylbenzene	0.000162084				
m-Xylene	0.000156177				
o-Xylene	0.000116719				
Nonane	2.62635E-07				

* User Specified Values

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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Mass Fraction		Total %			
Decane		4.90576E-08			
Undecane		0			
Dodecane		0			
Mass Flow		Total lb/h			
Methane		0.0445798			
Ethane		0.0765142			
Propane		0.0692815			
n-Butane		0.035097			
i-Pentane		0.00991723			
i-Butane		0.0104924			
n-Pentane		0.00646628			
Cyclohexane		0.0229882			
n-Hexane		0.00119659			
n-Heptane		0.00115097			
C8		2.18813E-05			
Water		5105.41			
N2		0.000617967			
CO2		0.265998			
H2S		0.000519756			
Triethylene Glycol		0.033349			
EG		0			
MeOH		0			
MDEA		0			
2,2,4-Trimethylpentane		0			
Benzene		1.30029			
Toluene		0.238547			
Ethylbenzene		0.0082785			
m-Xylene		0.00797681			
o-Xylene		0.00596148			
Nonane		1.34142E-05			
Decane		2.50564E-06			
Undecane		0			
Dodecane		0			
Properties					
Property	Units	Total			
Temperature	°F	59.4098			
Pressure	psig	0.125			
Mole Fraction Vapor	%	0			
Mole Fraction Light Liquid	%	100			
Mole Fraction Heavy Liquid	%	0			
Phase Mole Fraction	%	100			
Molecular Weight	lb/lbmol	18.0207			
Mass Density	lb/ft^3	62.3745			
Molar Flow	lbmol/h	283.427			
Mass Flow	lb/h	5107.55			
Vapor Volumetric Flow	ft^3/h	81.8851			
Liquid Volumetric Flow	gpm	10.2091			
Std Vapor Volumetric Flow	MMSCFD	2.58135			
Std Liquid Volumetric Flow	sgpm	10.2116			
Compressibility		0.000768673			
Specific Gravity		1.00009			
API Gravity		9.99778			
Enthalpy	Btu/h	-3.49143E+07			
Mass Enthalpy	Btu/lb	-6835.82			
Mass Cp	Btu/(lb*°F)	0.979757			
Ideal Gas CpCv Ratio		1.32952			
Dynamic Viscosity	cP	1.14313			

* User Specified Values

? Extrapolated or Approximate Values

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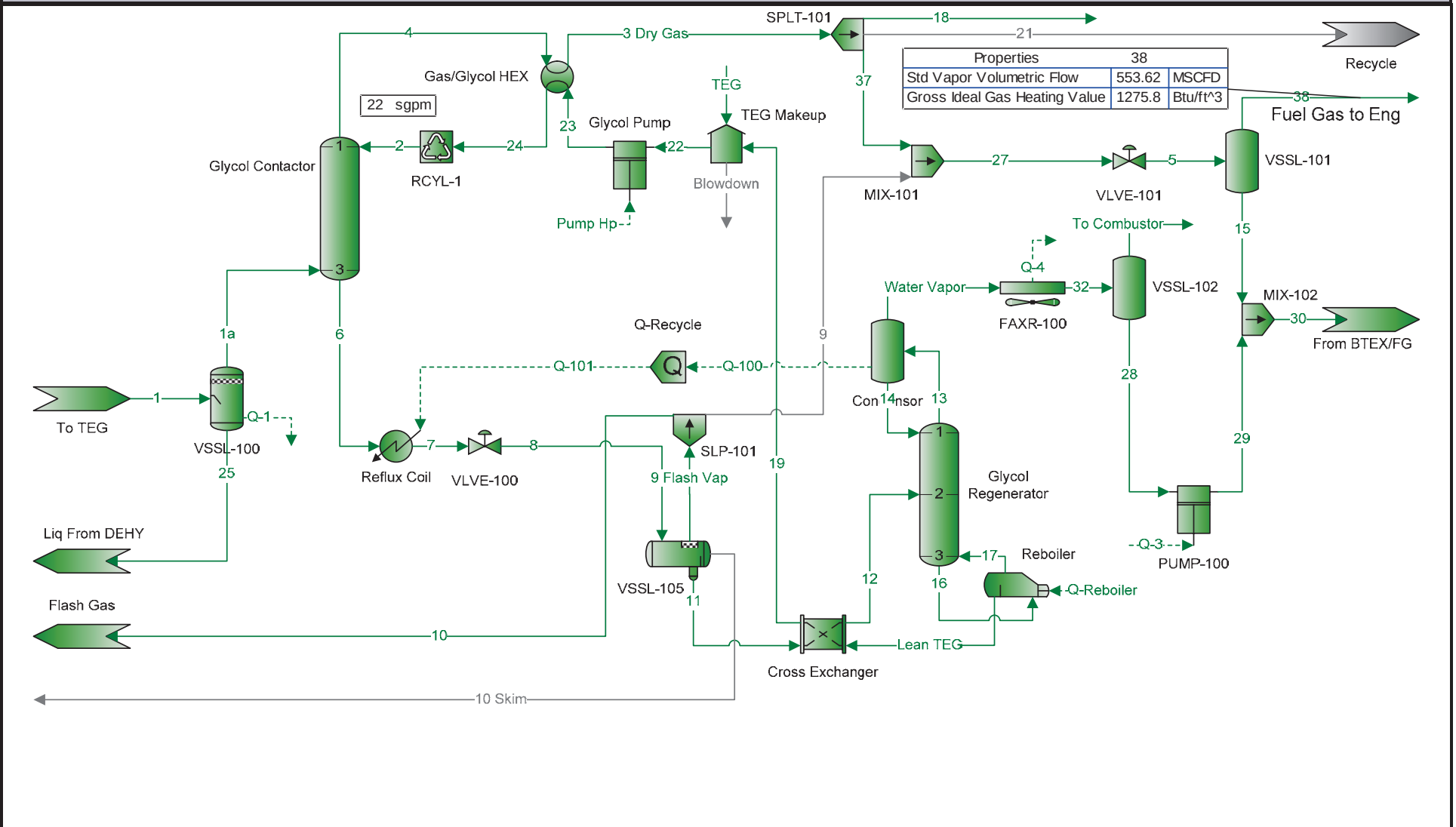
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		Blocks PW TK Tank Losses			
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station			Modified: 8:45 AM, 8/27/2025	
Flowsheet:	Lariat CS			Status: Solved 8:53 AM, 8/27/2025	
Properties					
Property	Units	Total			
Kinematic Viscosity	cSt	1.1441			
Thermal Conductivity	Btu/(h*ft*°F)	0.341792			
Surface Tension	lb/ft	0.00511123 ?			
Net Ideal Gas Heating Value	Btu/ft^3	0.308617			
Net Liquid Heating Value	Btu/lb	-1052.89			
Gross Ideal Gas Heating Value	Btu/ft^3	50.6285			
Gross Liquid Heating Value	Btu/lb	6.76313			
Warnings ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!PW TK Warning: Vapor adjusted to ensure mass balance.					
Remarks					

Lariat Dehy Plant Schematic

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	



Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	Blowdown	Lean TEG	TEG	To Combustor	Water Vapor
From Block	TEG Makeup	Reboiler	--	VSSL-102	Condensor
To Block	--	Cross Exchanger	TEG Makeup	--	FAXR-100

Stream Composition

Mole Fraction	Blowdown %	Lean TEG %	TEG %	To Combustor %	Water Vapor %
Methane	5.7522E-09	5.7522E-09	0 *	6.29426	0.502243
Ethane	9.30944E-08	9.30944E-08	0 *	10.2802	0.845764
Propane	5.84434E-07	5.84434E-07	0 *	16.2356	1.44315
n-Butane	2.07385E-06	2.07385E-06	0 *	11.6156	1.32592
i-Pentane	2.23564E-06	2.23564E-06	0 *	3.22746	0.536895
i-Butane	2.14823E-07	2.14823E-07	0 *	2.56203	0.260037
n-Pentane	7.24629E-06	7.24629E-06	0 *	6.65249	1.29429
Cyclohexane	0.000255766	0.000255766	0 *	1.74782	1.23701
n-Hexane	2.11168E-05	2.11168E-05	0 *	0.8732	0.384446
n-Heptane	2.33138E-05	2.33138E-05	0 *	0.343457	0.456784
C8	1.79608E-06	1.79608E-06	0 *	0.00422744	0.0154215
Water	4.57124	4.57124	0.827516 *	5.59948	74.0032
N2	1.85436E-12	1.85436E-12	0 *	0.0241612	0.00191889
CO2	8.00434E-07	8.00434E-07	0 *	19.5192	1.58893
H2S	9.46427E-08	9.46427E-08	0 *	0.0645329	0.00563951
Triethylene Glycol	95.3891	95.3891	99.1725 *	7.60706E-11	8.27203E-05
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0.0228302	0.0228302	0 *	13.9414	13.0883
Toluene	0.0138262	0.0138262	0 *	0.994743	2.81248
Ethylbenzene	0.00080361	0.00080361	0 *	0.00501687	0.0646512
m-Xylene	0.00120204	0.00120204	0 *	0.0103776	0.0946328
o-Xylene	0.000712724	0.000712724	0 *	0.00418772	0.0338921
Nonane	1.08412E-06	1.08412E-06	0 *	0.000529842	0.00365304
Decane	5.58764E-07	5.58764E-07	0 *	3.60185E-05	0.00067296
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

Mass Fraction	Blowdown %	Lean TEG %	TEG %	To Combustor %	Water Vapor %
Methane	6.40359E-10	6.40359E-10	0 *	1.99332	0.250838
Ethane	1.9425E-08	1.9425E-08	0 *	6.10216	0.791728
Propane	1.78834E-07	1.78834E-07	0 *	14.1327	1.98114
n-Butane	8.36446E-07	8.36446E-07	0 *	13.3273	2.39921
i-Pentane	1.11931E-06	1.11931E-06	0 *	4.59675	1.20594
i-Butane	8.66444E-08	8.66444E-08	0 *	2.9396	0.470528
n-Pentane	3.62797E-06	3.62797E-06	0 *	9.4749	2.90714
Cyclohexane	0.00014937	0.00014937	0 *	2.90377	3.24103
n-Hexane	1.26279E-05	1.26279E-05	0 *	1.48545	1.0314
n-Heptane	1.62109E-05	1.62109E-05	0 *	0.679376	1.42493
C8	1.4237E-06	1.4237E-06	0 *	0.00953266	0.0548416
Water	0.57147	0.57147	0.1 *	1.99136	41.5048
N2	3.60478E-13	3.60478E-13	0 *	0.0133612	0.00167349
CO2	2.4445E-07	2.4445E-07	0 *	16.9579	2.177
H2S	2.23829E-08	2.23829E-08	0 *	0.0434164	0.00598356
Triethylene Glycol	99.4051	99.4051	99.9 *	2.25512E-10	0.000386733
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0.012375	0.012375	0 *	21.4973	31.8279

* User Specified Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Mass Fraction	Blowdown %	Lean TEG %	TEG %	To Combustor %	Water Vapor %
Toluene	0.00884019	0.00884019	0 *	1.80931	8.06748
Ethylbenzene	0.000592032	0.000592032	0 *	0.0105142	0.213681
m-Xylene	0.000885565	0.000885565	0 *	0.021749	0.312774
o-Xylene	0.000525075	0.000525075	0 *	0.00877649	0.112018
Nonane	9.6487E-07	9.6487E-07	0 *	0.00134148	0.014586
Decane	5.51691E-07	5.51691E-07	0 *	0.000101166	0.00298089
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

Mass Flow	Blowdown lb/h	Lean TEG lb/h	TEG lb/h	To Combustor lb/h	Water Vapor lb/h
Methane	0	7.95321E-08	0 *	1.28521	1.2931
Ethane	0	2.41257E-06	0 *	3.93444	4.08145
Propane	0	2.2211E-05	0 *	9.11222	10.213
n-Butane	0	0.000103886	0 *	8.59295	12.3682
i-Pentane	0	0.000139017	0 *	2.96381	6.21676
i-Butane	0	1.07612E-05	0 *	1.89534	2.42562
n-Pentane	0	0.000450591	0 *	6.10905	14.9867
Cyclohexane	0	0.0185517	0 *	1.87224	16.7079
n-Hexane	0	0.00156837	0 *	0.95776	5.31697
n-Heptane	0	0.00201339	0 *	0.438035	7.34569
C8	0	0.000176822	0 *	0.00614628	0.282714
Water	0	70.9762	0.00134148 *	1.28395	213.962
N2	0	4.47711E-11	0 *	0.00861479	0.00862704
CO2	0	3.03605E-05	0 *	10.9338	11.2227
H2S	0	2.77994E-06	0 *	0.0279932	0.0308459
Triethylene Glycol	0	12346	1.34013 *	1.45401E-10	0.00199365
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0	1.53696	0 *	13.8606	164.076
Toluene	0	1.09795	0 *	1.16657	41.5887
Ethylbenzene	0	0.0735299	0 *	0.00677914	1.10155
m-Xylene	0	0.109986	0 *	0.0140229	1.61238
o-Xylene	0	0.0652139	0 *	0.00565874	0.577464
Nonane	0	0.000119836	0 *	0.000864931	0.0751924
Decane	0	6.85196E-05	0 *	6.52281E-05	0.0153668
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

Stream Properties

Property	Units	Blowdown	Lean TEG	TEG	To Combustor	Water Vapor
Temperature	°F		445	100 *	89.7106	193.425
Pressure	psig	1.88	2.38	12.18 *	-2.32	-1.12
Mole Fraction Vapor	%		0	0	100	100
Mole Fraction Light Liquid	%		100	100	0	0
Mole Fraction Heavy Liquid	%		0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	144.106	144.106	149.079	50.6569	32.1213
Mass Density	lb/ft^3		56.2397	69.4615	0.107825	0.0627957
Molar Flow	lbmol/h	0	86.1862	0.0089984	1.2728	16.0489
Mass Flow	lb/h	0	12419.9	1.34148	64.4761	515.511
Vapor Volumetric Flow	ft^3/h	0	220.839	0.0193125	597.972	8209.34
Liquid Volumetric Flow	gpm	0	27.5332	0.0024078	74.5524	1023.5
Std Vapor Volumetric Flow	MMSCFD	0	0.784951	8.1954E-05	0.0115922	0.146167
Std Liquid Volumetric Flow	sgpm	0	21.9976	0.00237435	0.203957	1.20014
Compressibility			0.00450682	0.00960377	0.986195	0.990817
Specific Gravity			0.901728	1.11372	1.74905	1.10906
API Gravity			-6.8439	-7.0854		

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Stream Properties

Property	Units	Blowdown	Lean TEG	TEG	To Combustor	Water Vapor
Enthalpy	Btu/h	0	-2.61985E+07	-3085.51	-79501.3	-1.24302E+06
Mass Enthalpy	Btu/lb	-2223.5	-2109.39	-2300.09	-1233.04	-2411.24
Mass Cp	Btu/(lb*°F)		0.670517	0.542648	0.341997	0.394022
Ideal Gas CpCv Ratio			1.02747	1.03561	1.13043	1.18736
Dynamic Viscosity	cP		0.567739	21.1048	0.00942341	0.011959
Kinematic Viscosity	cSt		0.630209	18.9677	5.45594	11.889
Thermal Conductivity	Btu/(h*ft*°F)		0.102976 ?	0.112147	0.00990264	0.0125344
Surface Tension	lbf/ft		0.00184181 ?	0.00300898		
Net Ideal Gas Heating Value	Btu/ft^3	3604.41	3604.41	3745.75	2065.92	860.097
Net Liquid Heating Value	Btu/lb	9227.54	9227.54	9274.43	15309	9618.63
Gross Ideal Gas Heating Value	Btu/ft^3	3942.38	3942.38	4095.08	2221.54	944.437
Gross Liquid Heating Value	Btu/lb	10117.5	10117.5	10163.6	16475.2	10615.1

Remarks

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	1	1a	2	3 Dry Gas	4
From Block	To TEG	VSSL-100	RCYL-1	Gas/Glycol HEX	Glycol Contactor
To Block	VSSL-100	Glycol Contactor	Glycol Contactor	SPLT-101	Gas/Glycol HEX

Stream Composition

Mole Fraction	1 %	1a %	2 %	3 Dry Gas %	4 %
Methane	68.5978	68.6039	0	68.7682	68.7682
Ethane	11.9096	11.9096	9.33971E-08	11.9285	11.9285
Propane	7.1709	7.16977	5.86244E-07	7.17611	7.17611
n-Butane	2.35765	2.35641	2.07903E-06	2.35559	2.35559
i-Pentane	0.58716	0.586572	2.23944E-06	0.58595	0.58595
i-Butane	0.888454	0.888106	2.15415E-07	0.888683	0.888683
n-Pentane	1.04234	1.04107	7.25695E-06	1.03902	1.03902
Cyclohexane	0.121178	0.120776	0.000256239	0.118176	0.118176
n-Hexane	0.157873	0.157453	2.11732E-05	0.156756	0.156756
n-Heptane	0.104347	0.103778	2.3425E-05	0.102912	0.102912
C8	0.00237837	0.00235207	1.818E-06	0.00232265	0.00232265
Water	0.159827	0.159835	4.56954	0.00503452	0.00503452
N2	3.78054	3.78097	0	3.79127	3.79127
CO2	2.91247	2.91262	8.02889E-07	2.90849	2.90849
H2S	0.00101741	0.00101739	9.49092E-08	0.00100189	0.00100189
Triethylene Glycol	2.44097E-20	2.24647E-20	95.3906	0.000116397	0.000116397
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.179016	0.178524	0.0228613	0.150931	0.150931
Toluene	0.0256655	0.0255146	0.0138614	0.019621	0.019621
Ethylbenzene	0.000447419	0.000442105	0.000827928	0.000307213	0.000307213
m-Xylene	0.000692143	0.000683647	0.00124616	0.000486438	0.000486438
o-Xylene	0.000194618	0.000192072	0.000765893	0.000121842	0.000121842
Nonane	0.000389734	0.000380795	1.27169E-06	0.000373752	0.000373752
Decane	5.12975E-05	4.92237E-05	1.32067E-06	4.79156E-05	4.79156E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	1 %	1a %	2 %	3 Dry Gas %	4 %
Methane	46.4512	46.4621	0	46.6226	46.6226
Ethane	15.1159	15.118	1.94879E-08	15.158	15.158
Propane	13.347	13.3469	1.79385E-07	13.3728	13.3728
n-Butane	5.78412	5.78193	8.38521E-07	5.78601	5.78601
i-Pentane	1.78814	1.78661	1.12119E-06	1.7866	1.7866
i-Butane	2.17968	2.17915	8.68819E-08	2.18286	2.18286
n-Pentane	3.17433	3.17094	3.63325E-06	3.16803	3.16803
Cyclohexane	0.430471	0.429104	0.000149644	0.420311	0.420311
n-Hexane	0.574258	0.572814	1.26614E-05	0.570882	0.570882
n-Heptane	0.441338	0.438996	1.6288E-05	0.435793	0.435793
C8	0.0114675	0.0113424	1.44105E-06	0.0112123	0.0112123
Water	0.121537	0.12156	0.571249	0.00383299	0.00383299
N2	4.47029	4.47145	0	4.48837	4.48837
CO2	5.41033	5.41141	2.45196E-07	5.40943	5.40943
H2S	0.00146361	0.00146378	2.24456E-08	0.00144301	0.00144301
Triethylene Glycol	1.54729E-19	1.4242E-19	99.4052	0.000738704	0.000738704
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Mass Fraction	1 %	1a %	2 %	3 Dry Gas %	4 %
Benzene	0.590236	0.588699	0.0123917	0.498233	0.498233
Toluene	0.0998176	0.099245	0.0088626	0.076401	0.076401
Ethylbenzene	0.00200499	0.00198146	0.000609939	0.00137835	0.00137835
m-Xylene	0.00310165	0.00306402	0.000918051	0.00218246	0.00218246
o-Xylene	0.000872128	0.000860842	0.000564237	0.000546658	0.000546658
Nonane	0.00210989	0.00206179	1.1318E-06	0.0020258	0.0020258
Decane	0.000308078	0.000295667	1.30394E-06	0.000288114	0.000288114
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	1 lb/h	1a lb/h	2 lb/h	3 Dry Gas lb/h	4 lb/h
Methane	84581.3	84577.5	0	84538.7	84538.7
Ethane	27523.9	27520.1	2.42064E-06	27485.3	27485.3
Propane	24303.1	24296.1	2.22819E-05	24248.3	24248.3
n-Butane	10532.1	10525.2	0.000104155	10491.5	10491.5
i-Pentane	3255.96	3252.26	0.000139266	3239.56	3239.56
i-Butane	3968.9	3966.82	1.07918E-05	3958.09	3958.09
n-Pentane	5780.03	5772.22	0.000451295	5744.44	5744.44
Cyclohexane	783.828	781.121	0.0185877	762.131	762.131
n-Hexane	1045.65	1042.72	0.0015727	1035.15	1035.15
n-Heptane	803.616	799.129	0.00202318	790.204	790.204
C8	20.8808	20.6472	0.000178997	20.3308	20.3308
Water	221.302	221.283	70.9563	6.95018	6.95018
N2	8139.79	8139.62	0	8138.55	8138.55
CO2	9851.47	9850.67	3.04565E-05	9808.67	9808.67
H2S	2.66503	2.6646	2.78803E-06	2.61654	2.61654
Triethylene Glycol	2.8174E-16	2.59255E-16	12347.4	1.33946	1.33946
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	1074.74	1071.64	1.5392	903.424	903.424
Toluene	181.754	180.661	1.10085	138.534	138.534
Ethylbenzene	3.6508	3.60696	0.0757621	2.4993	2.4993
m-Xylene	5.64768	5.57761	0.114034	3.95736	3.95736
o-Xylene	1.58803	1.56704	0.0700854	0.991229	0.991229
Nonane	3.84181	3.75319	0.000140584	3.67329	3.67329
Decane	0.560968	0.538218	0.000161965	0.522423	0.522423
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	1	1a	2	3 Dry Gas	4
Temperature	°F	110	109.892	122.621	121.94	112.61
Pressure	psig	995	993	1402.18	983	988
Mole Fraction Vapor	%	100	100	0	100	100
Mole Fraction Light Liquid	%	0	0	100	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.691	23.6876	144.108	23.6626	23.6626
Mass Density	lb/ft^3	4.9989	4.98753	68.6667	4.71044	4.89818
Molar Flow	lbmol/h	7685.87	7684.84	86.1942	7662.96	7662.96
Mass Flow	lb/h	182086	182035	12421.3	181325	181325
Vapor Volumetric Flow	ft^3/h	36425.3	36498.1	180.892	38494.4	37018.9
Liquid Volumetric Flow	gpm	4541.33	4550.42	22.5528	4799.3	4615.35
Std Vapor Volumetric Flow	MMSCFD	70	69.9906	0.785023	69.7913	69.7913
Std Liquid Volumetric Flow	sgpm	948.108	947.924	22	945.893	945.893
Compressibility		0.782732	0.782998	0.47585	0.802977	0.788723
Specific Gravity		0.81799	0.817871	1.10098	0.817007	0.817007

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat Dehy						
Stream Properties							
Property	Units	1	1a	2	3 Dry Gas	4	
API Gravity				-7.03509			
Enthalpy	Btu/h	-2.94097E+08	-2.94044E+08	-2.86295E+07	-2.91002E+08	-2.92088E+08	
Mass Enthalpy	Btu/lb	-1615.15	-1615.31	-2304.88	-1604.86	-1610.85	
Mass Cp	Btu/(lb*°F)	0.629837	0.629432	0.555725	0.616049	0.625328	
Ideal Gas CpCv Ratio		1.22396	1.22402	1.03568	1.22104	1.22342	
Dynamic Viscosity	cP	0.0139225	0.0139127	13.6649	0.0139162	0.0138912	
Kinematic Viscosity	cSt	0.173868	0.174143	12.4234	0.184432	0.177046	
Thermal Conductivity	Btu/(h*ft*°F)	0.0222233	0.022209	0.113075	0.022445	0.0222444	
Surface Tension	lbf/ft			0.00293889			
Net Ideal Gas Heating Value	Btu/ft^3	1165.76	1165.58	3604.48	1165.97	1165.97	
Net Liquid Heating Value	Btu/lb	18598.9	18598.7	9227.58	18626.2	18626.2	
Gross Ideal Gas Heating Value	Btu/ft^3	1281.97	1281.78	3942.45	1282.23	1282.23	
Gross Liquid Heating Value	Btu/lb	20460.9	20460.8	10117.6	20491.1	20491.1	
Remarks							

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	5	6	7	8	9
From Block	VLVE-101	Glycol Contactor	Reflux Coil	VLVE-100	SLP-101
To Block	VSSL-101	Reflux Coil	VLVE-100	VSSL-105	MIX-101

Stream Composition

Mole Fraction	5 %	6 %	7 %	8 %	9 %
Methane	68.7682	2.2409	2.2409	2.2409	40.0778
Ethane	11.9285	1.07007	1.07007	1.07007	17.4732
Propane	7.17611	1.00276	1.00276	1.00276	14.5868
n-Butane	2.35559	0.535797	0.535797	0.535797	6.26983
i-Pentane	0.58595	0.162858	0.162858	0.162858	1.53794
i-Butane	0.888683	0.138946	0.138946	0.138946	1.85617
n-Pentane	1.03902	0.356306	0.356306	0.356306	3.03602
Cyclohexane	0.118176	0.208986	0.208986	0.208986	0.464216
n-Hexane	0.156756	0.0812879	0.0812879	0.0812879	0.447388
n-Heptane	0.102912	0.0824254	0.0824254	0.0824254	0.269672
C8	0.00232265	0.00256372	0.00256372	0.00256372	0.00503687
Water	0.00503452	14.6525	14.6525	14.6525	0.33318
N2	3.79127	0.0353172	0.0353172	0.0353172	0.648112
CO2	2.90849	0.883136	0.883136	0.883136	11.9732
H2S	0.00100189	0.00130464	0.00130464	0.00130464	0.00864193
Triethylene Glycol	0.000116397	76.0682	76.0682	76.0682	0.000171529
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.150931	2.01082	2.01082	2.01082	0.907702
Toluene	0.019621	0.434095	0.434095	0.434095	0.10045
Ethylbenzene	0.000307213	0.010314	0.010314	0.010314	0.00134565
m-Xylene	0.000486438	0.0151149	0.0151149	0.0151149	0.00192127
o-Xylene	0.000121842	0.0056292	0.0056292	0.0056292	0.000518545
Nonane	0.000373752	0.000577479	0.000577479	0.000577479	0.000631908
Decane	4.79156E-05	0.000103765	0.000103765	0.000103765	6.26744E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	5 %	6 %	7 %	8 %	9 %
Methane	46.6226	0.295884	0.295884	0.295884	19.1858
Ethane	15.158	0.264825	0.264825	0.264825	15.6783
Propane	13.3728	0.363931	0.363931	0.363931	19.1938
n-Butane	5.78601	0.256313	0.256313	0.256313	10.8744
i-Pentane	1.7866	0.096709	0.096709	0.096709	3.31112
i-Butane	2.18286	0.0664685	0.0664685	0.0664685	3.21934
n-Pentane	3.16803	0.211583	0.211583	0.211583	6.53641
Cyclohexane	0.420311	0.14476	0.14476	0.14476	1.16581
n-Hexane	0.570882	0.057655	0.057655	0.057655	1.15047
n-Heptane	0.435793	0.0679776	0.0679776	0.0679776	0.80634
C8	0.0112123	0.00241031	0.00241031	0.00241031	0.0171689
Water	0.00383299	2.1726	2.1726	2.1726	0.179113
N2	4.48837	0.00814293	0.00814293	0.00814293	0.541779
CO2	5.40943	0.319891	0.319891	0.319891	15.724
H2S	0.00144301	0.000365956	0.000365956	0.000365956	0.00878876
Triethylene Glycol	0.000738704	94.0207	94.0207	94.0207	0.000768663
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.498233	1.29276	1.29276	1.29276	2.11576

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Process Streams Report All Streams Tabulated by Total Phase						
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat Dehy					
Mass Fraction	5 %	6 %	7 %	8 %	9 %	
Toluene	0.076401	0.329196	0.329196	0.329196	0.276182	
Ethylbenzene	0.00137835	0.0090123	0.0090123	0.0090123	0.00426305	
m-Xylene	0.00218246	0.0132074	0.0132074	0.0132074	0.00608662	
o-Xylene	0.000546658	0.00491877	0.00491877	0.00491877	0.00164276	
Nonane	0.0020258	0.000609592	0.000609592	0.000609592	0.00241843	
Decane	0.000288114	0.000121514	0.000121514	0.000121514	0.0002661	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	5 lb/h	6 lb/h	7 lb/h	8 lb/h	9 lb/h	
Methane	672.275	38.8531	38.8531	38.8531	0	
Ethane	218.571	34.7748	34.7748	34.7748	0	
Propane	192.829	47.7886	47.7886	47.7886	0	
n-Butane	83.4313	33.657	33.657	33.657	0	
i-Pentane	25.7619	12.6991	12.6991	12.6991	0	
i-Butane	31.4758	8.72812	8.72812	8.72812	0	
n-Pentane	45.6814	27.7834	27.7834	27.7834	0	
Cyclohexane	6.06068	19.0088	19.0088	19.0088	0	
n-Hexane	8.23183	7.5708	7.5708	7.5708	0	
n-Heptane	6.28392	8.92627	8.92627	8.92627	0	
C8	0.161676	0.316503	0.316503	0.316503	0	
Water	0.0552698	285.289	285.289	285.289	0	
N2	64.72	1.06927	1.06927	1.06927	0	
CO2	78.0012	42.0056	42.0056	42.0056	0	
H2S	0.0208075	0.0480544	0.0480544	0.0480544	0	
Triethylene Glycol	0.0106517	12346	12346	12346	0	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	7.18428	169.755	169.755	169.755	0	
Toluene	1.10166	43.2274	43.2274	43.2274	0	
Ethylbenzene	0.0198751	1.18342	1.18342	1.18342	0	
m-Xylene	0.03147	1.73429	1.73429	1.73429	0	
o-Xylene	0.00788253	0.645894	0.645894	0.645894	0	
Nonane	0.029211	0.0800468	0.0800468	0.0800468	0	
Decane	0.00415446	0.0159563	0.0159563	0.0159563	0	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	5	6	7	8	9
Temperature	°F	53.3942	111.775	116.427	119.542	
Pressure	psig	125 *	993	988	125 *	40
Mole Fraction Vapor	%	99.7521	0	0.012322	4.1459	
Mole Fraction Light Liquid	%	0.247864	100	99.9877	95.8541	
Mole Fraction Heavy Liquid	%	0	0	0	0	
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.6626	121.499	121.499	121.499	33.5115
Mass Density	lb/ft^3	0.630656	66.5895	66.4154	34.325	
Molar Flow	lbmol/h	60.938	108.077	108.077	108.077	0
Mass Flow	lb/h	1441.95	13131.2	13131.2	13131.2	0
Vapor Volumetric Flow	ft^3/h	2286.43	197.196	197.713	382.555	0
Liquid Volumetric Flow	gpm	285.061	24.5855	24.65	47.6952	0
Std Vapor Volumetric Flow	MMSCFD	0.555	0.984323	0.984323	0.984323	0
Std Liquid Volumetric Flow	sgpm	7.522	24.0316	24.0316	24.0316	0
Compressibility		0.951958	0.299818	0.296697	0.0795506	
Specific Gravity			1.06767			
API Gravity			-2.27819			

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat Dehy						
Stream Properties							
Property	Units	5	6	7	8	9	
Enthalpy	Btu/h	-2.31413E+06	-3.05852E+07	-3.0551E+07	-3.0551E+07	0	
Mass Enthalpy	Btu/lb	-1604.86	-2329.2	-2326.59	-2326.59	-1602.27	
Mass Cp	Btu/(lb*°F)	0.45608	0.562033	0.564231	0.564691		
Ideal Gas CpCv Ratio		1.23885	1.04337	1.04309	1.0429		
Dynamic Viscosity	cP		8.94875				
Kinematic Viscosity	cSt		8.3895				
Thermal Conductivity	Btu/(h*ft*°F)		0.110931				
Surface Tension	lbf/ft		0.00272398				
Net Ideal Gas Heating Value	Btu/ft^3	1165.97	3082.56	3082.56	3082.56	1489.27	
Net Liquid Heating Value	Btu/lb	18626.2	9355.02	9355.02	9355.02	16747.9	
Gross Ideal Gas Heating Value	Btu/ft^3	1282.23	3371.95	3371.95	3371.95	1625.33	
Gross Liquid Heating Value	Btu/lb	20491.1	10258.9	10258.9	10258.9	18289.1	
Remarks							

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	9 Flash Vap	10	10 Skim	11	12
From Block	VSSL-105	SLP-101	VSSL-105	VSSL-105	Cross Exchanger
To Block	SLP-101	Flash Gas	--	Cross Exchanger	Glycol Regenerator

Stream Composition

Mole Fraction	9 Flash Vap %	10 %	10 Skim %	11 %	12 %
Methane	40.0778	40.0778		0.0788424	0.0788424
Ethane	17.4732	17.4732		0.132768	0.132768
Propane	14.5868	14.5868		0.226547	0.226547
n-Butane	6.26983	6.26983		0.208146	0.208146
i-Pentane	1.53794	1.53794		0.084284	0.084284
i-Butane	1.85617	1.85617		0.040821	0.040821
n-Pentane	3.03602	3.03602		0.203184	0.203184
Cyclohexane	0.464216	0.464216		0.194402	0.194402
n-Hexane	0.447388	0.447388		0.0603683	0.0603683
n-Heptane	0.269672	0.269672		0.0717259	0.0717259
C8	0.00503687	0.00503687		0.0024224	0.0024224
Water	0.33318	0.33318		15.4707	15.4707
N2	0.648112	0.648112		0.000301228	0.000301228
CO2	11.9732	11.9732		0.249431	0.249431
H2S	0.00864193	0.00864193		0.000885373	0.000885373
Triethylene Glycol	0.000171529	0.000171529		80.4149	80.4149
EG	0	0		0	0
MeOH	0	0		0	0
MDEA	0	0		0	0
2,2,4-Trimethylpentane	0	0		0	0
Benzene	0.907702	0.907702		2.07385	2.07385
Toluene	0.10045	0.10045		0.45316	0.45316
Ethylbenzene	0.00134565	0.00134565		0.0108264	0.0108264
m-Xylene	0.00192127	0.00192127		0.0158689	0.0158689
o-Xylene	0.000518545	0.000518545		0.00592123	0.00592123
Nonane	0.000631908	0.000631908		0.000574369	0.000574369
Decane	6.26744E-05	6.26744E-05		0.000106113	0.000106113
Undecane	0	0		0	0
Dodecane	0	0		0	0

Mass Fraction	9 Flash Vap %	10 %	10 Skim %	11 %	12 %
Methane	19.1858	19.1858		0.00999653	0.00999653
Ethane	15.6783	15.6783		0.0315525	0.0315525
Propane	19.1938	19.1938		0.0789536	0.0789536
n-Butane	10.8744	10.8744		0.0956155	0.0956155
i-Pentane	3.31112	3.31112		0.048061	0.048061
i-Butane	3.21934	3.21934		0.0187518	0.0187518
n-Pentane	6.53641	6.53641		0.115861	0.115861
Cyclohexane	1.16581	1.16581		0.129307	0.129307
n-Hexane	1.15047	1.15047		0.041116	0.041116
n-Heptane	0.80634	0.80634		0.0568029	0.0568029
C8	0.0171689	0.0171689		0.00218695	0.00218695
Water	0.179113	0.179113		2.20277	2.20277
N2	0.541779	0.541779		6.6693E-05	6.6693E-05
CO2	15.724	15.724		0.0867593	0.0867593
H2S	0.00878876	0.00878876		0.000238482	0.000238482
Triethylene Glycol	0.000768663	0.000768663		95.4436	95.4436
EG	0	0		0	0
MeOH	0	0		0	0
MDEA	0	0		0	0
2,2,4-Trimethylpentane	0	0		0	0

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat Dehy					
Mass Fraction	9 Flash Vap %	10 %	10 Skim %	11 %	12 %	
Benzene	2.11576	2.11576		1.28031	1.28031	
Toluene	0.276182	0.276182		0.329998	0.329998	
Ethylbenzene	0.00426305	0.00426305		0.00908418	0.00908418	
m-Xylene	0.00608662	0.00608662		0.0133151	0.0133151	
o-Xylene	0.00164276	0.00164276		0.00496835	0.00496835	
Nonane	0.00241843	0.00241843		0.000582216	0.000582216	
Decane	0.0002661	0.0002661		0.000119326	0.000119326	
Undecane	0	0		0	0	
Dodecane	0	0		0	0	
Mass Flow	9 Flash Vap lb/h	10 lb/h	10 Skim lb/h	11 lb/h	12 lb/h	
Methane	37.56	37.56	0	1.2931	1.2931	
Ethane	30.6933	30.6933	0	4.08145	4.08145	
Propane	37.5756	37.5756	0	10.213	10.213	
n-Butane	21.2887	21.2887	0	12.3683	12.3683	
i-Pentane	6.48216	6.48216	0	6.2169	6.2169	
i-Butane	6.30249	6.30249	0	2.42563	2.42563	
n-Pentane	12.7963	12.7963	0	14.9871	14.9871	
Cyclohexane	2.28231	2.28231	0	16.7264	16.7264	
n-Hexane	2.25226	2.25226	0	5.31854	5.31854	
n-Heptane	1.57857	1.57857	0	7.34771	7.34771	
C8	0.0336114	0.0336114	0	0.282891	0.282891	
Water	0.350648	0.350648	0	284.938	284.938	
N2	1.06064	1.06064	0	0.00862704	0.00862704	
CO2	30.7829	30.7829	0	11.2227	11.2227	
H2S	0.0172057	0.0172057	0	0.0308487	0.0308487	
Triethylene Glycol	0.00150481	0.00150481	0	12346	12346	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	4.14201	4.14201	0	165.613	165.613	
Toluene	0.540681	0.540681	0	42.6867	42.6867	
Ethylbenzene	0.00834575	0.00834575	0	1.17508	1.17508	
m-Xylene	0.0119158	0.0119158	0	1.72237	1.72237	
o-Xylene	0.00321602	0.00321602	0	0.642678	0.642678	
Nonane	0.00473456	0.00473456	0	0.0753122	0.0753122	
Decane	0.000520944	0.000520944	0	0.0154353	0.0154353	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	9 Flash Vap	10	10 Skim	11	12
Temperature	°F	119.129	119.129		119.129	300 *
Pressure	psig	40 *	40	40	40	39.5
Mole Fraction Vapor	%	100	100		0	0.826845
Mole Fraction Light Liquid	%	0	0		100	99.1732
Mole Fraction Heavy Liquid	%	0	0		0	0
Phase Mole Fraction	%	100	100		100	100
Molecular Weight	lb/lbmol	33.5115	33.5115		126.526	126.526
Mass Density	lb/ft^3	0.302306	0.302306		67.658	38.6657
Molar Flow	lbmol/h	5.84186	5.84186	0	102.235	102.235
Mass Flow	lb/h	195.77	195.77	0	12935.4	12935.4
Vapor Volumetric Flow	ft^3/h	647.587	647.587	0	191.189	334.546
Liquid Volumetric Flow	gpm	80.7381	80.7381	0	23.8365	41.7096
Std Vapor Volumetric Flow	MMSCFD	0.0532055	0.0532055	0	0.931118	0.931118
Std Liquid Volumetric Flow	sgpm	0.833874	0.833874	0	23.1978	23.1978
Compressibility		0.976137	0.976137		0.0164674	0.0217537
Soecific Gravity		1.15707	1.15707		1.08481	

* User Specified Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Stream Properties

Property	Units	9 Flash Vap	10	10 Skim	11	12
API Gravity					-4.70349	
Enthalpy	Btu/h	-313676	-313676		-3.02373E+07	-2.88201E+07
Mass Enthalpy	Btu/lb	-1602.27	-1602.27		-2337.55	-2227.99
Mass Cp	Btu/(lb*°F)	0.417274	0.417274		0.565865	0.636963
Ideal Gas CpCv Ratio		1.16873	1.16873		1.04117	1.03433
Dynamic Viscosity	cP	0.0108814	0.0108814		11.1154	
Kinematic Viscosity	cSt	2.24707	2.24707		10.2562	
Thermal Conductivity	Btu/(h*ft*°F)	0.0151378	0.0151378		0.113426	
Surface Tension	lbf/ft				0.00286961	
Net Ideal Gas Heating Value	Btu/ft^3	1489.27	1489.27		3173.61	3173.61
Net Liquid Heating Value	Btu/lb	16747.9	16747.9		9243.13	9243.13
Gross Ideal Gas Heating Value	Btu/ft^3	1625.33	1625.33		3471.76	3471.76
Gross Liquid Heating Value	Btu/lb	18289.1	18289.1		10137.4	10137.4

Remarks

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	13	14	15	16	17
From Block	Glycol Regenerator	Condensor	VSSL-101	Glycol Regenerator	Reboiler
To Block	Condensor	Glycol Regenerator	MIX-102	Reboiler	Glycol Regenerator

Stream Composition

Mole Fraction	13 %	14 %	15 %	16 %	17 %
Methane	0.456586	7.92064E-06	3.60693	1.27809E-06	6.65696E-06
Ethane	0.768878	1.37885E-05	4.11728	1.10981E-05	5.76226E-05
Propane	1.31196	1.71044E-05	8.64432	4.82185E-05	0.000249595
n-Butane	1.20539	1.53489E-05	11.7466	0.000117297	0.000604411
i-Pentane	0.488087	3.22575E-06	7.4598	9.38296E-05	0.000481049
i-Butane	0.236398	1.40255E-06	3.00804	1.42306E-05	7.34831E-05
n-Pentane	1.17662	6.84898E-06	17.6884	0.000283756	0.00145272
Cyclohexane	1.12456	3.05794E-05	8.21999	0.00358326	0.0176504
n-Hexane	0.349497	1.20777E-06	8.39911	0.000392628	0.00196322
n-Heptane	0.415259	7.96004E-07	14.3589	0.000501586	0.00252352
C8	0.0140196	1.70719E-08	0.596397	3.17237E-05	0.000158245
Water	76.3536	99.8575	0.000900171	19.2679	81.3988
N2	0.00174445	1.57448E-08	0.0518476	8.07432E-10	4.21306E-09
CO2	1.44451	0.000307321	0.442683	6.55009E-05	0.000339026
H2S	0.00512715	3.57834E-06	0.000465745	2.98705E-06	1.52149E-05
Triethylene Glycol	0.0121435	0.132751	0.046224	80.4165	17.1191
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	11.8992	0.00784103	8.3457	0.20187	0.958771
Toluene	2.55693	0.00141077	2.87306	0.0944872	0.435487
Ethylbenzene	0.0587759	2.22012E-05	0.0815436	0.00428203	0.0189873
m-Xylene	0.0860327	3.10117E-05	0.131296	0.00645209	0.028647
o-Xylene	0.0308126	1.7879E-05	0.0339611	0.00335146	0.0145069
Nonane	0.00332094	1.39096E-09	0.128414	1.47589E-05	7.25702E-05
Decane	0.000611782	1.11605E-10	0.0182458	5.8069E-06	2.79937E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	13 %	14 %	15 %	16 %	17 %
Methane	0.23739	6.98296E-06	0.809613	1.64689E-07	2.56654E-06
Ethane	0.749283	2.27847E-05	1.73221	2.68042E-06	4.16402E-05
Propane	1.87492	4.14487E-05	5.33329	1.70782E-05	0.000264504
n-Butane	2.27058	4.90261E-05	9.5526	5.476E-05	0.000844259
i-Pentane	1.14129	1.27899E-05	7.53053	5.43754E-05	0.000834102
i-Butane	0.445302	4.4799E-06	2.44622	6.64352E-06	0.000102643
n-Pentane	2.75129	2.71558E-05	17.8561	0.00016444	0.0025189
Cyclohexane	3.06728	0.00014143	9.67929	0.00242223	0.0356993
n-Hexane	0.976102	5.71973E-06	10.1271	0.000271768	0.00406586
n-Heptane	1.34854	4.38328E-06	20.131	0.000403697	0.00607691
C8	0.0519014	1.07168E-07	0.95319	2.91066E-05	0.000434415
Water	44.5799	98.8622	0.000226901	2.7881	35.2419
N2	0.00158377	2.42388E-08	0.0203219	1.81679E-10	2.83638E-09
CO2	2.06032	0.00074327	0.272589	2.31541E-05	0.000358576
H2S	0.00566312	6.70195E-06	0.00022209	8.17687E-07	1.24618E-05
Triethylene Glycol	0.0591021	1.09556	0.0971244	96.9998	61.7838
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Mass Fraction	13 %	14 %	15 %	16 %	17 %
Benzene	30.1233	0.0336588	9.12114	0.126655	1.79983
Toluene	7.63534	0.00714342	3.70386	0.0699275	0.964311
Ethylbenzene	0.202232	0.000129529	0.121127	0.00365145	0.0484446
m-Xylene	0.296015	0.000180932	0.19503	0.00550194	0.0730906
o-Xylene	0.106018	0.000104312	0.0504466	0.00285791	0.0370132
Nonane	0.013804	9.80387E-09	0.230438	1.52042E-05	0.000223683
Decane	0.00282107	8.72653E-10	0.0363229	6.63632E-06	9.57218E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	13 lb/h	14 lb/h	15 lb/h	16 lb/h	17 lb/h
Methane	1.2931	2.03928E-06	0.0873997	2.18513E-05	2.17718E-05
Ethane	4.08145	6.65397E-06	0.186996	0.000355644	0.000353231
Propane	10.213	1.21045E-05	0.575742	0.00226598	0.00224377
n-Butane	12.3682	1.43174E-05	1.03123	0.00726567	0.00716179
i-Pentane	6.21676	3.73513E-06	0.812939	0.00721465	0.00707563
i-Butane	2.42562	1.30829E-06	0.264075	0.000881477	0.000870716
n-Pentane	14.9867	7.93049E-06	1.92761	0.0218183	0.0213677
Cyclohexane	16.7079	4.13026E-05	1.0449	0.321386	0.302835
n-Hexane	5.31697	1.67037E-06	1.09325	0.0360588	0.0344904
n-Heptane	7.34569	1.28008E-06	2.17319	0.0535634	0.0515501
C8	0.282714	3.12969E-08	0.102899	0.00386193	0.00368511
Water	242.833	28.8714	2.44945E-05	369.931	298.955
N2	0.00862704	7.0786E-09	0.0021938	2.41056E-08	2.40608E-08
CO2	11.2229	0.000217062	0.0294266	0.00307213	0.00304177
H2S	0.0308479	1.95721E-06	2.39751E-05	0.000108492	0.000105713
Triethylene Glycol	0.321938	0.319944	0.0104848	12870.2	524.108
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	164.086	0.00982959	0.984649	16.8048	15.2679
Toluene	41.5908	0.00208614	0.399841	9.27813	8.18018
Ethylbenzene	1.10159	3.78272E-05	0.0130759	0.484482	0.410952
m-Xylene	1.61244	5.28388E-05	0.021054	0.730009	0.620023
o-Xylene	0.577494	3.04628E-05	0.00544584	0.379194	0.31398
Nonane	0.0751924	2.86309E-09	0.0248764	0.00201733	0.00189749
Decane	0.0153668	2.54847E-10	0.00392114	0.000880521	0.000812001
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	13	14	15	16	17
Temperature	°F	219.753	193.425	53.3942	325.188	445 *
Pressure	psig	1.88	-1.12	125	2.38	2.38
Mole Fraction Vapor	%	100	0	0	0	100
Mole Fraction Light Liquid	%	0	100	100	100	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	30.8554	18.1967	71.4711	124.499	41.6101
Mass Density	lb/ft^3	0.0708509	60.3818	41.7992	61.0604	0.0739115
Molar Flow	lbmol/h	17.6538	1.60489	0.151043	106.573	20.3867
Mass Flow	lb/h	544.715	29.2036	10.7952	13268.2	848.293
Vapor Volumetric Flow	ft^3/h	7688.18	0.48365	0.258264	217.297	11477.2
Liquid Volumetric Flow	gpm	958.526	0.0602992	0.0321992	27.0915	1430.92
Std Vapor Volumetric Flow	MMSCFD	0.160784	0.0146167	0.00137565	0.970625	0.185674
Std Liquid Volumetric Flow	sgpm	1.25845	0.0583103	0.033046	23.5803	1.58268
Compressibility		0.990057	0.000583735	0.0433822	0.00413368	0.990189
Specific Gravity		1.06536	0.968143	0.670194	0.979023	1.43669

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Stream Properties

Property	Units	13	14	15	16	17
API Gravity			9.75211	80.8243	-6.07386	
Enthalpy	Btu/h	-1.40318E+06	-194378	-9510.53	-3.0268E+07	-2.65678E+06
Mass Enthalpy	Btu/lb	-2575.99	-6655.96	-880.992	-2281.24	-3131.91
Mass Cp	Btu/(lb*°F)	0.405641	0.987876	0.506555	0.651482	0.498733
Ideal Gas CpCv Ratio		1.19	1.31992	1.08454	1.03421	1.10641
Dynamic Viscosity	cP	0.0125195	0.320922	0.290624	1.20493	0.0157193
Kinematic Viscosity	cSt	11.0311	0.331797	0.434052	1.23191	13.277
Thermal Conductivity	Btu/(h*ft*°F)	0.0134508	0.383074	0.0691758	0.112823 ?	0.0171065
Surface Tension	lbf/ft		0.00411959 ?	0.00118089 ?	0.00231587 ?	
Net Ideal Gas Heating Value	Btu/ft^3	782.393	5.36234	3601.55	3049.54	703.765
Net Liquid Heating Value	Btu/lb	9052.62	-938.793	18959.7	9013.45	5878.93
Gross Ideal Gas Heating Value	Btu/ft^3	863.678	56.0828	3876.53	3342.7	807.505
Gross Liquid Heating Value	Btu/lb	10052.4	118.961	20420.1	9907.03	6825.03

Remarks

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	18	19	21	22	23
From Block	SPLT-101	Cross Exchanger	SPLT-101	TEG Makeup	Glycol Pump
To Block	--	TEG Makeup	Recycle	Glycol Pump	Gas/Glycol HEX

Stream Composition

Mole Fraction	18 %	19 %	21 %	22 %	23 %
Methane	68.7682	5.7522E-09	68.7682	0	0
Ethane	11.9285	9.30944E-08	11.9285	9.30847E-08	9.30847E-08
Propane	7.17611	5.84434E-07	7.17611	5.84373E-07	5.84373E-07
n-Butane	2.35559	2.07385E-06	2.35559	2.07363E-06	2.07363E-06
i-Pentane	0.58595	2.23564E-06	0.58595	2.2354E-06	2.2354E-06
i-Butane	0.888683	2.14823E-07	0.888683	2.148E-07	2.148E-07
n-Pentane	1.03902	7.24629E-06	1.03902	7.24554E-06	7.24554E-06
Cyclohexane	0.118176	0.000255766	0.118176	0.000255739	0.000255739
n-Hexane	0.156756	2.11168E-05	0.156756	2.11146E-05	2.11146E-05
n-Heptane	0.102912	2.33138E-05	0.102912	2.33114E-05	2.33114E-05
C8	0.00232265	1.79608E-06	0.00232265	1.79589E-06	1.79589E-06
Water	0.00503452	4.57124	0.00503452	4.57085	4.57085
N2	3.79127	1.85436E-12	3.79127	0	0
CO2	2.90849	8.00434E-07	2.90849	8.0035E-07	8.0035E-07
H2S	0.00100189	9.46427E-08	0.00100189	9.46328E-08	9.46328E-08
Triethylene Glycol	0.000116397	95.3891	0.000116397	95.3895	95.3895
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.150931	0.0228302	0.150931	0.0228278	0.0228278
Toluene	0.019621	0.0138262	0.019621	0.0138247	0.0138247
Ethylbenzene	0.000307213	0.00080361	0.000307213	0.000803526	0.000803526
m-Xylene	0.000486438	0.00120204	0.000486438	0.00120192	0.00120192
o-Xylene	0.000121842	0.000712724	0.000121842	0.00071265	0.00071265
Nonane	0.000373752	1.08412E-06	0.000373752	1.084E-06	1.084E-06
Decane	4.79156E-05	5.58764E-07	4.79156E-05	5.58706E-07	5.58706E-07
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	18 %	19 %	21 %	22 %	23 %
Methane	46.6226	6.40359E-10	46.6226	0	0
Ethane	15.158	1.9425E-08	15.158	1.94229E-08	1.94229E-08
Propane	13.3728	1.78834E-07	13.3728	1.78814E-07	1.78814E-07
n-Butane	5.78601	8.36446E-07	5.78601	8.36356E-07	8.36356E-07
i-Pentane	1.7866	1.11931E-06	1.7866	1.11919E-06	1.11919E-06
i-Butane	2.18286	8.66444E-08	2.18286	8.66351E-08	8.66351E-08
n-Pentane	3.16803	3.62797E-06	3.16803	3.62758E-06	3.62758E-06
Cyclohexane	0.420311	0.00014937	0.420311	0.000149354	0.000149354
n-Hexane	0.570882	1.26279E-05	0.570882	1.26265E-05	1.26265E-05
n-Heptane	0.435793	1.62109E-05	0.435793	1.62092E-05	1.62092E-05
C8	0.0112123	1.4237E-06	0.0112123	1.42354E-06	1.42354E-06
Water	0.00383299	0.57147	0.00383299	0.571419	0.571419
N2	4.48837	3.60478E-13	4.48837	0	0
CO2	5.40943	2.4445E-07	5.40943	2.44424E-07	2.44424E-07
H2S	0.00144301	2.23829E-08	0.00144301	2.23805E-08	2.23805E-08
Triethylene Glycol	0.000738704	99.4051	0.000738704	99.4052	99.4052
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Mass Fraction	18 %	19 %	21 %	22 %	23 %
Benzene	0.498233	0.012375	0.498233	0.0123736	0.0123736
Toluene	0.076401	0.00884019	0.076401	0.00883924	0.00883924
Ethylbenzene	0.00137835	0.000592032	0.00137835	0.000591968	0.000591968
m-Xylene	0.00218246	0.000885565	0.00218246	0.000885469	0.000885469
o-Xylene	0.000546658	0.000525075	0.000546658	0.000525018	0.000525018
Nonane	0.0020258	9.6487E-07	0.0020258	9.64766E-07	9.64766E-07
Decane	0.000288114	5.51691E-07	0.000288114	5.51632E-07	5.51632E-07
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	18 lb/h	19 lb/h	21 lb/h	22 lb/h	23 lb/h
Methane	83866.4	7.95321E-08	0	0	0
Ethane	27266.8	2.41257E-06	0	2.41257E-06	2.41257E-06
Propane	24055.5	2.2211E-05	0	2.2211E-05	2.2211E-05
n-Butane	10408.1	0.000103886	0	0.000103886	0.000103886
i-Pentane	3213.8	0.000139017	0	0.000139017	0.000139017
i-Butane	3926.61	1.07612E-05	0	1.07612E-05	1.07612E-05
n-Pentane	5698.76	0.000450591	0	0.000450591	0.000450591
Cyclohexane	756.07	0.0185517	0	0.0185517	0.0185517
n-Hexane	1026.92	0.00156837	0	0.00156837	0.00156837
n-Heptane	783.92	0.00201339	0	0.00201339	0.00201339
C8	20.1692	0.000176822	0	0.000176822	0.000176822
Water	6.89491	70.9762	0	70.9775	70.9775
N2	8073.83	4.47711E-11	0	0	0
CO2	9730.67	3.03605E-05	0	3.03605E-05	3.03605E-05
H2S	2.59574	2.77994E-06	0	2.77994E-06	2.77994E-06
Triethylene Glycol	1.32881	12346	0	12347.4	12347.4
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	896.239	1.53696	0	1.53696	1.53696
Toluene	137.433	1.09795	0	1.09795	1.09795
Ethylbenzene	2.47942	0.0735299	0	0.0735299	0.0735299
m-Xylene	3.92589	0.109986	0	0.109986	0.109986
o-Xylene	0.983347	0.0652139	0	0.0652139	0.0652139
Nonane	3.64408	0.000119836	0	0.000119836	0.000119836
Decane	0.518269	6.85196E-05	0	6.85196E-05	6.85196E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	18	19	21	22	23
Temperature	°F	121.94	267.747		267.73	271.699
Pressure	psig	983	1.88	983	1.88	1407.18 *
Mole Fraction Vapor	%	100	0		0	0
Mole Fraction Light Liquid	%	0	100		100	100
Mole Fraction Heavy Liquid	%	0	0		0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.6626	144.106	23.6626	144.106	144.106
Mass Density	lb/ft³	4.71044	63.1783		63.179	63.1713
Molar Flow	lbmol/h	7602.02	86.1862	0	86.1952	86.1952
Mass Flow	lb/h	179883	12419.9	0	12421.3	12421.3
Vapor Volumetric Flow	ft³/h	38188.2	196.585	0	196.604	196.628
Liquid Volumetric Flow	gpm	4761.13	24.5093	0	24.5117	24.5147
Std Vapor Volumetric Flow	MMSCFD	69.2363	0.784951	0 *	0.785033	0.785033
Std Liquid Volumetric Flow	sgpm	938.371	21.9976	0	22 *	22
Compressibility		0.802977	0.00484334		0.00484342	0.413261
Specific Gravity		0.817007	1.01298		1.01299	1.01287

* User Specified Values

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Process Streams Report All Streams Tabulated by Total Phase						
Client Name:	Delek	Job: 253201.0051				
Location:	Lariat Compressor Station					
Flowsheet:	Lariat Dehy					
Stream Properties						
Property	Units	18	19	21	22	23
API Gravity			-6.84383		-6.84386	-7.03577
Enthalpy	Btu/h	-2.88688E+08	-2.76157E+07	0	-2.76188E+07	-2.75436E+07
Mass Enthalpy	Btu/lb	-1604.86	-2223.5	-1604.86	-2223.51	-2217.45
Mass Cp	Btu/(lb*°F)	0.616049	0.615334		0.615327	0.613974
Ideal Gas CpCv Ratio		1.22104	1.03063		1.03063	1.03053
Dynamic Viscosity	cP	0.0139162	2.01669		2.017	2.04639
Kinematic Viscosity	cSt	0.184432	1.99273		1.99302	2.02231
Thermal Conductivity	Btu/(h*ft*°F)	0.022445	0.111892 ?		0.111893 ?	0.111783 ?
Surface Tension	lbf/ft		0.00246537 ?		0.00246543 ?	0.00245325 ?
Net Ideal Gas Heating Value	Btu/ft^3	1165.97	3604.41	1165.97	3604.43	3604.43
Net Liquid Heating Value	Btu/lb	18626.2	9227.54	18626.2	9227.55	9227.55
Gross Ideal Gas Heating Value	Btu/ft^3	1282.23	3942.38	1282.23	3942.39	3942.39
Gross Liquid Heating Value	Btu/lb	20491.1	10117.5	20491.1	10117.5	10117.5
Remarks						

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	24	25	27	28	29
From Block	Gas/Glycol HEX	VSSL-100	MIX-101	VSSL-102	PUMP-100
To Block	RCYL-1	Liq From DEHY	VLVE-101	PUMP-100	MIX-102

Stream Composition

Mole Fraction	24 %	25 %	27 %	28 %	29 %
Methane	0	23.0062	68.7682	0.00332447	0.00332447
Ethane	9.30847E-08	12.2668	11.9285	0.033088	0.033088
Propane	5.84373E-07	15.5462	7.17611	0.168942	0.168942
n-Butane	2.07363E-06	11.5881	2.35559	0.439583	0.439583
i-Pentane	2.2354E-06	4.97701	0.58595	0.305133	0.305133
i-Butane	2.148E-07	3.48447	0.888683	0.0617457	0.0617457
n-Pentane	7.24554E-06	10.5012	1.03902	0.832735	0.832735
Cyclohexane	0.000255739	3.12351	0.118176	1.19301	1.19301
n-Hexane	2.11146E-05	3.29322	0.156756	0.342346	0.342346
n-Heptane	2.33114E-05	4.34869	0.102912	0.466546	0.466546
C8	1.79589E-06	0.19861	0.00232265	0.0163858	0.0163858
Water	4.57085	0.101777	0.00503452	79.8954	79.8954
N2	0	0.586109	3.79127	2.95809E-06	2.95809E-06
CO2	8.0035E-07	1.76652	2.90849	0.0444273	0.0444273
H2S	9.46328E-08	0.00123106	0.00100189	0.000566487	0.000566487
Triethylene Glycol	95.3895	1.45399E-17	0.000116397	8.98457E-05	8.98457E-05
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.0228278	3.85199	0.150931	13.0148	13.0148
Toluene	0.0138247	1.15228	0.019621	2.96906	2.96906
Ethylbenzene	0.000803526	0.0401052	0.000307213	0.0697881	0.0697881
m-Xylene	0.00120192	0.0640986	0.000486438	0.101891	0.101891
o-Xylene	0.00071265	0.0191984	0.000121842	0.0364508	0.0364508
Nonane	1.084E-06	0.0671013	0.000373752	0.00392207	0.00392207
Decane	5.58706E-07	0.0155277	4.79156E-05	0.000727826	0.000727826
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	24 %	25 %	27 %	28 %	29 %
Methane	0	7.45859	46.6226	0.0017472	0.0017472
Ethane	1.94229E-08	7.45404	15.158	0.0325942	0.0325942
Propane	1.78814E-07	13.8535	13.3728	0.244052	0.244052
n-Butane	8.36356E-07	13.6111	5.78601	0.837014	0.837014
i-Pentane	1.11919E-06	7.25667	1.7866	0.72122	0.72122
i-Butane	8.66351E-08	4.09278	2.18286	0.11757	0.11757
n-Pentane	3.62758E-06	15.3112	3.16803	1.96827	1.96827
Cyclohexane	0.000149354	5.31234	0.420311	3.28925	3.28925
n-Hexane	1.26265E-05	5.73515	0.570882	0.96649	0.96649
n-Heptane	1.62092E-05	8.80592	0.435793	1.53151	1.53151
C8	1.42354E-06	0.458475	0.0112123	0.0613185	0.0613185
Water	0.571419	0.0370536	0.00383299	47.1533	47.1533
N2	0	0.331806	4.48837	2.71473E-06	2.71473E-06
CO2	2.44424E-07	1.5711	5.40943	0.0640539	0.0640539
H2S	2.23805E-08	0.000847873	0.00144301	0.000632485	0.000632485
Triethylene Glycol	99.4052	4.4126E-17	0.000738704	0.000442017	0.000442017
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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Process Streams Report All Streams Tabulated by Total Phase						
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat Dehy					
Mass Fraction	24 %	25 %	27 %	28 %	29 %	
Benzene	0.0123736	6.08054	0.498233	33.3046	33.3046	
Toluene	0.00883924	2.14555	0.076401	8.96209	8.96209	
Ethylbenzene	0.000591968	0.0860443	0.00137835	0.242724	0.242724	
m-Xylene	0.000885469	0.137521	0.00218246	0.354376	0.354376	
o-Xylene	0.000525018	0.0411895	0.000546658	0.126776	0.126776	
Nonane	9.64766E-07	0.173918	0.0020258	0.0164793	0.0164793	
Decane	5.51632E-07	0.0446474	0.000288114	0.00339255	0.00339255	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	24 lb/h	25 lb/h	27 lb/h	28 lb/h	29 lb/h	
Methane	0	3.80055	672.275	0.0078805	0.0078805	
Ethane	2.41257E-06	3.79823	218.571	0.147011	0.147011	
Propane	2.2211E-05	7.05909	192.829	1.10076	1.10076	
n-Butane	0.000103886	6.9356	83.4313	3.77523	3.77523	
i-Pentane	0.000139017	3.69766	25.7619	3.25295	3.25295	
i-Butane	1.07612E-05	2.08549	31.4758	0.530284	0.530284	
n-Pentane	0.000450591	7.80187	45.6814	8.87761	8.87761	
Cyclohexane	0.0185517	2.70692	6.06068	14.8357	14.8357	
n-Hexane	0.00156837	2.92236	8.23183	4.35921	4.35921	
n-Heptane	0.00201339	4.48709	6.28392	6.90766	6.90766	
C8	0.000176822	0.233617	0.161676	0.276568	0.276568	
Water	70.9775	0.0188808	0.0552698	212.678	212.678	
N2	0	0.169073	64.72	1.22444E-05	1.22444E-05	
CO2	3.03605E-05	0.80056	78.0012	0.288906	0.288906	
H2S	2.77994E-06	0.000432036	0.0208075	0.00285273	0.00285273	
Triethylene Glycol	12347.4	2.24845E-17	0.0106517	0.00199365	0.00199365	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	1.53696	3.09836	7.18428	150.216	150.216	
Toluene	1.09795	1.09327	1.10166	40.4222	40.4222	
Ethylbenzene	0.0735299	0.0438442	0.0198751	1.09477	1.09477	
m-Xylene	0.109986	0.0700745	0.03147	1.59836	1.59836	
o-Xylene	0.0652139	0.0209882	0.00788253	0.571805	0.571805	
Nonane	0.000119836	0.0886207	0.029211	0.0743275	0.0743275	
Decane	6.85196E-05	0.0227502	0.00415446	0.0153016	0.0153016	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	24	25	27	28	29
Temperature	°F	122.61	109.892	121.94	89.7106	89.9202
Pressure	psig	1402.18	993	983	-2.32	75 *
Mole Fraction Vapor	%	0	0	100	0	0
Mole Fraction Light Liquid	%	100	100	0	20.1234	20.1235
Mole Fraction Heavy Liquid	%	0	0	0	79.8766	79.8765
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	144.106	49.4834	23.6626	30.5246	30.5246
Mass Density	lb/ft^3	68.6671	33.2229	4.71044	55.8237	55.844
Molar Flow	lbmol/h	86.1952	1.02975	60.938	14.7761	14.7761
Mass Flow	lb/h	12421.3	50.9553	1441.95	451.035	451.035
Vapor Volumetric Flow	ft^3/h	180.891	1.53374	306.118	8.07963	8.07669
Liquid Volumetric Flow	gpm	22.5526	0.19122	38.1653	1.00733	1.00696
Std Vapor Volumetric Flow	MMSCFD	0.785033	0.00937853	0.555	0.134575	0.134575
Std Liquid Volumetric Flow	sgpm	22	0.184104	7.522	0.996186	0.996186
Compressibility		0.47585	0.245555	0.802977	0.00114782	0.00831274
Specific Gravity		1.10099	0.532684	0.817007	0.895059	0.895385

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? Extrapolated or Approximate Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Stream Properties

Property	Units	24	25	27	28	29
API Gravity		-7.03509	115.973		24.5152	24.4506
Enthalpy	Btu/h	-2.86298E+07	-54350.7	-2.31413E+06	-1.44669E+06	-1.44654E+06
Mass Enthalpy	Btu/lb	-2304.9	-1066.63	-1604.86	-3207.5	-3207.15
Mass Cp	Btu/(lb*°F)	0.555722	0.632354	0.616049	0.679839	0.679661
Ideal Gas CpCv Ratio		1.03568	1.10932	1.22104	1.22056	1.22051
Dynamic Viscosity	cP	13.6679	0.114487	0.0139162	0.610604	0.61167
Kinematic Viscosity	cSt	12.426	0.215129	0.184432	0.682842	0.683785
Thermal Conductivity	Btu/(h*ft*°F)	0.113075	0.0586175	0.022445	0.194765	0.194832
Surface Tension	lbf/ft	0.00293893	0.00029343	?	0.00305806	?
Net Ideal Gas Heating Value	Btu/ft^3	3604.43	2502.57	1165.97	756.228	756.228
Net Liquid Heating Value	Btu/lb	9227.55	19042.9	18626.2	8805.18	8805.18
Gross Ideal Gas Heating Value	Btu/ft^3	3942.39	2708.4	1282.23	834.429	834.429
Gross Liquid Heating Value	Btu/lb	10117.5	20621.9	20491.1	9777.42	9777.42

Remarks

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

Connections

	30	32	37	38	
From Block	MIX-102	FAXR-100	SPLT-101	VSSL-101	
To Block	From BTEx/FG	VSSL-102	MIX-101	--	

Stream Composition

Mole Fraction	30 %	32 %	37 %	38 %	
Methane	0.0397883	0.502243	68.7682	68.9301	
Ethane	0.0744148	0.845764	11.9285	11.9479	
Propane	0.254701	1.44315	7.17611	7.17246	
n-Butane	0.553995	1.32592	2.35559	2.33225	
i-Pentane	0.377529	0.536895	0.58595	0.56887	
i-Butane	0.0915584	0.260037	0.888683	0.883417	
n-Pentane	1.00329	1.29429	1.03902	0.997645	
Cyclohexane	1.26411	1.23701	0.118176	0.0980448	
n-Hexane	0.42387	0.384446	0.156756	0.136276	
n-Heptane	0.607119	0.456784	0.102912	0.067489	
C8	0.0222548	0.0154215	0.00232265	0.000846495	
Water	79.087	74.0032	0.00503452	0.0050448	
N2	0.000527559	0.00191889	3.79127	3.80056	
CO2	0.0484571	1.58893	2.90849	2.91461	
H2S	0.000565467	0.00563951	0.00100189	0.00100322	
Triethylene Glycol	0.000556664	8.27203E-05	0.000116397	1.82859E-06	
EG	0	0	0	0	
MeOH	0	0	0	0	
MDEA	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	
Benzene	12.9676	13.0883	0.150931	0.130568	
Toluene	2.96809	2.81248	0.019621	0.0125307	
Ethylbenzene	0.069907	0.0646512	0.000307213	0.000105357	
m-Xylene	0.102188	0.0946328	0.000486438	0.000161402	
o-Xylene	0.0364256	0.0338921	0.000121842	3.7758E-05	
Nonane	0.00518176	0.00365304	0.000373752	5.55989E-05	
Decane	0.000905085	0.00067296	4.79156E-05	2.69761E-06	
Undecane	0	0	0	0	
Dodecane	0	0	0	0	

Mass Fraction	30 %	32 %	37 %	38 %	
Methane	0.020631	0.250838	46.6226	46.9682	
Ethane	0.0723225	0.791728	15.158	15.2593	
Propane	0.363012	1.98114	13.3728	13.4334	
n-Butane	1.04074	2.39921	5.78601	5.75759	
i-Pentane	0.880387	1.20594	1.7866	1.74327	
i-Butane	0.172002	0.470528	2.18286	2.18088	
n-Pentane	2.33965	2.90714	3.16803	3.05724	
Cyclohexane	3.43861	3.24103	0.420311	0.35047	
n-Hexane	1.18062	1.0314	0.570882	0.498799	
n-Heptane	1.96627	1.42493	0.435793	0.287232	
C8	0.082166	0.0548416	0.0112123	0.00410698	
Water	46.0511	41.5048	0.00383299	0.00386019	
N2	0.000477674	0.00167349	4.48837	4.52207	
CO2	0.0689284	2.177	5.40943	5.44817	
H2S	0.000622892	0.00598356	0.00144301	0.00145222	
Triethylene Glycol	0.00270196	0.000386733	0.000738704	1.16636E-05	
EG	0	0	0	0	
MeOH	0	0	0	0	
MDEA	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	
Benzene	32.7394	31.8279	0.498233	0.433191	

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek			Job: 253201.0051	
Location:	Lariat Compressor Station				
Flowsheet:	Lariat Dehy				
Mass Fraction	30 %	32 %	37 %	38 %	
Toluene	8.83918	8.06748	0.076401	0.0490389	
Ethylbenzene	0.239881	0.213681	0.00137835	0.000475084	
m-Xylene	0.350652	0.312774	0.00218246	0.000727803	
o-Xylene	0.124992	0.112018	0.000546658	0.000170261	
Nonane	0.0214806	0.014586	0.0020258	0.000302876	
Decane	0.00416229	0.00298089	0.000288114	1.63024E-05	
Undecane	0	0	0	0	
Dodecane	0	0	0	0	
Mass Flow	30 lb/h	32 lb/h	37 lb/h	38 lb/h	
Methane	0.0952802	1.2931	672.275	672.188	
Ethane	0.334007	4.08145	218.571	218.384	
Propane	1.6765	10.213	192.829	192.253	
n-Butane	4.80645	12.3682	83.4313	82.4001	
i-Pentane	4.06589	6.21676	25.7619	24.949	
i-Butane	0.794359	2.42562	31.4758	31.2117	
n-Pentane	10.8052	14.9867	45.6814	43.7538	
Cyclohexane	15.8806	16.7079	6.06068	5.01577	
n-Hexane	5.45246	5.31697	8.23183	7.13859	
n-Heptane	9.08085	7.34569	6.28392	4.11073	
C8	0.379467	0.282714	0.161676	0.0587773	
Water	212.678	213.962	0.0552698	0.0552453	
N2	0.00220604	0.00862704	64.72	64.7178	
CO2	0.318332	11.2227	78.0012	77.9718	
H2S	0.0028767	0.0308459	0.0208075	0.0207835	
Triethylene Glycol	0.0124785	0.00199365	0.0106517	0.000166924	
EG	0	0	0	0	
MeOH	0	0	0	0	
MDEA	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	
Benzene	151.2	164.076	7.18428	6.19963	
Toluene	40.822	41.5887	1.10166	0.701823	
Ethylbenzene	1.10785	1.10155	0.0198751	0.00679918	
m-Xylene	1.61942	1.61238	0.03147	0.010416	
o-Xylene	0.577251	0.577464	0.00788253	0.00243669	
Nonane	0.0992039	0.0751924	0.029211	0.00433462	
Decane	0.0192227	0.0153668	0.00415446	0.000233313	
Undecane	0	0	0	0	
Dodecane	0	0	0	0	
Stream Properties					
Property	Units	30	32	37	38
Temperature	°F	89.0779	90 *	121.94	53.3942
Pressure	psig	75	-2.12	983	125
Mole Fraction Vapor	%	0	7.88296	100	100
Mole Fraction Light Liquid	%	20.9289	18.5697	0	0
Mole Fraction Heavy Liquid	%	79.0711	73.5473	0	0
Phase Mole Fraction	%	100	100	100	100
Molecular Weight	lb/lbmol	30.939	32.1213	23.6626	23.5438
Mass Density	lb/ft^3	55.3987	0.86899	4.71044	0.626005
Molar Flow	lbmol/h	14.9271	16.0489	60.938	60.787
Mass Flow	lb/h	461.83	515.511	1441.95	1431.15
Vapor Volumetric Flow	ft^3/h	8.33648	593.23	306.118	2286.17
Liquid Volumetric Flow	gpm	1.03935	73.9612	38.1653	285.029
Std Vapor Volumetric Flow	MMSCFD	0.135951	0.146167	0.555 *	0.553624
Std Liquid Volumetric Flow	sgpm	1.02923	1.20014	7.522	7.48895
Compressibility		0.00850633	0.0788049	0.802977	0.954216
Specific Gravity		0.888245		0.817007	0.812906
API Gravity		25.7116			

* User Specified Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat Dehy	

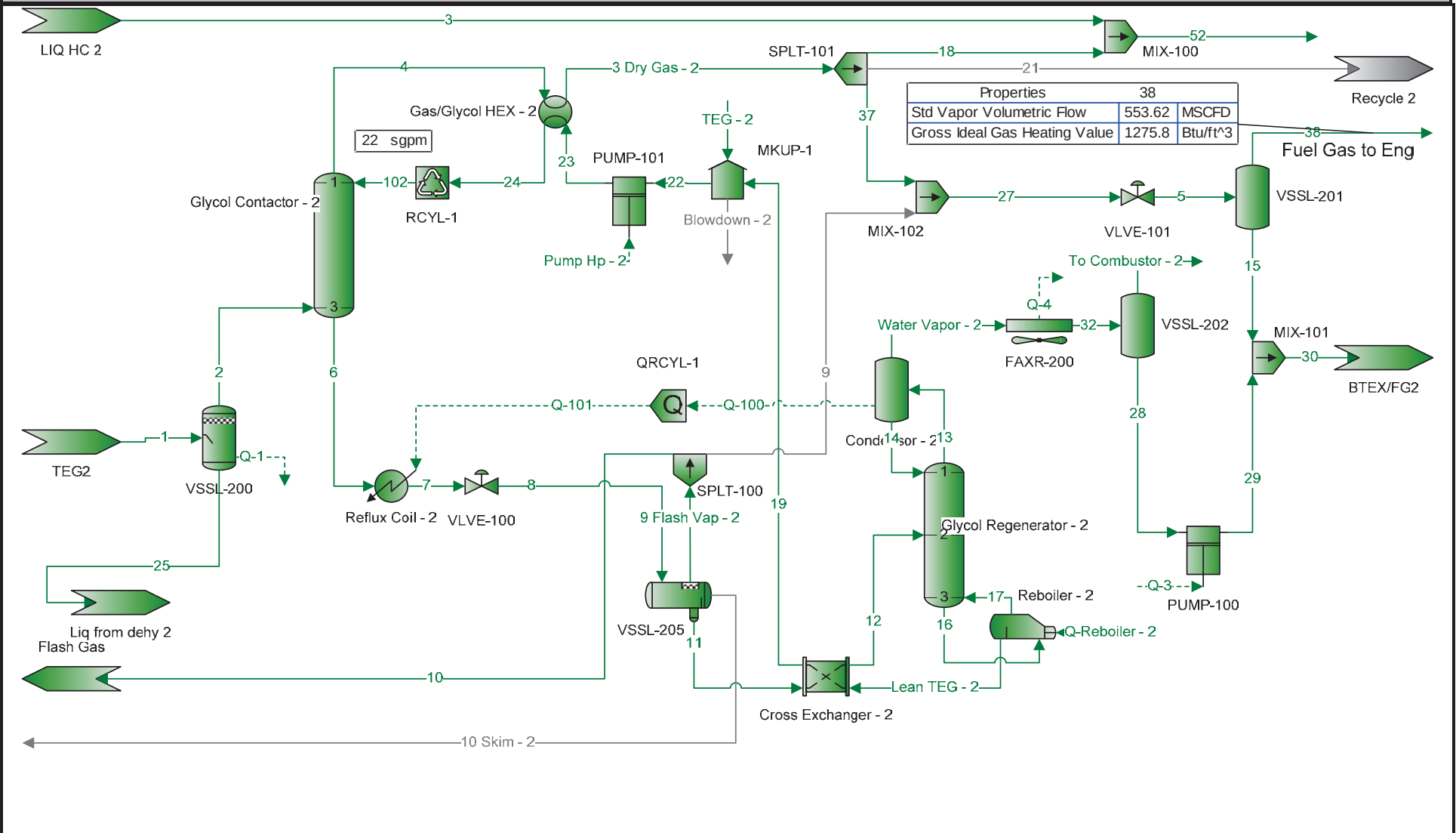
Stream Properties

Property	Units	30	32	37	38	
Enthalpy	Btu/h	-1.45605E+06	-1.52619E+06	-2.31413E+06	-2.30462E+06	
Mass Enthalpy	Btu/lb	-3152.78	-2960.55	-1604.86	-1610.32	
Mass Cp	Btu/(lb*°F)	0.675852	0.637834	0.616049	0.455699	
Ideal Gas CpCv Ratio		1.21681	1.20903	1.22104	1.23994	
Dynamic Viscosity	cP	0.601494		0.0139162	0.0105101	
Kinematic Viscosity	cSt	0.677815		0.184432	1.04811	
Thermal Conductivity	Btu/(h*ft*°F)	0.190634		0.022445	0.0160383	
Surface Tension	lbf/ft	0.00295319	?			
Net Ideal Gas Heating Value	Btu/ft^3	785.019	860.097	1165.97	1159.92	
Net Liquid Heating Value	Btu/lb	9042.54	9618.63	18626.2	18623.7	
Gross Ideal Gas Heating Value	Btu/ft^3	865.211	944.437	1282.23	1275.78	
Gross Liquid Heating Value	Btu/lb	10026.2	10615.1	20491.1	20491.6	

Remarks

Lariat dehy 2 Plant Schematic

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	



Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	Blowdown - 2	Lean TEG - 2	TEG - 2	To Combustor - 2	Water Vapor - 2
From Block	MKUP-1	Reboiler - 2	--	VSSL-202	Condensor - 2
To Block	--	Cross Exchanger - 2	MKUP-1	--	FAXR-200

Stream Composition

	Blowdown - 2	Lean TEG - 2	TEG - 2	To Combustor - 2	Water Vapor - 2
Mole Fraction	%	%	%	%	%
Methane	5.7522E-09	5.7522E-09	0 *	6.29426	0.502243
Ethane	9.30944E-08	9.30944E-08	0 *	10.2802	0.845764
Propane	5.84434E-07	5.84434E-07	0 *	16.2356	1.44315
n-Butane	2.07385E-06	2.07385E-06	0 *	11.6156	1.32592
i-Pentane	2.23564E-06	2.23564E-06	0 *	3.22746	0.536895
i-Butane	2.14823E-07	2.14823E-07	0 *	2.56203	0.260037
n-Pentane	7.24629E-06	7.24629E-06	0 *	6.65249	1.29429
Cyclohexane	0.000255766	0.000255766	0 *	1.74782	1.23701
n-Hexane	2.11168E-05	2.11168E-05	0 *	0.8732	0.384446
n-Heptane	2.33138E-05	2.33138E-05	0 *	0.343457	0.456784
C8	1.79608E-06	1.79608E-06	0 *	0.00422744	0.0154215
Water	4.57124	4.57124	0.827516 *	5.59948	74.0032
N2	1.85436E-12	1.85436E-12	0 *	0.0241612	0.00191889
CO2	8.00434E-07	8.00434E-07	0 *	19.5192	1.58893
H2S	9.46427E-08	9.46427E-08	0 *	0.0645329	0.00563951
Triethylene Glycol	95.3891	95.3891	99.1725 *	7.60712E-11	8.27209E-05
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0.0228302	0.0228302	0 *	13.9414	13.0883
Toluene	0.0138262	0.0138262	0 *	0.994743	2.81248
Ethylbenzene	0.00080361	0.00080361	0 *	0.00501687	0.0646512
m-Xylene	0.00120204	0.00120204	0 *	0.0103776	0.0946328
o-Xylene	0.000712724	0.000712724	0 *	0.00418772	0.0338921
Nonane	1.08412E-06	1.08412E-06	0 *	0.000529842	0.00365304
Decane	5.58764E-07	5.58764E-07	0 *	3.60185E-05	0.00067296
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

	Blowdown - 2	Lean TEG - 2	TEG - 2	To Combustor - 2	Water Vapor - 2
Mass Fraction	%	%	%	%	%
Methane	6.40359E-10	6.40359E-10	0 *	1.99332	0.250838
Ethane	1.9425E-08	1.9425E-08	0 *	6.10216	0.791728
Propane	1.78834E-07	1.78834E-07	0 *	14.1327	1.98114
n-Butane	8.36446E-07	8.36446E-07	0 *	13.3273	2.39921
i-Pentane	1.11931E-06	1.11931E-06	0 *	4.59675	1.20594
i-Butane	8.66444E-08	8.66444E-08	0 *	2.9396	0.470528
n-Pentane	3.62797E-06	3.62797E-06	0 *	9.4749	2.90714
Cyclohexane	0.00014937	0.00014937	0 *	2.90377	3.24103
n-Hexane	1.26279E-05	1.26279E-05	0 *	1.48545	1.0314
n-Heptane	1.62109E-05	1.62109E-05	0 *	0.679376	1.42493
C8	1.4237E-06	1.4237E-06	0 *	0.00953266	0.0548416
Water	0.57147	0.57147	0.1 *	1.99136	41.5048
N2	3.60478E-13	3.60478E-13	0 *	0.0133612	0.00167349
CO2	2.4445E-07	2.4445E-07	0 *	16.9579	2.177
H2S	2.23829E-08	2.23829E-08	0 *	0.0434164	0.00598356
Triethylene Glycol	99.4051	99.4051	99.9 *	2.25514E-10	0.000386736
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0

* User Specified Values

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Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Mass Fraction	Blowdown - 2 %	Lean TEG - 2 %	TEG - 2 %	To Combustor - 2 %	Water Vapor - 2 %
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0.012375	0.012375	0 *	21.4973	31.8279
Toluene	0.00884019	0.00884019	0 *	1.80931	8.06748
Ethylbenzene	0.000592032	0.000592032	0 *	0.0105142	0.213681
m-Xylene	0.000885565	0.000885565	0 *	0.021749	0.312774
o-Xylene	0.000525075	0.000525075	0 *	0.00877649	0.112018
Nonane	9.6487E-07	9.6487E-07	0 *	0.00134148	0.014586
Decane	5.51691E-07	5.51691E-07	0 *	0.000101166	0.00298089
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

Mass Flow	Blowdown - 2 lb/h	Lean TEG - 2 lb/h	TEG - 2 lb/h	To Combustor - 2 lb/h	Water Vapor - 2 lb/h
Methane	0	7.95321E-08	0 *	1.28521	1.2931
Ethane	0	2.41257E-06	0 *	3.93444	4.08145
Propane	0	2.2211E-05	0 *	9.11222	10.213
n-Butane	0	0.000103886	0 *	8.59295	12.3682
i-Pentane	0	0.000139017	0 *	2.96381	6.21676
i-Butane	0	1.07612E-05	0 *	1.89534	2.42562
n-Pentane	0	0.000450591	0 *	6.10905	14.9867
Cyclohexane	0	0.0185517	0 *	1.87224	16.7079
n-Hexane	0	0.00156837	0 *	0.95776	5.31697
n-Heptane	0	0.00201339	0 *	0.438035	7.34569
C8	0	0.000176822	0 *	0.00614628	0.282714
Water	0	70.9762	0.00134143 *	1.28395	213.962
N2	0	4.47711E-11	0 *	0.00861479	0.00862704
CO2	0	3.03605E-05	0 *	10.9338	11.2227
H2S	0	2.77994E-06	0 *	0.0279932	0.0308459
Triethylene Glycol	0	12346	1.34009 *	1.45403E-10	0.00199367
EG	0	0	0 *	0	0
MeOH	0	0	0 *	0	0
MDEA	0	0	0 *	0	0
2,2,4-Trimethylpentane	0	0	0 *	0	0
Benzene	0	1.53696	0 *	13.8606	164.076
Toluene	0	1.09795	0 *	1.16657	41.5887
Ethylbenzene	0	0.0735299	0 *	0.00677914	1.10155
m-Xylene	0	0.109987	0 *	0.0140229	1.61238
o-Xylene	0	0.0652139	0 *	0.00565874	0.577464
Nonane	0	0.000119836	0 *	0.000864931	0.0751924
Decane	0	6.85197E-05	0 *	6.52281E-05	0.0153668
Undecane	0	0	0 *	0	0
Dodecane	0	0	0 *	0	0

Stream Properties

Property	Units	Blowdown - 2	Lean TEG - 2	TEG - 2	To Combustor - 2	Water Vapor - 2
Temperature	°F		445	100 *	89.7106	193.425
Pressure	psig	1.88	2.38	12.18 *	-2.32	-1.12
Mole Fraction Vapor	%		0	0	100	100
Mole Fraction Light Liquid	%		100	100	0	0
Mole Fraction Heavy Liquid	%		0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	144.106	144.106	149.079	50.6569	32.1213
Mass Density	lb/ft^3		56.2397	69.4615	0.107825	0.0627957
Molar Flow	lbmol/h	0	86.1862	0.00899809	1.2728	16.0489
Mass Flow	lb/h	0	12419.9	1.34143	64.4761	515.511
Vapor Volumetric Flow	ft^3/h	0	220.839	0.0193119	597.972	8209.34

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Stream Properties

Property	Units	Blowdown - 2	Lean TEG - 2	TEG - 2	To Combustor - 2	Water Vapor - 2
Liquid Volumetric Flow	gpm	0	27.5332	0.00240771	74.5524	1023.5
Std Vapor Volumetric Flow	MMSCFD	0	0.784951	8.19512E-05	0.0115922	0.146167
Std Liquid Volumetric Flow	sgpm	0	21.9976	0.00237427	0.203957	1.20014
Compressibility			0.00450682	0.00960377	0.986195	0.990817
Specific Gravity			0.901728	1.11372	1.74905	1.10906
API Gravity			-6.8439	-7.0854		
Enthalpy	Btu/h	0	-2.61985E+07	-3085.4	-79501.3	-1.24302E+06
Mass Enthalpy	Btu/lb	-2223.5	-2109.39	-2300.09	-1233.04	-2411.24
Mass Cp	Btu/(lb*°F)		0.670517	0.542648	0.341997	0.394022
Ideal Gas CpCv Ratio			1.02747	1.03561	1.13043	1.18736
Dynamic Viscosity	cP		0.567739	21.1048	0.00942341	0.011959
Kinematic Viscosity	cSt		0.630209	18.9677	5.45594	11.889
Thermal Conductivity	Btu/(h*ft*°F)		0.102976 ?	0.112147	0.00990264	0.0125344
Surface Tension	lbf/ft		0.00184181 ?	0.00300898		
Net Ideal Gas Heating Value	Btu/ft^3	3604.41	3604.41	3745.75	2065.92	860.096
Net Liquid Heating Value	Btu/lb	9227.54	9227.54	9274.43	15309	9618.63
Gross Ideal Gas Heating Value	Btu/ft^3	3942.38	3942.38	4095.08	2221.54	944.437
Gross Liquid Heating Value	Btu/lb	10117.5	10117.5	10163.6	16475.2	10615.1

Remarks

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	1	2	3	3 Dry Gas - 2	4
From Block	TEG2	VSSL-200	LIQ HC 2	Gas/Glycol HEX - 2	Glycol Contactor - 2
To Block	VSSL-200	Glycol Contactor - 2	MIX-100	SPLT-101	Gas/Glycol HEX - 2

Stream Composition

Mole Fraction	1 %	2 %	3 %	3 Dry Gas - 2 %	4 %
Methane	68.5978	68.6039	0	68.7682	68.7682
Ethane	11.9096	11.9096	0.436266	11.9285	11.9285
Propane	7.1709	7.16977	2.01002	7.17611	7.17611
n-Butane	2.35765	2.35641	3.94628	2.35559	2.35559
i-Pentane	0.58716	0.586572	3.29888	0.58595	0.58595
i-Butane	0.888454	0.888106	0.902644	0.888683	0.888683
n-Pentane	1.04234	1.04107	8.57154	1.03902	1.03902
Cyclohexane	0.121178	0.120776	7.97941	0.118176	0.118176
n-Hexane	0.157873	0.157453	6.96323	0.156756	0.156756
n-Heptane	0.104347	0.103778	25.7371	0.102912	0.102912
C8	0.00237837	0.00235207	3.73071	0.00232265	0.00232265
Water	0.159827	0.159835	0.0193778	0.00503452	0.00503452
N2	3.78054	3.78097	0	3.79127	3.79127
CO2	2.91247	2.91262	0.0182051	2.90849	2.90849
H2S	0.00101741	0.00101739	0.000108691	0.00100189	0.00100189
Triethylene Glycol	2.44097E-20	2.24647E-20	9.97568E-09	0.000116397	0.000116397
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.179016	0.178524	10.1857	0.150931	0.150931
Toluene	0.0256655	0.0255146	8.14476	0.019621	0.019621
Ethylbenzene	0.000447419	0.000442105	0.934043	0.000307213	0.000307213
m-Xylene	0.000692143	0.000683647	1.60411	0.000486438	0.000486438
o-Xylene	0.000194618	0.000192072	0.537486	0.000121842	0.000121842
Nonane	0.000389734	0.000380795	4.9561	0.000373752	0.000373752
Decane	5.12975E-05	4.92237E-05	10.024	4.79156E-05	4.79156E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	1 %	2 %	3 %	3 Dry Gas - 2 %	4 %
Methane	46.4512	46.4621	0	46.6226	46.6226
Ethane	15.1159	15.118	0.138782	15.158	15.158
Propane	13.347	13.3469	0.937689	13.3728	13.3728
n-Butane	5.78412	5.78193	2.42657	5.78601	5.78601
i-Pentane	1.78814	1.78661	2.51801	1.7866	1.7866
i-Butane	2.17968	2.17915	0.555036	2.18286	2.18286
n-Pentane	3.17433	3.17094	6.5426	3.16803	3.16803
Cyclohexane	0.430471	0.429104	7.10454	0.420311	0.420311
n-Hexane	0.574258	0.572814	6.34828	0.570882	0.570882
n-Heptane	0.441338	0.438996	27.2834	0.435793	0.435793
C8	0.0114675	0.0113424	4.50846	0.0112123	0.0112123
Water	0.121537	0.12156	0.00369324	0.00383299	0.00383299
N2	4.47029	4.47145	0	4.48837	4.48837
CO2	5.41033	5.41141	0.00847623	5.40943	5.40943
H2S	0.00146361	0.00146378	3.91894E-05	0.00144301	0.00144301
Triethylene Glycol	1.54729E-19	1.4242E-19	1.58488E-08	0.000738704	0.000738704
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Mass Fraction	1 %	2 %	3 %	3 Dry Gas - 2 %	4 %	
Benzene	0.590236	0.588699	8.41722	0.498233	0.498233	
Toluene	0.0998176	0.099245	7.93928	0.076401	0.076401	
Ethylbenzene	0.00200499	0.00198146	1.04908	0.00137835	0.00137835	
m-Xylene	0.00310165	0.00306402	1.80168	0.00218246	0.00218246	
o-Xylene	0.000872128	0.000860842	0.603686	0.000546658	0.000546658	
Nonane	0.00210989	0.00206179	6.72476	0.0020258	0.0020258	
Decane	0.000308078	0.000295667	15.0887	0.000288114	0.000288114	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	1 lb/h	2 lb/h	3 lb/h	3 Dry Gas - 2 lb/h	4 lb/h	
Methane	84581.3	84577.5	0	84538.7	84538.7	
Ethane	27523.9	27520.1	10.1861	27485.3	27485.3	
Propane	24303.1	24296.1	68.823	24248.3	24248.3	
n-Butane	10532.1	10525.2	178.101	10491.5	10491.5	
i-Pentane	3255.96	3252.26	184.813	3239.56	3239.56	
i-Butane	3968.9	3966.82	40.7377	3958.09	3958.09	
n-Pentane	5780.03	5772.22	480.204	5744.44	5744.44	
Cyclohexane	783.828	781.121	521.448	762.131	762.131	
n-Hexane	1045.65	1042.72	465.942	1035.15	1035.15	
n-Heptane	803.616	799.129	2002.51	790.204	790.204	
C8	20.8808	20.6472	330.905	20.3308	20.3308	
Water	221.302	221.283	0.271071	6.95018	6.95018	
N2	8139.79	8139.62	0	8138.55	8138.55	
CO2	9851.47	9850.67	0.622125	9808.67	9808.67	
H2S	2.66503	2.6646	0.00287636	2.61654	2.61654	
Triethylene Glycol	2.8174E-16	2.59255E-16	1.16325E-06	1.33946	1.33946	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	1074.74	1071.64	617.794	903.424	903.424	
Toluene	181.754	180.661	582.715	138.534	138.534	
Ethylbenzene	3.6508	3.60696	76.9991	2.4993	2.4993	
m-Xylene	5.64768	5.57761	132.237	3.95736	3.95736	
o-Xylene	1.58803	1.56704	44.3084	0.991229	0.991229	
Nonane	3.84181	3.75319	493.574	3.67329	3.67329	
Decane	0.560968	0.538218	1107.46	0.522423	0.522423	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	1	2	3	3 Dry Gas - 2	4
Temperature	°F	110	109.892	88.7314	121.94	112.61
Pressure	psig	995	993	1200	983	988
Mole Fraction Vapor	%	100	100	0	100	100
Mole Fraction Light Liquid	%	0	0	100	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.691	23.6876	94.5231	23.6626	23.6626
Mass Density	lb/ft^3	4.9989	4.98753	44.9846	4.71044	4.89818
Molar Flow	lbmol/h	7685.87	7684.84	77.6493	7662.96	7662.96
Mass Flow	lb/h	182086	182035	7339.65	181325	181325
Vapor Volumetric Flow	ft^3/h	36425.3	36498.1	163.159	38494.4	37018.9
Liquid Volumetric Flow	gpm	4541.33	4550.42	20.3419	4799.3	4615.35
Std Vapor Volumetric Flow	MMSCFD	70	69.9906	0.7072	69.7913	69.7913
Std Liquid Volumetric Flow	sgpm	948.108	947.924	20.3767	945.893	945.893
Compressibility		0.782732	0.782998	0.43369	0.802977	0.788723
Soecific Gravity		0.81799	0.817871	0.721269	0.817007	0.817007

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	1	2	3	3 Dry Gas - 2	4
API Gravity				61.0349		
Enthalpy	Btu/h	-2.94097E+08	-2.94044E+08	-5.35313E+06	-2.91002E+08	-2.92088E+08
Mass Enthalpy	Btu/lb	-1615.15	-1615.31	-729.344	-1604.86	-1610.85
Mass Cp	Btu/(lb*°F)	0.629837	0.629432	0.492826	0.616049	0.625328
Ideal Gas CpCv Ratio		1.22396	1.22402	1.06043	1.22104	1.22342
Dynamic Viscosity	cP	0.0139225	0.0139127	0.45512	0.0139162	0.0138912
Kinematic Viscosity	cSt	0.173868	0.174143	0.631597	0.184432	0.177046
Thermal Conductivity	Btu/(h*ft*°F)	0.0222233	0.022209	0.0709911	0.022445	0.0222444
Surface Tension	lbf/ft			0.00101982		
Net Ideal Gas Heating Value	Btu/ft^3	1165.76	1165.58	4716.37	1165.97	1165.97
Net Liquid Heating Value	Btu/lb	18598.9	18598.7	18770	18626.2	18626.2
Gross Ideal Gas Heating Value	Btu/ft^3	1281.97	1281.78	5058.08	1282.23	1282.23
Gross Liquid Heating Value	Btu/lb	20460.9	20460.8	20142.2	20491.1	20491.1
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	5	6	7	8	9
From Block	VLVE-101	Glycol Contactor - 2	Reflux Coil - 2	VLVE-100	SPLT-100
To Block	VSSL-201	Reflux Coil - 2	VLVE-100	VSSL-205	MIX-102

Stream Composition

Mole Fraction	5 %	6 %	7 %	8 %	9 %
Methane	68.7682	2.2409	2.2409	2.2409	40.0778
Ethane	11.9285	1.07007	1.07007	1.07007	17.4732
Propane	7.17611	1.00276	1.00276	1.00276	14.5868
n-Butane	2.35559	0.535797	0.535797	0.535797	6.26983
i-Pentane	0.58595	0.162858	0.162858	0.162858	1.53794
i-Butane	0.888683	0.138946	0.138946	0.138946	1.85617
n-Pentane	1.03902	0.356306	0.356306	0.356306	3.03602
Cyclohexane	0.118176	0.208986	0.208986	0.208986	0.464216
n-Hexane	0.156756	0.0812879	0.0812879	0.0812879	0.447388
n-Heptane	0.102912	0.0824254	0.0824254	0.0824254	0.269672
C8	0.00232265	0.00256372	0.00256372	0.00256372	0.00503687
Water	0.00503452	14.6525	14.6525	14.6525	0.33318
N2	3.79127	0.0353172	0.0353172	0.0353172	0.648112
CO2	2.90849	0.883136	0.883136	0.883136	11.9732
H2S	0.00100189	0.00130464	0.00130464	0.00130464	0.00864193
Triethylene Glycol	0.000116397	76.0682	76.0682	76.0682	0.000171529
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.150931	2.01082	2.01082	2.01082	0.907702
Toluene	0.019621	0.434095	0.434095	0.434095	0.10045
Ethylbenzene	0.000307213	0.010314	0.010314	0.010314	0.00134565
m-Xylene	0.000486438	0.0151149	0.0151149	0.0151149	0.00192127
o-Xylene	0.000121842	0.0056292	0.0056292	0.0056292	0.000518545
Nonane	0.000373752	0.000577479	0.000577479	0.000577479	0.000631908
Decane	4.79156E-05	0.000103765	0.000103765	0.000103765	6.26744E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	5 %	6 %	7 %	8 %	9 %
Methane	46.6226	0.295884	0.295884	0.295884	19.1858
Ethane	15.158	0.264825	0.264825	0.264825	15.6783
Propane	13.3728	0.363931	0.363931	0.363931	19.1938
n-Butane	5.78601	0.256313	0.256313	0.256313	10.8744
i-Pentane	1.7866	0.096709	0.096709	0.096709	3.31112
i-Butane	2.18286	0.0664685	0.0664685	0.0664685	3.21934
n-Pentane	3.16803	0.211583	0.211583	0.211583	6.53641
Cyclohexane	0.420311	0.14476	0.14476	0.14476	1.16581
n-Hexane	0.570882	0.057655	0.057655	0.057655	1.15047
n-Heptane	0.435793	0.0679776	0.0679776	0.0679776	0.80634
C8	0.0112123	0.00241031	0.00241031	0.00241031	0.0171689
Water	0.00383299	2.1726	2.1726	2.1726	0.179113
N2	4.48837	0.00814293	0.00814293	0.00814293	0.541779
CO2	5.40943	0.319891	0.319891	0.319891	15.724
H2S	0.00144301	0.000365956	0.000365956	0.000365956	0.00878876
Triethylene Glycol	0.000738704	94.0207	94.0207	94.0207	0.000768663
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.498233	1.29276	1.29276	1.29276	2.11576

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Mass Fraction	5 %	6 %	7 %	8 %	9 %	
Toluene	0.076401	0.329196	0.329196	0.329196	0.276182	
Ethylbenzene	0.00137835	0.0090123	0.0090123	0.0090123	0.00426305	
m-Xylene	0.00218246	0.0132074	0.0132074	0.0132074	0.00608662	
o-Xylene	0.000546658	0.00491877	0.00491877	0.00491877	0.00164276	
Nonane	0.0020258	0.000609592	0.000609592	0.000609592	0.00241843	
Decane	0.000288114	0.000121514	0.000121514	0.000121514	0.0002661	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	5 lb/h	6 lb/h	7 lb/h	8 lb/h	9 lb/h	
Methane	672.275	38.8531	38.8531	38.8531	0	
Ethane	218.571	34.7748	34.7748	34.7748	0	
Propane	192.829	47.7886	47.7886	47.7886	0	
n-Butane	83.4313	33.657	33.657	33.657	0	
i-Pentane	25.7619	12.6991	12.6991	12.6991	0	
i-Butane	31.4758	8.72812	8.72812	8.72812	0	
n-Pentane	45.6814	27.7834	27.7834	27.7834	0	
Cyclohexane	6.06068	19.0088	19.0088	19.0088	0	
n-Hexane	8.23183	7.5708	7.5708	7.5708	0	
n-Heptane	6.28392	8.92627	8.92627	8.92627	0	
C8	0.161676	0.316503	0.316503	0.316503	0	
Water	0.0552698	285.289	285.289	285.289	0	
N2	64.72	1.06927	1.06927	1.06927	0	
CO2	78.0012	42.0056	42.0056	42.0056	0	
H2S	0.0208075	0.0480544	0.0480544	0.0480544	0	
Triethylene Glycol	0.0106517	12346	12346	12346	0	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	7.18428	169.755	169.755	169.755	0	
Toluene	1.10166	43.2274	43.2274	43.2274	0	
Ethylbenzene	0.0198751	1.18342	1.18342	1.18342	0	
m-Xylene	0.03147	1.73429	1.73429	1.73429	0	
o-Xylene	0.00788253	0.645894	0.645894	0.645894	0	
Nonane	0.029211	0.0800468	0.0800468	0.0800468	0	
Decane	0.00415446	0.0159563	0.0159563	0.0159563	0	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	5	6	7	8	9
Temperature	°F	53.3942	111.775	116.427	119.542	
Pressure	psig	125 *	993	988	125 *	40
Mole Fraction Vapor	%	99.7521	0	0.012322	4.1459	
Mole Fraction Light Liquid	%	0.247864	100	99.9877	95.8541	
Mole Fraction Heavy Liquid	%	0	0	0	0	
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.6626	121.499	121.499	121.499	33.5115
Mass Density	lb/ft^3	0.630656	66.5895	66.4154	34.325	
Molar Flow	lbmol/h	60.938	108.077	108.077	108.077	0
Mass Flow	lb/h	1441.95	13131.2	13131.2	13131.2	0
Vapor Volumetric Flow	ft^3/h	2286.43	197.196	197.713	382.555	0
Liquid Volumetric Flow	gpm	285.061	24.5855	24.65	47.6952	0
Std Vapor Volumetric Flow	MMSCFD	0.555	0.984323	0.984323	0.984323	0
Std Liquid Volumetric Flow	sgpm	7.522	24.0316	24.0316	24.0316	0
Compressibility		0.951958	0.299818	0.296697	0.0795506	
Specific Gravity			1.06767			
API Graviti			-2.27819			

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		Process Streams Report All Streams Tabulated by Total Phase					
Client Name:	Delek				Job: 253201.0051		
Location:	Lariat Compressor Station						
Flowsheet:	Lariat dehy 2						
Stream Properties							
Property	Units	5	6	7	8	9	
Enthalpy	Btu/h	-2.31413E+06	-3.05852E+07	-3.0551E+07	-3.0551E+07	0	
Mass Enthalpy	Btu/lb	-1604.86	-2329.2	-2326.59	-2326.59	-1602.27	
Mass Cp	Btu/(lb*°F)	0.45608	0.562033	0.564231	0.564691		
Ideal Gas CpCv Ratio		1.23885	1.04337	1.04309	1.0429		
Dynamic Viscosity	cP		8.94875				
Kinematic Viscosity	cSt		8.3895				
Thermal Conductivity	Btu/(h*ft*°F)		0.110931				
Surface Tension	lbf/ft		0.00272398				
Net Ideal Gas Heating Value	Btu/ft^3	1165.97	3082.56	3082.56	3082.56	1489.27	
Net Liquid Heating Value	Btu/lb	18626.2	9355.02	9355.02	9355.02	16747.9	
Gross Ideal Gas Heating Value	Btu/ft^3	1282.23	3371.95	3371.95	3371.95	1625.33	
Gross Liquid Heating Value	Btu/lb	20491.1	10258.9	10258.9	10258.9	18289.1	
Remarks							

		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Connections						
	9 Flash Vap - 2	10	10 Skim - 2	11	12	
From Block	VSSL-205	SPLT-100	VSSL-205	VSSL-205	Cross Exchanger - 2	
To Block	SPLT-100	Flash Gas	--	Cross Exchanger - 2	Glycol Regenerator - 2	
Stream Composition						
	9 Flash Vap - 2	10	10 Skim - 2	11	12	
Mole Fraction	%	%	%	%	%	
Methane	40.0778	40.0778		0.0788424	0.0788424	
Ethane	17.4732	17.4732		0.132768	0.132768	
Propane	14.5868	14.5868		0.226547	0.226547	
n-Butane	6.26983	6.26983		0.208146	0.208146	
i-Pentane	1.53794	1.53794		0.084284	0.084284	
i-Butane	1.85617	1.85617		0.040821	0.040821	
n-Pentane	3.03602	3.03602		0.203184	0.203184	
Cyclohexane	0.464216	0.464216		0.194402	0.194402	
n-Hexane	0.447388	0.447388		0.0603683	0.0603683	
n-Heptane	0.269672	0.269672		0.0717259	0.0717259	
C8	0.00503687	0.00503687		0.0024224	0.0024224	
Water	0.33318	0.33318		15.4707	15.4707	
N2	0.648112	0.648112		0.000301228	0.000301228	
CO2	11.9732	11.9732		0.249431	0.249431	
H2S	0.00864193	0.00864193		0.000885373	0.000885373	
Triethylene Glycol	0.000171529	0.000171529		80.4149	80.4149	
EG	0	0		0	0	
MeOH	0	0		0	0	
MDEA	0	0		0	0	
2,2,4-Trimethylpentane	0	0		0	0	
Benzene	0.907702	0.907702		2.07385	2.07385	
Toluene	0.10045	0.10045		0.45316	0.45316	
Ethylbenzene	0.00134565	0.00134565		0.0108264	0.0108264	
m-Xylene	0.00192127	0.00192127		0.0158689	0.0158689	
o-Xylene	0.000518545	0.000518545		0.00592123	0.00592123	
Nonane	0.000631908	0.000631908		0.000574369	0.000574369	
Decane	6.26744E-05	6.26744E-05		0.000106113	0.000106113	
Undecane	0	0		0	0	
Dodecane	0	0		0	0	
	9 Flash Vap - 2	10	10 Skim - 2	11	12	
Mass Fraction	%	%	%	%	%	
Methane	19.1858	19.1858		0.00999653	0.00999653	
Ethane	15.6783	15.6783		0.0315525	0.0315525	
Propane	19.1938	19.1938		0.0789536	0.0789536	
n-Butane	10.8744	10.8744		0.0956155	0.0956155	
i-Pentane	3.31112	3.31112		0.048061	0.048061	
i-Butane	3.21934	3.21934		0.0187518	0.0187518	
n-Pentane	6.53641	6.53641		0.115861	0.115861	
Cyclohexane	1.16581	1.16581		0.129307	0.129307	
n-Hexane	1.15047	1.15047		0.041116	0.041116	
n-Heptane	0.80634	0.80634		0.0568029	0.0568029	
C8	0.0171689	0.0171689		0.00218695	0.00218695	
Water	0.179113	0.179113		2.20277	2.20277	
N2	0.541779	0.541779		6.6693E-05	6.6693E-05	
CO2	15.724	15.724		0.0867593	0.0867593	
H2S	0.00878876	0.00878876		0.000238482	0.000238482	
Triethylene Glycol	0.000768663	0.000768663		95.4436	95.4436	

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
	9 Flash Vap - 2	10	10 Skim - 2	11	12	
Mass Fraction	%	%	%	%	%	
EG	0	0		0	0	
MeOH	0	0		0	0	
MDEA	0	0		0	0	
2,2,4-Trimethylpentane	0	0		0	0	
Benzene	2.11576	2.11576		1.28031	1.28031	
Toluene	0.276182	0.276182		0.329998	0.329998	
Ethylbenzene	0.00426305	0.00426305		0.00908418	0.00908418	
m-Xylene	0.00608662	0.00608662		0.0133151	0.0133151	
o-Xylene	0.00164276	0.00164276		0.00496835	0.00496835	
Nonane	0.00241843	0.00241843		0.000582216	0.000582216	
Decane	0.0002661	0.0002661		0.000119326	0.000119326	
Undecane	0	0		0	0	
Dodecane	0	0		0	0	
	9 Flash Vap - 2	10	10 Skim - 2	11	12	
Mass Flow	lb/h	lb/h	lb/h	lb/h	lb/h	
Methane	37.56	37.56	0	1.2931	1.2931	
Ethane	30.6933	30.6933	0	4.08145	4.08145	
Propane	37.5756	37.5756	0	10.213	10.213	
n-Butane	21.2887	21.2887	0	12.3683	12.3683	
i-Pentane	6.48216	6.48216	0	6.2169	6.2169	
i-Butane	6.30249	6.30249	0	2.42563	2.42563	
n-Pentane	12.7963	12.7963	0	14.9871	14.9871	
Cyclohexane	2.28231	2.28231	0	16.7264	16.7264	
n-Hexane	2.25226	2.25226	0	5.31854	5.31854	
n-Heptane	1.57857	1.57857	0	7.34771	7.34771	
C8	0.0336114	0.0336114	0	0.282891	0.282891	
Water	0.350648	0.350648	0	284.938	284.938	
N2	1.06064	1.06064	0	0.00862704	0.00862704	
CO2	30.7829	30.7829	0	11.2227	11.2227	
H2S	0.0172057	0.0172057	0	0.0308487	0.0308487	
Triethylene Glycol	0.00150481	0.00150481	0	12346	12346	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	4.14201	4.14201	0	165.613	165.613	
Toluene	0.540681	0.540681	0	42.6867	42.6867	
Ethylbenzene	0.00834575	0.00834575	0	1.17508	1.17508	
m-Xylene	0.0119158	0.0119158	0	1.72237	1.72237	
o-Xylene	0.00321602	0.00321602	0	0.642678	0.642678	
Nonane	0.00473456	0.00473456	0	0.0753122	0.0753122	
Decane	0.000520944	0.000520944	0	0.0154353	0.0154353	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	9 Flash Vap - 2	10	10 Skim - 2	11	12
Temperature	°F	119.129	119.129		119.129	300 *
Pressure	psig	40 *	40	40	40	39.5
Mole Fraction Vapor	%	100	100		0	0.826845
Mole Fraction Light Liquid	%	0	0		100	99.1732
Mole Fraction Heavy Liquid	%	0	0		0	0
Phase Mole Fraction	%	100	100		100	100
Molecular Weight	lb/lbmol	33.5115	33.5115		126.526	126.526
Mass Density	lb/ft^3	0.302306	0.302306		67.658	38.6657
Molar Flow	lbmol/h	5.84186	5.84186	0	102.235	102.235

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	9 Flash Vap - 2	10	10 Skim - 2	11	12
Mass Flow	lb/h	195.77	195.77	0	12935.4	12935.4
Vapor Volumetric Flow	ft^3/h	647.587	647.587	0	191.189	334.546
Liquid Volumetric Flow	gpm	80.7381	80.7381	0	23.8365	41.7096
Std Vapor Volumetric Flow	MMSCFD	0.0532055	0.0532055	0	0.931118	0.931118
Std Liquid Volumetric Flow	sgpm	0.833874	0.833874	0	23.1978	23.1978
Compressibility		0.976137	0.976137		0.0164674	0.0217537
Specific Gravity		1.15707	1.15707		1.08481	
API Gravity					-4.70349	
Enthalpy	Btu/h	-313676	-313676		-3.02373E+07	-2.88201E+07
Mass Enthalpy	Btu/lb	-1602.27	-1602.27		-2337.55	-2227.99
Mass Cp	Btu/(lb*°F)	0.417274	0.417274		0.565865	0.636963
Ideal Gas CpCv Ratio		1.16873	1.16873		1.04117	1.03433
Dynamic Viscosity	cP	0.0108814	0.0108814		11.1154	
Kinematic Viscosity	cSt	2.24707	2.24707		10.2562	
Thermal Conductivity	Btu/(h*ft*°F)	0.0151378	0.0151378		0.113426	
Surface Tension	lbf/ft				0.00286961	
Net Ideal Gas Heating Value	Btu/ft^3	1489.27	1489.27		3173.61	3173.61
Net Liquid Heating Value	Btu/lb	16747.9	16747.9		9243.13	9243.13
Gross Ideal Gas Heating Value	Btu/ft^3	1625.33	1625.33		3471.76	3471.76
Gross Liquid Heating Value	Btu/lb	18289.1	18289.1		10137.4	10137.4
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	13	14	15	16	17
From Block	Glycol Regenerator - 2	Condensor - 2	VSSL-201	Glycol Regenerator - 2	Reboiler - 2
To Block	Condensor - 2	Glycol Regenerator - 2	MIX-101	Reboiler - 2	Glycol Regenerator - 2

Stream Composition

Mole Fraction	13 %	14 %	15 %	16 %	17 %
Methane	0.456586	7.92065E-06	3.60693	1.27809E-06	6.65696E-06
Ethane	0.768877	1.37885E-05	4.11728	1.10981E-05	5.76226E-05
Propane	1.31196	1.71044E-05	8.64432	4.82185E-05	0.000249595
n-Butane	1.20539	1.53489E-05	11.7466	0.000117297	0.000604411
i-Pentane	0.488087	3.22575E-06	7.4598	9.38296E-05	0.000481049
i-Butane	0.236398	1.40255E-06	3.00804	1.42306E-05	7.34831E-05
n-Pentane	1.17662	6.84898E-06	17.6884	0.000283756	0.00145272
Cyclohexane	1.12456	3.05794E-05	8.21999	0.00358326	0.0176505
n-Hexane	0.349497	1.20777E-06	8.39911	0.000392628	0.00196322
n-Heptane	0.415258	7.96004E-07	14.3589	0.000501586	0.00252352
C8	0.0140196	1.70719E-08	0.596397	3.17237E-05	0.000158245
Water	76.3536	99.8575	0.000900171	19.2679	81.3988
N2	0.00174445	1.57448E-08	0.0518476	8.07432E-10	4.21306E-09
CO2	1.44451	0.000307321	0.442683	6.55009E-05	0.000339026
H2S	0.00512715	3.57834E-06	0.000465745	2.98705E-06	1.52149E-05
Triethylene Glycol	0.0121436	0.132752	0.046224	80.4165	17.1191
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	11.8992	0.00784103	8.3457	0.20187	0.958771
Toluene	2.55693	0.00141077	2.87306	0.0944872	0.435487
Ethylbenzene	0.0587759	2.22013E-05	0.0815436	0.00428203	0.0189873
m-Xylene	0.0860327	3.10117E-05	0.131296	0.00645209	0.028647
o-Xylene	0.0308126	1.7879E-05	0.0339611	0.00335146	0.0145069
Nonane	0.00332094	1.39096E-09	0.128414	1.47589E-05	7.25702E-05
Decane	0.000611782	1.11605E-10	0.0182458	5.8069E-06	2.79937E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	13 %	14 %	15 %	16 %	17 %
Methane	0.23739	6.98296E-06	0.809613	1.64689E-07	2.56654E-06
Ethane	0.749283	2.27847E-05	1.73221	2.68042E-06	4.16402E-05
Propane	1.87492	4.14487E-05	5.33329	1.70782E-05	0.000264504
n-Butane	2.27058	4.90261E-05	9.5526	5.476E-05	0.000844259
i-Pentane	1.14129	1.27899E-05	7.53053	5.43754E-05	0.000834102
i-Butane	0.445302	4.4799E-06	2.44622	6.64352E-06	0.000102643
n-Pentane	2.75129	2.71558E-05	17.8561	0.00016444	0.0025189
Cyclohexane	3.06728	0.00014143	9.67929	0.00242223	0.0356993
n-Hexane	0.976102	5.71973E-06	10.1271	0.000271768	0.00406586
n-Heptane	1.34854	4.38329E-06	20.131	0.000403697	0.00607691
C8	0.0519014	1.07168E-07	0.95319	2.91066E-05	0.000434415
Water	44.5799	98.8621	0.000226901	2.7881	35.2419
N2	0.00158377	2.42388E-08	0.0203219	1.81679E-10	2.83638E-09
CO2	2.06032	0.00074327	0.272589	2.31541E-05	0.000358576
H2S	0.00566312	6.70195E-06	0.00022209	8.17687E-07	1.24618E-05
Triethylene Glycol	0.0591026	1.09557	0.0971244	96.9998	61.7838
EG	0	0	0	0	0
MeOH	0	0	0	0	0

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Mass Fraction	13 %	14 %	15 %	16 %	17 %	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	30.1233	0.0336588	9.12114	0.126655	1.79983	
Toluene	7.63534	0.00714343	3.70386	0.0699275	0.964311	
Ethylbenzene	0.202232	0.000129529	0.121127	0.00365145	0.0484446	
m-Xylene	0.296015	0.000180932	0.19503	0.00550194	0.0730906	
o-Xylene	0.106018	0.000104312	0.0504466	0.00285791	0.0370132	
Nonane	0.013804	9.80389E-09	0.230438	1.52042E-05	0.000223683	
Decane	0.00282107	8.72655E-10	0.0363229	6.63632E-06	9.57218E-05	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	13 lb/h	14 lb/h	15 lb/h	16 lb/h	17 lb/h	
Methane	1.2931	2.03928E-06	0.0873997	2.18513E-05	2.17718E-05	
Ethane	4.08145	6.65397E-06	0.186996	0.000355644	0.000353231	
Propane	10.213	1.21045E-05	0.575742	0.00226598	0.00224377	
n-Butane	12.3682	1.43174E-05	1.03123	0.00726568	0.00716179	
i-Pentane	6.21676	3.73513E-06	0.812939	0.00721465	0.00707563	
i-Butane	2.42562	1.30829E-06	0.264075	0.000881477	0.000870716	
n-Pentane	14.9867	7.9305E-06	1.92761	0.0218183	0.0213677	
Cyclohexane	16.7079	4.13026E-05	1.0449	0.321386	0.302835	
n-Hexane	5.31697	1.67037E-06	1.09325	0.0360588	0.0344904	
n-Heptane	7.34569	1.28008E-06	2.17319	0.0535634	0.0515501	
C8	0.282714	3.12969E-08	0.102899	0.00386193	0.00368511	
Water	242.833	28.8714	2.44945E-05	369.931	298.955	
N2	0.00862704	7.0786E-09	0.0021938	2.41056E-08	2.40608E-08	
CO2	11.2229	0.000217062	0.0294266	0.00307213	0.00304177	
H2S	0.0308479	1.95721E-06	2.39751E-05	0.000108492	0.000105713	
Triethylene Glycol	0.321941	0.319947	0.0104848	12870.2	524.108	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	164.086	0.00982959	0.984649	16.8048	15.2679	
Toluene	41.5908	0.00208614	0.399841	9.27813	8.18019	
Ethylbenzene	1.10159	3.78272E-05	0.0130759	0.484482	0.410952	
m-Xylene	1.61244	5.28388E-05	0.021054	0.73001	0.620023	
o-Xylene	0.577494	3.04629E-05	0.00544584	0.379194	0.31398	
Nonane	0.0751924	2.86309E-09	0.0248764	0.00201733	0.00189749	
Decane	0.0153668	2.54847E-10	0.00392114	0.000880521	0.000812002	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	13	14	15	16	17
Temperature	°F	219.753	193.425	53.3942	325.188	445 *
Pressure	psig	1.88	-1.12	125	2.38	2.38
Mole Fraction Vapor	%	100	0	0	0	100
Mole Fraction Light Liquid	%	0	100	100	100	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	30.8554	18.1967	71.4711	124.499	41.6101
Mass Density	lb/ft^3	0.0708509	60.3818	41.7992	61.0604	0.0739115
Molar Flow	lbmol/h	17.6538	1.60489	0.151043	106.573	20.3867
Mass Flow	lb/h	544.715	29.2037	10.7952	13268.2	848.293
Vapor Volumetric Flow	ft^3/h	7688.18	0.48365	0.258264	217.297	11477.2
Liquid Volumetric Flow	gpm	958.527	0.0602992	0.0321992	27.0915	1430.92
Std Vapor Volumetric Flow	MMSCFD	0.160784	0.0146167	0.00137565	0.970625	0.185674
Std Liquid Volumetric Flow	sgpm	1.25845	0.0583103	0.033046	23.5803	1.58268

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	13	14	15	16	17
Compressibility		0.990057	0.000583735	0.0433822	0.00413368	0.990189
Specific Gravity		1.06536	0.968143	0.670194	0.979023	1.43669
API Gravity			9.75211	80.8243	-6.07386	
Enthalpy	Btu/h	-1.40318E+06	-194378	-9510.53	-3.0268E+07	-2.65678E+06
Mass Enthalpy	Btu/lb	-2575.99	-6655.96	-880.992	-2281.24	-3131.91
Mass Cp	Btu/(lb*°F)	0.405641	0.987876	0.506555	0.651482	0.498733
Ideal Gas CpCv Ratio		1.19	1.31992	1.08454	1.03421	1.10641
Dynamic Viscosity	cP	0.0125195	0.320922	0.290624	1.20493	0.0157193
Kinematic Viscosity	cSt	11.0311	0.331797	0.434052	1.23191	13.277
Thermal Conductivity	Btu/(h*ft*°F)	0.0134508	0.383074	0.0691758	0.112823	?
Surface Tension	lbf/ft		0.00411959	?	0.00118089	?
Net Ideal Gas Heating Value	Btu/ft^3	782.393	5.36238	3601.55	3049.54	703.765
Net Liquid Heating Value	Btu/lb	9052.62	-938.792	18959.7	9013.45	5878.93
Gross Ideal Gas Heating Value	Btu/ft^3	863.678	56.0828	3876.53	3342.7	807.505
Gross Liquid Heating Value	Btu/lb	10052.4	118.962	20420.1	9907.03	6825.03
Remarks						

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	18	19	21	22	23
From Block	SPLT-101	Cross Exchanger - 2	SPLT-101	MKUP-1	PUMP-101
To Block	MIX-100	MKUP-1	Recycle 2	PUMP-101	Gas/Glycol HEX - 2

Stream Composition

Mole Fraction	18 %	19 %	21 %	22 %	23 %
Methane	68.7682	5.7522E-09	68.7682	0	0
Ethane	11.9285	9.30944E-08	11.9285	9.30847E-08	9.30847E-08
Propane	7.17611	5.84434E-07	7.17611	5.84373E-07	5.84373E-07
n-Butane	2.35559	2.07385E-06	2.35559	2.07363E-06	2.07363E-06
i-Pentane	0.58595	2.23564E-06	0.58595	2.23541E-06	2.23541E-06
i-Butane	0.888683	2.14823E-07	0.888683	2.148E-07	2.148E-07
n-Pentane	1.03902	7.24629E-06	1.03902	7.24554E-06	7.24554E-06
Cyclohexane	0.118176	0.000255766	0.118176	0.000255739	0.000255739
n-Hexane	0.156756	2.11168E-05	0.156756	2.11146E-05	2.11146E-05
n-Heptane	0.102912	2.33138E-05	0.102912	2.33114E-05	2.33114E-05
C8	0.00232265	1.79608E-06	0.00232265	1.79589E-06	1.79589E-06
Water	0.00503452	4.57124	0.00503452	4.57085	4.57085
N2	3.79127	1.85436E-12	3.79127	0	0
CO2	2.90849	8.00434E-07	2.90849	8.0035E-07	8.0035E-07
H2S	0.00100189	9.46427E-08	0.00100189	9.46328E-08	9.46328E-08
Triethylene Glycol	0.000116397	95.3891	0.000116397	95.3895	95.3895
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.150931	0.0228302	0.150931	0.0228278	0.0228278
Toluene	0.019621	0.0138262	0.019621	0.0138247	0.0138247
Ethylbenzene	0.000307213	0.00080361	0.000307213	0.000803526	0.000803526
m-Xylene	0.000486438	0.00120204	0.000486438	0.00120192	0.00120192
o-Xylene	0.000121842	0.000712724	0.000121842	0.00071265	0.00071265
Nonane	0.000373752	1.08412E-06	0.000373752	1.084E-06	1.084E-06
Decane	4.79156E-05	5.58764E-07	4.79156E-05	5.58706E-07	5.58706E-07
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	18 %	19 %	21 %	22 %	23 %
Methane	46.6226	6.40359E-10	46.6226	0	0
Ethane	15.158	1.9425E-08	15.158	1.94229E-08	1.94229E-08
Propane	13.3728	1.78834E-07	13.3728	1.78814E-07	1.78814E-07
n-Butane	5.78601	8.36446E-07	5.78601	8.36356E-07	8.36356E-07
i-Pentane	1.7866	1.11931E-06	1.7866	1.11919E-06	1.11919E-06
i-Butane	2.18286	8.66444E-08	2.18286	8.66351E-08	8.66351E-08
n-Pentane	3.16803	3.62797E-06	3.16803	3.62758E-06	3.62758E-06
Cyclohexane	0.420311	0.00014937	0.420311	0.000149354	0.000149354
n-Hexane	0.570882	1.26279E-05	0.570882	1.26265E-05	1.26265E-05
n-Heptane	0.435793	1.62109E-05	0.435793	1.62092E-05	1.62092E-05
C8	0.0112123	1.4237E-06	0.0112123	1.42355E-06	1.42355E-06
Water	0.00383299	0.57147	0.00383299	0.571419	0.571419
N2	4.48837	3.60478E-13	4.48837	0	0
CO2	5.40943	2.4445E-07	5.40943	2.44424E-07	2.44424E-07
H2S	0.00144301	2.23829E-08	0.00144301	2.23805E-08	2.23805E-08
Triethylene Glycol	0.000738704	99.4051	0.000738704	99.4052	99.4052
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Mass Fraction	18 %	19 %	21 %	22 %	23 %
Benzene	0.498233	0.012375	0.498233	0.0123736	0.0123736
Toluene	0.076401	0.00884019	0.076401	0.00883924	0.00883924
Ethylbenzene	0.00137835	0.000592032	0.00137835	0.000591968	0.000591968
m-Xylene	0.00218246	0.000885565	0.00218246	0.000885469	0.000885469
o-Xylene	0.000546658	0.000525075	0.000546658	0.000525018	0.000525018
Nonane	0.0020258	9.6487E-07	0.0020258	9.64766E-07	9.64766E-07
Decane	0.000288114	5.51691E-07	0.000288114	5.51632E-07	5.51632E-07
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	18 lb/h	19 lb/h	21 lb/h	22 lb/h	23 lb/h
Methane	83866.4	7.95321E-08	0	0	0
Ethane	27266.8	2.41257E-06	0	2.41257E-06	2.41257E-06
Propane	24055.5	2.2211E-05	0	2.2211E-05	2.2211E-05
n-Butane	10408.1	0.000103886	0	0.000103886	0.000103886
i-Pentane	3213.8	0.000139017	0	0.000139017	0.000139017
i-Butane	3926.61	1.07612E-05	0	1.07612E-05	1.07612E-05
n-Pentane	5698.76	0.000450591	0	0.000450591	0.000450591
Cyclohexane	756.07	0.0185517	0	0.0185517	0.0185517
n-Hexane	1026.92	0.00156837	0	0.00156837	0.00156837
n-Heptane	783.92	0.00201339	0	0.00201339	0.00201339
C8	20.1692	0.000176822	0	0.000176822	0.000176822
Water	6.89491	70.9762	0	70.9775	70.9775
N2	8073.83	4.47711E-11	0	0	0
CO2	9730.67	3.03605E-05	0	3.03605E-05	3.03605E-05
H2S	2.59574	2.77994E-06	0	2.77994E-06	2.77994E-06
Triethylene Glycol	1.32881	12346	0	12347.4	12347.4
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	896.239	1.53696	0	1.53696	1.53696
Toluene	137.433	1.09795	0	1.09795	1.09795
Ethylbenzene	2.47942	0.0735299	0	0.0735299	0.0735299
m-Xylene	3.92589	0.109987	0	0.109987	0.109987
o-Xylene	0.983347	0.0652139	0	0.0652139	0.0652139
Nonane	3.64408	0.000119836	0	0.000119836	0.000119836
Decane	0.518269	6.85197E-05	0	6.85197E-05	6.85197E-05
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	18	19	21	22	23
Temperature	°F	121.94	267.747		267.73	271.699
Pressure	psig	983	1.88	983	1.88	1407.18 *
Mole Fraction Vapor	%	100	0		0	0
Mole Fraction Light Liquid	%	0	100		100	100
Mole Fraction Heavy Liquid	%	0	0		0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	23.6626	144.106	23.6626	144.106	144.106
Mass Density	lb/ft^3	4.71044	63.1783		63.179	63.1713
Molar Flow	lbmol/h	7602.02	86.1862	0	86.1952	86.1952
Mass Flow	lb/h	179883	12419.9	0 *	12421.3	12421.3
Vapor Volumetric Flow	ft^3/h	38188.2	196.585	0	196.604	196.628
Liquid Volumetric Flow	gpm	4761.13	24.5093	0	24.5117	24.5147
Std Vapor Volumetric Flow	MMSCFD	69.2363	0.784951	0	0.785033	0.785033
Std Liquid Volumetric Flow	sgpm	938.371	21.9976	0	22 *	22
Compressibility		0.802977	0.00484334		0.00484342	0.413261
Specific Gravity		0.817007	1.01298		1.01299	1.01287

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	18	19	21	22	23
API Gravity			-6.84383		-6.84386	-7.03577
Enthalpy	Btu/h	-2.88688E+08	-2.76157E+07	0	-2.76188E+07	-2.75436E+07
Mass Enthalpy	Btu/lb	-1604.86	-2223.5	-1604.86	-2223.51	-2217.45
Mass Cp	Btu/(lb*°F)	0.616049	0.615334		0.615327	0.613974
Ideal Gas CpCv Ratio		1.22104	1.03063		1.03063	1.03053
Dynamic Viscosity	cP	0.0139162	2.01669		2.017	2.04639
Kinematic Viscosity	cSt	0.184432	1.99273		1.99302	2.02231
Thermal Conductivity	Btu/(h*ft*°F)	0.022445	0.111892	?	0.111893	?
Surface Tension	lbf/ft		0.00246537	?	0.00246543	?
Net Ideal Gas Heating Value	Btu/ft^3	1165.97	3604.41	1165.97	3604.43	3604.43
Net Liquid Heating Value	Btu/lb	18626.2	9227.54	18626.2	9227.55	9227.55
Gross Ideal Gas Heating Value	Btu/ft^3	1282.23	3942.38	1282.23	3942.39	3942.39
Gross Liquid Heating Value	Btu/lb	20491.1	10117.5	20491.1	10117.5	10117.5
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	24	25	27	28	29
From Block	Gas/Glycol HEX - 2	VSSL-200	MIX-102	VSSL-202	PUMP-100
To Block	RCYL-1	Liq from dehy 2	VLVE-101	PUMP-100	MIX-101

Stream Composition

Mole Fraction	24 %	25 %	27 %	28 %	29 %
Methane	0	23.0062	68.7682	0.00332447	0.00332447
Ethane	9.30847E-08	12.2668	11.9285	0.033088	0.033088
Propane	5.84373E-07	15.5462	7.17611	0.168942	0.168942
n-Butane	2.07363E-06	11.5881	2.35559	0.439583	0.439583
i-Pentane	2.23541E-06	4.97701	0.58595	0.305133	0.305133
i-Butane	2.148E-07	3.48447	0.888683	0.0617457	0.0617457
n-Pentane	7.24554E-06	10.5012	1.03902	0.832735	0.832735
Cyclohexane	0.000255739	3.12351	0.118176	1.19301	1.19301
n-Hexane	2.11146E-05	3.29322	0.156756	0.342345	0.342345
n-Heptane	2.33114E-05	4.34869	0.102912	0.466546	0.466546
C8	1.79589E-06	0.19861	0.00232265	0.0163858	0.0163858
Water	4.57085	0.101777	0.00503452	79.8954	79.8954
N2	0	0.586109	3.79127	2.95809E-06	2.95809E-06
CO2	8.0035E-07	1.76652	2.90849	0.0444273	0.0444273
H2S	9.46328E-08	0.00123106	0.00100189	0.000566487	0.000566487
Triethylene Glycol	95.3895	1.45399E-17	0.000116397	8.98464E-05	8.98464E-05
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	0.0228278	3.85199	0.150931	13.0148	13.0148
Toluene	0.0138247	1.15228	0.019621	2.96906	2.96906
Ethylbenzene	0.000803526	0.0401052	0.000307213	0.0697881	0.0697881
m-Xylene	0.00120192	0.0640986	0.000486438	0.10189	0.10189
o-Xylene	0.00071265	0.0191984	0.000121842	0.0364508	0.0364508
Nonane	1.084E-06	0.0671013	0.000373752	0.00392206	0.00392206
Decane	5.58706E-07	0.0155277	4.79156E-05	0.000727826	0.000727826
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	24 %	25 %	27 %	28 %	29 %
Methane	0	7.45859	46.6226	0.0017472	0.0017472
Ethane	1.94229E-08	7.45404	15.158	0.0325942	0.0325942
Propane	1.78814E-07	13.8535	13.3728	0.244052	0.244052
n-Butane	8.36356E-07	13.6111	5.78601	0.837014	0.837014
i-Pentane	1.11919E-06	7.25667	1.7866	0.721219	0.721219
i-Butane	8.66351E-08	4.09278	2.18286	0.11757	0.11757
n-Pentane	3.62758E-06	15.3112	3.16803	1.96827	1.96827
Cyclohexane	0.000149354	5.31234	0.420311	3.28925	3.28925
n-Hexane	1.26265E-05	5.73515	0.570882	0.96649	0.96649
n-Heptane	1.62092E-05	8.80592	0.435793	1.53151	1.53151
C8	1.42355E-06	0.458475	0.0112123	0.0613185	0.0613185
Water	0.571419	0.0370536	0.00383299	47.1534	47.1534
N2	0	0.331806	4.48837	2.71473E-06	2.71473E-06
CO2	2.44424E-07	1.5711	5.40943	0.0640539	0.0640539
H2S	2.23805E-08	0.000847873	0.00144301	0.000632485	0.000632485
Triethylene Glycol	99.4052	4.4126E-17	0.000738704	0.00044202	0.00044202
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Mass Fraction	24 %	25 %	27 %	28 %	29 %	
Benzene	0.0123736	6.08054	0.498233	33.3046	33.3046	
Toluene	0.00883924	2.14555	0.076401	8.96209	8.96209	
Ethylbenzene	0.000591968	0.0860443	0.00137835	0.242724	0.242724	
m-Xylene	0.000885469	0.137521	0.00218246	0.354376	0.354376	
o-Xylene	0.000525018	0.0411895	0.000546658	0.126776	0.126776	
Nonane	9.64766E-07	0.173918	0.0020258	0.0164793	0.0164793	
Decane	5.51632E-07	0.0446474	0.000288114	0.00339255	0.00339255	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Mass Flow	24 lb/h	25 lb/h	27 lb/h	28 lb/h	29 lb/h	
Methane	0	3.80055	672.275	0.0078805	0.0078805	
Ethane	2.41257E-06	3.79823	218.571	0.147011	0.147011	
Propane	2.2211E-05	7.05909	192.829	1.10076	1.10076	
n-Butane	0.000103886	6.9356	83.4313	3.77523	3.77523	
i-Pentane	0.000139017	3.69766	25.7619	3.25295	3.25295	
i-Butane	1.07612E-05	2.08549	31.4758	0.530284	0.530284	
n-Pentane	0.000450591	7.80187	45.6814	8.87761	8.87761	
Cyclohexane	0.0185517	2.70692	6.06068	14.8357	14.8357	
n-Hexane	0.00156837	2.92236	8.23183	4.35921	4.35921	
n-Heptane	0.00201339	4.48709	6.28392	6.90766	6.90766	
C8	0.000176822	0.233617	0.161676	0.276568	0.276568	
Water	70.9775	0.0188808	0.0552698	212.678	212.678	
N2	0	0.169073	64.72	1.22444E-05	1.22444E-05	
CO2	3.03605E-05	0.80056	78.0012	0.288906	0.288906	
H2S	2.77994E-06	0.000432036	0.0208075	0.00285273	0.00285273	
Triethylene Glycol	12347.4	2.24845E-17	0.0106517	0.00199367	0.00199367	
EG	0	0	0	0	0	
MeOH	0	0	0	0	0	
MDEA	0	0	0	0	0	
2,2,4-Trimethylpentane	0	0	0	0	0	
Benzene	1.53696	3.09836	7.18428	150.216	150.216	
Toluene	1.09795	1.09327	1.10166	40.4222	40.4222	
Ethylbenzene	0.0735299	0.0438442	0.0198751	1.09477	1.09477	
m-Xylene	0.109987	0.0700745	0.03147	1.59836	1.59836	
o-Xylene	0.0652139	0.0209882	0.00788253	0.571805	0.571805	
Nonane	0.000119836	0.0886207	0.029211	0.0743275	0.0743275	
Decane	6.85197E-05	0.0227502	0.00415446	0.0153016	0.0153016	
Undecane	0	0	0	0	0	
Dodecane	0	0	0	0	0	
Stream Properties						
Property	Units	24	25	27	28	29
Temperature	°F	122.61	109.892	121.94	89.7106	89.9202
Pressure	psig	1402.18	993	983	-2.32	75 *
Mole Fraction Vapor	%	0	0	100	0	0
Mole Fraction Light Liquid	%	100	100	0	20.1234	20.1235
Mole Fraction Heavy Liquid	%	0	0	0	79.8766	79.8765
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	144.106	49.4834	23.6626	30.5246	30.5246
Mass Density	lb/ft^3	68.6671	33.2229	4.71044	55.8237	55.844
Molar Flow	lbmol/h	86.1952	1.02975	60.938	14.7761	14.7761
Mass Flow	lb/h	12421.3	50.9553	1441.95	451.035	451.035
Vapor Volumetric Flow	ft^3/h	180.891	1.53374	306.118	8.07963	8.0767
Liquid Volumetric Flow	gpm	22.5526	0.19122	38.1653	1.00733	1.00696
Std Vapor Volumetric Flow	MMSCFD	0.785033	0.00937853	0.555	0.134575	0.134575
Std Liquid Volumetric Flow	sgpm	22	0.184104	7.522	0.996186	0.996186
Compressibility		0.47585	0.245555	0.802977	0.00114782	0.00831274
Specific Gravity		1.10099	0.532684	0.817007	0.895059	0.895385

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	24	25	27	28	29
API Gravity		-7.03509	115.973		24.5152	24.4506
Enthalpy	Btu/h	-2.86298E+07	-54350.7	-2.31413E+06	-1.44669E+06	-1.44654E+06
Mass Enthalpy	Btu/lb	-2304.9	-1066.63	-1604.86	-3207.5	-3207.15
Mass Cp	Btu/(lb*°F)	0.555722	0.632354	0.616049	0.679839	0.679661
Ideal Gas CpCv Ratio		1.03568	1.10932	1.22104	1.22056	1.22051
Dynamic Viscosity	cP	13.6679	0.114487	0.0139162	0.610604	0.61167
Kinematic Viscosity	cSt	12.426	0.215129	0.184432	0.682842	0.683785
Thermal Conductivity	Btu/(h*ft*°F)	0.113075	0.0586175	0.022445	0.194765	0.194832
Surface Tension	lbf/ft	0.00293893	0.00029343	?	0.00305806	?
Net Ideal Gas Heating Value	Btu/ft^3	3604.43	2502.57	1165.97	756.227	756.227
Net Liquid Heating Value	Btu/lb	9227.55	19042.9	18626.2	8805.18	8805.18
Gross Ideal Gas Heating Value	Btu/ft^3	3942.39	2708.4	1282.23	834.429	834.429
Gross Liquid Heating Value	Btu/lb	10117.5	20621.9	20491.1	9777.42	9777.42
Remarks						

Process Streams Report

All Streams

Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Connections

	30	32	37	38	52
From Block	MIX-101	FAXR-200	SPLT-101	VSSL-201	MIX-100
To Block	BTEX/FG2	VSSL-202	MIX-102	--	--

Stream Composition

Mole Fraction	30 %	32 %	37 %	38 %	52 %
Methane	0.0397883	0.502243	68.7682	68.9301	68.0729
Ethane	0.0744148	0.845764	11.9285	11.9479	11.8123
Propane	0.254701	1.44315	7.17611	7.17246	7.12387
n-Butane	0.553995	1.32592	2.35559	2.33225	2.37167
i-Pentane	0.377529	0.536895	0.58595	0.56887	0.613381
i-Butane	0.0915584	0.260037	0.888683	0.883417	0.888824
n-Pentane	1.00329	1.29429	1.03902	0.997645	1.11518
Cyclohexane	1.26411	1.23701	0.118176	0.0980448	0.197661
n-Hexane	0.42387	0.384446	0.156756	0.136276	0.225577
n-Heptane	0.607118	0.456784	0.102912	0.067489	0.3621
C8	0.0222548	0.0154215	0.00232265	0.000846495	0.0400204
Water	79.087	74.0032	0.00503452	0.0050448	0.00517955
N2	0.000527559	0.00191889	3.79127	3.80056	3.75294
CO2	0.0484571	1.58893	2.90849	2.91461	2.87926
H2S	0.000565467	0.00563951	0.00100189	0.00100322	0.000992861
Triethylene Glycol	0.000556664	8.27209E-05	0.000116397	1.82859E-06	0.00011522
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	12.9676	13.0883	0.150931	0.130568	0.252392
Toluene	2.96809	2.81248	0.019621	0.0125307	0.101774
Ethylbenzene	0.069907	0.0646512	0.000307213	0.000105357	0.00974823
m-Xylene	0.102188	0.0946328	0.000486438	0.000161402	0.0167007
o-Xylene	0.0364256	0.0338921	0.000121842	3.7758E-05	0.00555514
Nonane	0.00518176	0.00365304	0.000373752	5.55989E-05	0.0504811
Decane	0.000905084	0.00067296	4.79156E-05	2.69761E-06	0.1014
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Fraction	30 %	32 %	37 %	38 %	52 %
Methane	0.020631	0.250838	46.6226	46.9682	44.7949
Ethane	0.0723224	0.791728	15.158	15.2593	14.5692
Propane	0.363012	1.98114	13.3728	13.4334	12.8853
n-Butane	1.04074	2.39921	5.78601	5.75759	5.65431
i-Pentane	0.880387	1.20594	1.7866	1.74327	1.81527
i-Butane	0.172002	0.470528	2.18286	2.18088	2.11905
n-Pentane	2.33965	2.90714	3.16803	3.05724	3.30032
Cyclohexane	3.43861	3.24103	0.420311	0.35047	0.682351
n-Hexane	1.18062	1.0314	0.570882	0.498799	0.797371
n-Heptane	1.96627	1.42493	0.435793	0.287232	1.48829
C8	0.082166	0.0548416	0.0112123	0.00410698	0.187516
Water	46.0512	41.5048	0.00383299	0.00386019	0.00382751
N2	0.000477673	0.00167349	4.48837	4.52207	4.31241
CO2	0.0689284	2.177	5.40943	5.44817	5.1977
H2S	0.000622892	0.00598356	0.00144301	0.00145222	0.00138798
Triethylene Glycol	0.00270196	0.000386736	0.000738704	1.16636E-05	0.000709746
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	32.7394	31.8279	0.498233	0.433191	0.808679
Toluene	8.83918	8.06748	0.076401	0.0490389	0.384647

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	
Flowsheet:	Lariat dehy 2	

Mass Fraction	30 %	32 %	37 %	38 %	52 %
Ethylbenzene	0.239881	0.213681	0.00137835	0.000475084	0.0424512
m-Xylene	0.350652	0.312774	0.00218246	0.000727803	0.0727277
o-Xylene	0.124992	0.112018	0.000546658	0.000170261	0.0241913
Nonane	0.0214806	0.014586	0.0020258	0.000302876	0.265575
Decane	0.00416229	0.00298089	0.000288114	1.63024E-05	0.591795
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Mass Flow	30 lb/h	32 lb/h	37 lb/h	38 lb/h	52 lb/h
Methane	0.0952802	1.2931	672.275	672.188	83866.4
Ethane	0.334007	4.08145	218.571	218.384	27277
Propane	1.6765	10.213	192.829	192.253	24124.3
n-Butane	4.80645	12.3682	83.4313	82.4001	10586.2
i-Pentane	4.06589	6.21676	25.7619	24.949	3398.61
i-Butane	0.794359	2.42562	31.4758	31.2117	3967.35
n-Pentane	10.8052	14.9867	45.6814	43.7538	6178.96
Cyclohexane	15.8806	16.7079	6.06068	5.01577	1277.52
n-Hexane	5.45246	5.31697	8.23183	7.13859	1492.86
n-Heptane	9.08085	7.34569	6.28392	4.11073	2786.43
C8	0.379467	0.282714	0.161676	0.0587773	351.074
Water	212.678	213.962	0.0552698	0.0552453	7.16598
N2	0.00220604	0.00862704	64.72	64.7178	8073.83
CO2	0.318332	11.2227	78.0012	77.9718	9731.29
H2S	0.0028767	0.0308459	0.0208075	0.0207835	2.59861
Triethylene Glycol	0.0124785	0.00199367	0.0106517	0.000166924	1.32881
EG	0	0	0	0	0
MeOH	0	0	0	0	0
MDEA	0	0	0	0	0
2,2,4-Trimethylpentane	0	0	0	0	0
Benzene	151.2	164.076	7.18428	6.19963	1514.03
Toluene	40.822	41.5887	1.10166	0.701823	720.148
Ethylbenzene	1.10785	1.10155	0.0198751	0.00679918	79.4785
m-Xylene	1.61942	1.61238	0.03147	0.010416	136.163
o-Xylene	0.577251	0.577464	0.00788253	0.00243669	45.2918
Nonane	0.0992039	0.0751924	0.029211	0.00433462	497.218
Decane	0.0192227	0.0153668	0.00415446	0.000233313	1107.98
Undecane	0	0	0	0	0
Dodecane	0	0	0	0	0

Stream Properties

Property	Units	30	32	37	38	52
Temperature	°F	89.0779	90 *	121.94	53.3942	123.454
Pressure	psig	75	-2.12	983	125	983
Mole Fraction Vapor	%	0	7.88296	100	100	97.4544
Mole Fraction Light Liquid	%	20.9289	18.5697	0	0	2.54563
Mole Fraction Heavy Liquid	%	79.0711	73.5473	0	0	0
Phase Mole Fraction	%	100	100	100	100	100
Molecular Weight	lb/lbmol	30.9389	32.1213	23.6626	23.5438	24.3791
Mass Density	lb/ft^3	55.3987	0.86899	4.71044	0.626005	4.89375
Molar Flow	lbmol/h	14.9271	16.0489	60.938	60.787	7679.67
Mass Flow	lb/h	461.83	515.511	1441.95	1431.15	187223
Vapor Volumetric Flow	ft^3/h	8.33648	593.23	306.118	2286.17	38257.6
Liquid Volumetric Flow	gpm	1.03935	73.9612	38.1653	285.029	4769.78
Std Vapor Volumetric Flow	MMSCFD	0.135951	0.146167	0.555 *	0.553624	69.9435
Std Liquid Volumetric Flow	sgpm	1.02923	1.20014	7.522	7.48895	958.747
Compressibility		0.00850633	0.0788049	0.802977	0.954216	0.794235
Specific Gravity		0.888245		0.817007	0.812906	
API Gravity		25.7116				
Enthalpy	Btu/h	-1.45605E+06	-1.52619E+06	-2.31413E+06	-2.30462E+06	-2.94041E+08

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	30	32	37	38	52
Mass Enthalpy	Btu/lb	-3152.78	-2960.55	-1604.86	-1610.32	-1570.54
Mass Cp	Btu/(lb*°F)	0.675852	0.637834	0.616049	0.455699	0.612233
Ideal Gas CpCv Ratio		1.21681	1.20903	1.22104	1.23994	1.21444
Dynamic Viscosity	cP	0.601494		0.0139162	0.0105101	
Kinematic Viscosity	cSt	0.677815		0.184432	1.04811	
Thermal Conductivity	Btu/(h*ft*°F)	0.190634		0.022445	0.0160383	
Surface Tension	lbf/ft	0.00295319	?			
Net Ideal Gas Heating Value	Btu/ft^3	785.018	860.096	1165.97	1159.92	1201.87
Net Liquid Heating Value	Btu/lb	9042.54	9618.63	18626.2	18623.7	18631.8
Gross Ideal Gas Heating Value	Btu/ft^3	865.211	944.437	1282.23	1275.78	1320.41
Gross Liquid Heating Value	Btu/lb	10026.2	10615.1	20491.1	20491.6	20477.4
Remarks						

		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek				Job: 253201.0051	
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Connections						
		102				
From Block		RCYL-1				
To Block		Glycol Contactor - 2				
Stream Composition						
Mole Fraction	102 %					
Methane	0					
Ethane	9.33971E-08					
Propane	5.86244E-07					
n-Butane	2.07903E-06					
i-Pentane	2.23944E-06					
i-Butane	2.15415E-07					
n-Pentane	7.25695E-06					
Cyclohexane	0.000256239					
n-Hexane	2.11732E-05					
n-Heptane	2.3425E-05					
C8	1.818E-06					
Water	4.56954					
N2	0					
CO2	8.02889E-07					
H2S	9.49092E-08					
Triethylene Glycol	95.3906					
EG	0					
MeOH	0					
MDEA	0					
2,2,4-Trimethylpentane	0					
Benzene	0.0228613					
Toluene	0.0138614					
Ethylbenzene	0.000827928					
m-Xylene	0.00124616					
o-Xylene	0.000765893					
Nonane	1.27169E-06					
Decane	1.32067E-06					
Undecane	0					
Dodecane	0					
Mass Fraction	102 %					
Methane	0					
Ethane	1.94879E-08					
Propane	1.79385E-07					
n-Butane	8.38521E-07					
i-Pentane	1.12119E-06					
i-Butane	8.68819E-08					
n-Pentane	3.63325E-06					
Cyclohexane	0.000149644					
n-Hexane	1.26614E-05					
n-Heptane	1.6288E-05					
C8	1.44105E-06					
Water	0.571249					
N2	0					
CO2	2.45196E-07					
H2S	2.24456E-08					
Triethylene Glycol	99.4052					
EG	0					
MeOH	0					
MDEA	0					
2,2,4-Trimethylpentane	0					
Benzene	0.0123917					

* User Specified Values

? Extrapolated or Approximate Values

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		Process Streams Report All Streams Tabulated by Total Phase				
Client Name:	Delek			Job: 253201.0051		
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Mass Fraction	102 %					
Toluene	0.0088626					
Ethylbenzene	0.000609939					
m-Xylene	0.000918051					
o-Xylene	0.000564237					
Nonane	1.1318E-06					
Decane	1.30394E-06					
Undecane	0					
Dodecane	0					
Mass Flow	102 lb/h					
Methane	0					
Ethane	2.42064E-06					
Propane	2.22819E-05					
n-Butane	0.000104155					
i-Pentane	0.000139266					
i-Butane	1.07918E-05					
n-Pentane	0.000451295					
Cyclohexane	0.0185877					
n-Hexane	0.0015727					
n-Heptane	0.00202318					
C8	0.000178997					
Water	70.9563					
N2	0					
CO2	3.04565E-05					
H2S	2.78803E-06					
Triethylene Glycol	12347.4					
EG	0					
MeOH	0					
MDEA	0					
2,2,4-Trimethylpentane	0					
Benzene	1.5392					
Toluene	1.10085					
Ethylbenzene	0.0757621					
m-Xylene	0.114034					
o-Xylene	0.0700854					
Nonane	0.000140584					
Decane	0.000161965					
Undecane	0					
Dodecane	0					
Stream Properties						
Property	Units	102				
Temperature	°F	122.621				
Pressure	psig	1402.18				
Mole Fraction Vapor	%	0				
Mole Fraction Light Liquid	%	100				
Mole Fraction Heavy Liquid	%	0				
Phase Mole Fraction	%	100				
Molecular Weight	lb/lbmol	144.108				
Mass Density	lb/ft^3	68.6667				
Molar Flow	lbmol/h	86.1942				
Mass Flow	lb/h	12421.3				
Vapor Volumetric Flow	ft^3/h	180.892				
Liquid Volumetric Flow	gpm	22.5528				
Std Vapor Volumetric Flow	MMSCFD	0.785023				
Std Liquid Volumetric Flow	sgpm	22				
Compressibility		0.47585				
Specific Gravity		1.10098				
API Graviv		-7.03509				

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report All Streams Tabulated by Total Phase						
Client Name:	Delek	Job: 253201.0051				
Location:	Lariat Compressor Station					
Flowsheet:	Lariat dehy 2					
Stream Properties						
Property	Units	102				
Enthalpy	Btu/h	-2.86295E+07				
Mass Enthalpy	Btu/lb	-2304.88				
Mass Cp	Btu/(lb*°F)	0.555725				
Ideal Gas CpCv Ratio		1.03568				
Dynamic Viscosity	cP	13.6649				
Kinematic Viscosity	cSt	12.4234				
Thermal Conductivity	Btu/(h*ft*°F)	0.113075				
Surface Tension	lbf/ft	0.00293889				
Net Ideal Gas Heating Value	Btu/ft^3	3604.48				
Net Liquid Heating Value	Btu/lb	9227.58				
Gross Ideal Gas Heating Value	Btu/ft^3	3942.45				
Gross Liquid Heating Value	Btu/lb	10117.6				
Remarks						

**Delek Lariat CS ProMax_v0.1_2025_0827 RA -
Copy.pmx
Project Warnings Report**

Client Name:	Delek	Job: 253201.0051
Location:	Lariat Compressor Station	

ProMax:ProMax!Project!Oils!hexanes plus!Properties!Pour Point
Warning: Pour Point calculation: The value of 213.934 °F for Volume Average Boiling Point should be between 340.33 °F and 1040.33 °F.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!SPLT-100!Properties!Flow Multiplier
Warning: The Flow Multiplier property in block SPLT-100 is 99.9884 % which is not equal to unity. Mass balance is impacted in the block.

ProMax:ProMax!Project!Flowsheets!Lariat dehy 2!Blocks!Glycol Regenerator - 2
Warning: The inlet pressure from PStream 14 is lower than the stage pressure.

ProMax:ProMax!Project!Flowsheets!Lariat Dehy!Blocks!Glycol Regenerator
Warning: The inlet pressure from PStream 14 is lower than the stage pressure.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!MIX-108!Properties!Flow Multiplier
Warning: The Flow Multiplier property in block MIX-108 is 43.8463 % which is not equal to unity. Mass balance is impacted in the block.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!MIX-103!Properties!Flow Multiplier
Warning: The Flow Multiplier property in block MIX-103 is 77.4565 % which is not equal to unity. Mass balance is impacted in the block.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!Cond. TK
Warning: Vapor adjusted to ensure mass balance.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!MIX-107!Properties!Flow Multiplier
Warning: The Flow Multiplier property in block MIX-107 is 272.034 % which is not equal to unity. Mass balance is impacted in the block.

ProMax:ProMax!Project!Flowsheets!Lariat CS!Blocks!PW TK
Warning: Vapor adjusted to ensure mass balance.

ProMax:ProMax!Project!Flowsheets!Lariat CS!PStreams!36
Warning: The temperature of 38.9483 °F is within 10 °F of ice formation.
Warning: The temperature of 38.9483 °F is within 10 °F of hydrate formation.

ProMax:ProMax!Project!Flowsheets!Lariat CS!PStreams!37
Warning: The temperature of 38.9483 °F is within 10 °F of ice formation.
Warning: The temperature of 38.9483 °F is within 10 °F of hydrate formation.



Emission Statement

Date: 11/04/2024

Project Name	Archrock: SN1011
Engine Model	Waukesha 7044GSIS5
Engine Mechanical Power	1900 hp
Fuel	NG High BTU per Supplied GERP
Exhaust Flowrate	12338 lb/h
Exhaust Temperature	1145 deg. F
Catalyst Housing Model	ERH-4200-1414F-6CE0-242
Catalyst Model	DCY3W
Catalyst Part Number	C30F1-01-040Y-03W3-01
Number of Elements	6
Housing Capacity	6
Catalyst Code	0Y Premium NSCR, 3-Way / 300 cpsi
Dimensions	24" x 15" x 3.5"

Exhaust Gas Component	Engine Output (g/bhp-hr)	Converter Output (g/bhp-hr)
NOx	11.71	0.45
CO	9.81	0.20
VOC (NMNEHC)	0.064	0.02
HCHO	0.05	0.02

Limited Warranty	(doc. X0000-0000-K1) one year or 8000 hours of operation, whichever first
Guarantee By:	Sam Kirk



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Emission Statement

Date: 06/27/2025

Project Name	Archrock: 3606A4 Example Sheet
Engine Model	CAT 3606A4
Engine Mechanical Power	1875 hp
Fuel	NG High BTU Per Supplied GERP
Exhaust Flowrate	22072 lb/h
Exhaust Temperature	798 deg. F
Catalyst Housing Model	ELH-5000-1820F-4CEO-362
Catalyst Model	DCA1T
Catalyst Part Number	A70TL-01-040A-01T3-02
Number of Elements	4
Housing Capacity	4
Catalyst Code	0A Oxidation High VOC Reduction / 300 cpsi
Dimensions	36" x 15" x 3.5"

Exhaust Gas Component	Engine Output (g/bhp-hr)	Converter Output (g/bhp-hr)
NOx	0.30	0.30
CO	2.90	0.60
VOC	1.37	0.50
HCHO	0.19	0.10

Limited Warranty	(doc. X0000-0000-K1) one year or 8000 hours of operation, whichever first
Guarantee By:	



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Emission Statement

Date: 06/25/2025

Project Name	Archrock: DKL Residue Gas
Engine Model	CAT 3608A4-E
Engine Mechanical Power	2750 hp
Fuel	NG per Supplied GERP
Exhaust Flowrate	31983 b/h
Exhaust Temperature	787 deg. F
Catalyst Housing Model	DCL ARC1T6-20/26
Catalyst Model	DCQ1T
Catalyst Part Number	A70TL-01-0427-01T3-02
Number of Elements	2
Housing Capacity	6
Catalyst Code	27 Standard Oxidation / 300 cpsi
Dimensions	36" x 15" x 3.5"

Exhaust Gas Component	Engine Output (g/bhp-hr)	Converter Output (g/bhp-hr)
NOx	0.30	0.30
CO	2.17	0.40
VOC (NMNEHC)	0.17	0.10
HCHO	0.12	0.09

Limited Warranty	(doc. X0000-0000-K1) one year or 8000 hours of operation, whichever first
Guarantee By:	Sam Kirk



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Catalyst Element (Table 1A)		
Application	Gas Compression	
Engine Model	CAT G3516B	
Engine Mechanical Power	1350 hp	
Fuel	NG (High BTU)	
Exhaust Flowrate	14038 lb/hr	
Exhaust Temperature	996 deg. F	
Silencer Model	EMIT ELS-3050	
Catalyst Part Number	C30F1-OX-0427-03W3-01	
Number of Elements	2	
Catalyst Code	27 / 300 cpsi	
Dimensions	24x15"	
Pre-Catalyst Emissions g/bhp-h	NOx	0.50
	CO	2.52
	NMNEHC (VOC)	1.08
Post-Catalyst g/bhp-h	NOx	0.50
	CO	0.60
	NMNEHC (VOC)	0.70
Limited Warranty	(doc. X0000-0000-K1) one year or 8000 hours operation, whichever first	



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Emission Statement

Date: 06/27/2025

Project Name	Archrock: 3606A4 Example Sheet
Engine Model	CAT 3606A4
Engine Mechanical Power	1875 hp
Fuel	NG High BTU Per Supplied GERP
Exhaust Flowrate	22072 lb/h
Exhaust Temperature	798 deg. F
Catalyst Housing Model	ELH-5000-1820F-4CEO-362
Catalyst Model	DCA1T
Catalyst Part Number	A70TL-01-040A-01T3-02
Number of Elements	4
Housing Capacity	4
Catalyst Code	0A Oxidation High VOC Reduction / 300 cpsi
Dimensions	36" x 15" x 3.5"

Exhaust Gas Component	Engine Output (g/bhp-hr)	Converter Output (g/bhp-hr)
NOx	0.30	0.30
CO	2.90	0.60
VOC	1.37	0.50
HCHO	0.19	0.10

Limited Warranty	(doc. X0000-0000-K1) one year or 8000 hours of operation, whichever first
Guarantee By:	



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GAS COMPRESSION APPLICATION

ENGINE SPEED (rpm): 1000
COMPRESSION RATIO: 7.6
AFTERCOOLER TYPE: SCAC
AFTERCOOLER - STAGE 1/STAGE 2 INLET (°F): 174 / 130
JACKET WATER OUTLET (°F): 190
ASPIRATION: TA
COOLING SYSTEM: JW+1AC, OC+2AC
CONTROL SYSTEM: ADEM4
EXHAUST MANIFOLD: DRY
COMBUSTION: LOW EMISSION
NOx EMISSION LEVEL (g/bhp-hr NOx): 0.3
SET POINT TIMING: 16

RATING STRATEGY:

RATING LEVEL:

FUEL SYSTEM:

GEN 1 ENGINE - NO CCV

CONTINUOUS

GAV

WITH AIR FUEL RATIO CONTROL

SITE CONDITIONS:

FUEL: DKL - Aztec
FUEL PRESSURE RANGE(psig): (See note 1) 58.0-70.3
FUEL METHANE NUMBER: 52.7
FUEL LHV (Btu/scf): 1167
ALTITUDE(ft): 3500
STANDARD RATED POWER: 1875 bhp@1000rpm

RATING	NOTES	LOAD	MAX RATING	SITE RATING AT MAX INLET AIR TEMP			
			100%	100%	75%	50%	
ENGINE POWER (WITHOUT FAN)	(2)	bhp	1875	1875	1406	938	
INLET AIR TEMPERATURE		°F	100	100	100	100	

ENGINE DATA

FUEL CONSUMPTION (LHV)	(3)	Btu/bhp-hr	6943	6943	7223	7803	
FUEL CONSUMPTION (HHV)	(3)	Btu/bhp-hr	7642	7642	7951	8588	
AIR FLOW (@inlet air temp, 14.7 psia)	(4)(5)	ft ³ /min	5002	5002	3800	2609	
AIR FLOW (WET)	(4)(5)	lb/hr	21269	21269	16159	11094	
FUEL FLOW (60°F, 14.7 psia)	(4)(5)	scfm	186	186	145	105	
INLET MANIFOLD PRESSURE	(6)	psi(abs)	50.7	50.7	39.1	27.8	
EXHAUST TEMPERATURE - ENGINE OUTLET	(7)	°F	808	808	878	955	
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(5)(8)	ft ³ /min	12052	12052	9672	7039	
EXHAUST GAS MASS FLOW (WET)	(5)(8)	lb/hr	21954	21954	16693	11479	

EMISSIONS DATA - EXHAUST OUT

NOx (as NO2)	(9)(10)	g/bhp-hr	0.30	0.30	0.30	0.30	
CO	(9)(10)	g/bhp-hr	2.90	2.90	2.90	2.90	
NMHC (mol. wt. of 15.84)	(9)(10)	g/bhp-hr	2.28	2.28	2.35	2.50	
NMNEHC (VOCs) (mol. wt. of 15.84)	(9)(10)(11)	g/bhp-hr	1.37	1.37	1.42	1.51	
HCHO (Formaldehyde)	(9)(10)	g/bhp-hr	0.19	0.19	0.20	0.22	
CH4 (mol. wt. of 16.04) (NOMINAL)	(9)(12)	g/bhp-hr	1.86	1.86	1.92	2.04	
CO2 (NOMINAL)	(9)(12)	g/bhp-hr	430	430	445	483	
EXHAUST OXYGEN (NOMINAL)	(9)(13)	% DRY	11.3	11.3	11.2	10.7	

HEAT REJECTION

HEAT REJ. TO JACKET WATER (JW)	(14)	Btu/min	23836	23836	19107	15789	
HEAT REJ. TO ATMOSPHERE	(14)	Btu/min	5804	5804	5699	5486	
HEAT REJ. TO LUBE OIL (OC)	(14)	Btu/min	11717	11717	10836	9390	
HEAT REJ. TO A/C - STAGE 1 (1AC)	(14)(15)	Btu/min	19028	19028	9893	3139	
HEAT REJ. TO A/C - STAGE 2 (2AC)	(14)(15)	Btu/min	8212	8212	5047	2471	

COOLING SYSTEM SIZING CRITERIA

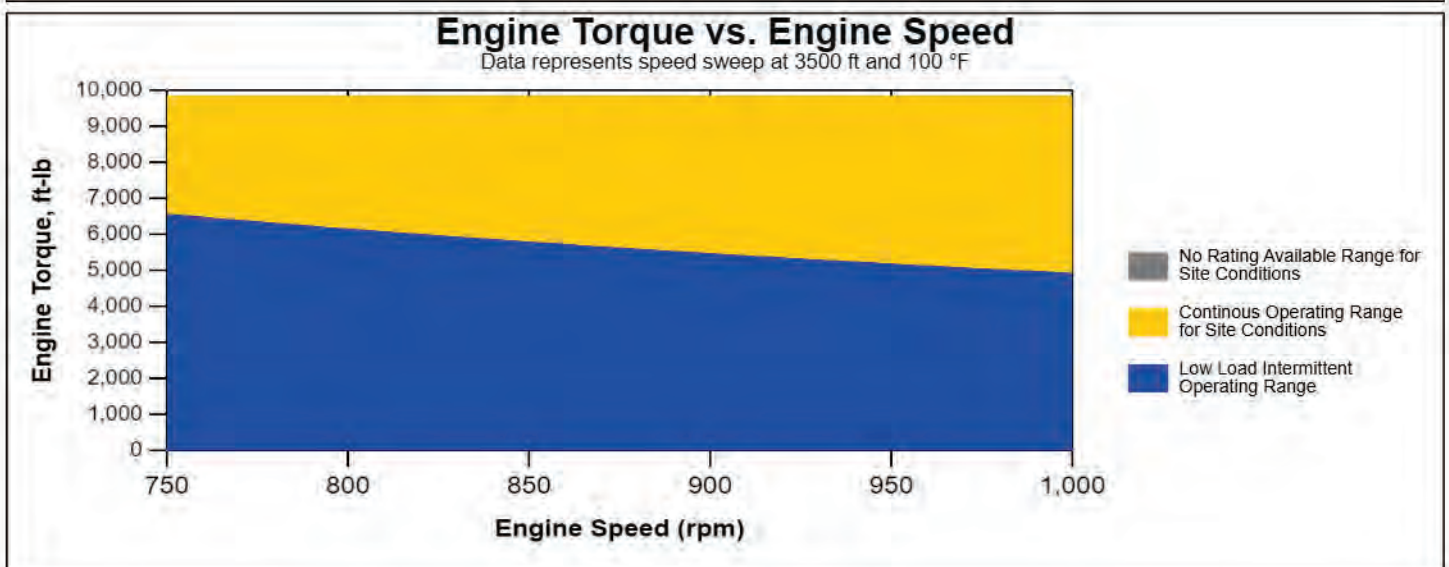
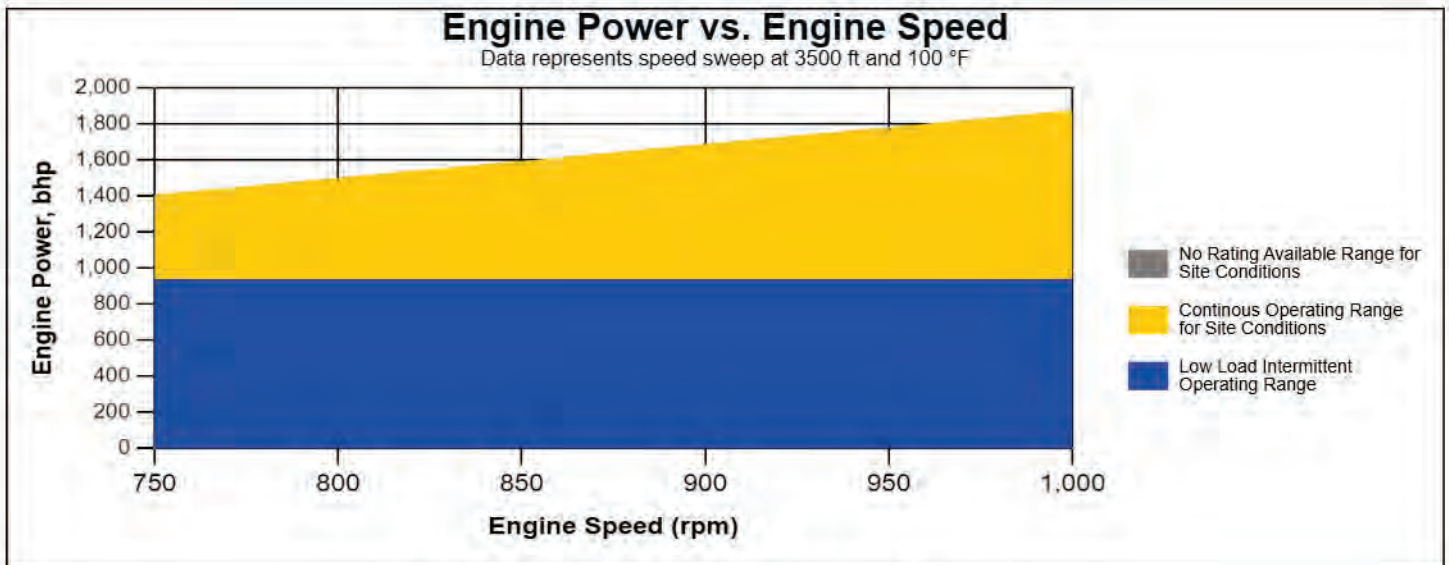
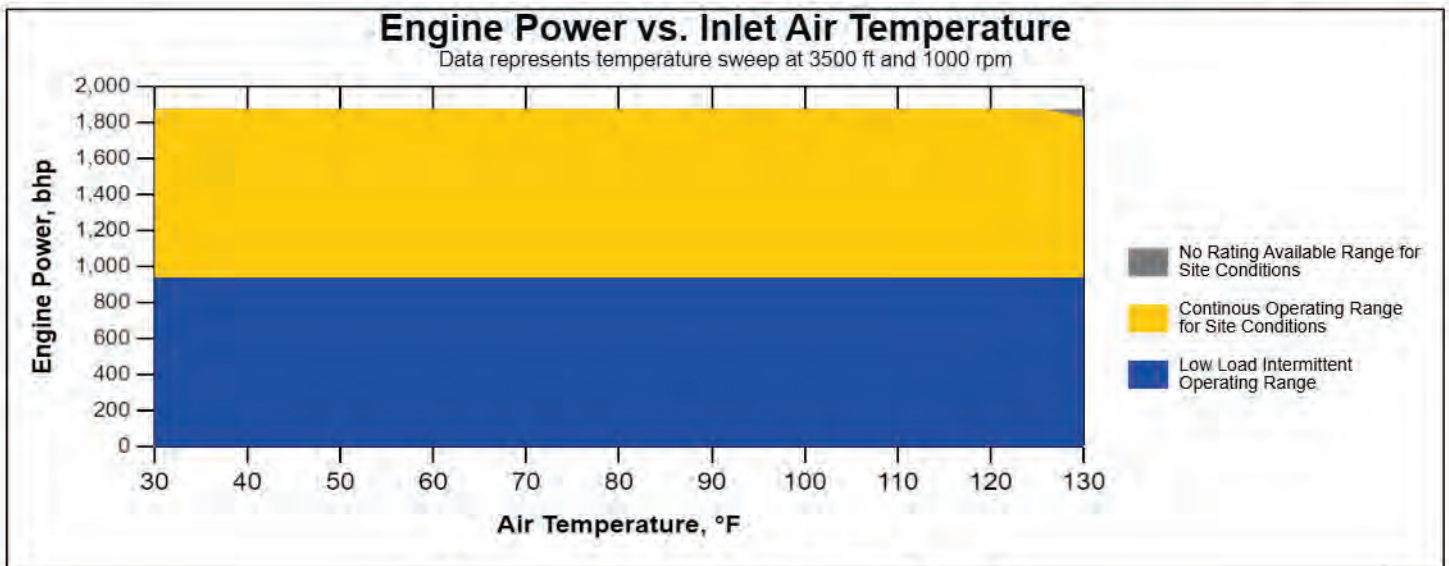
TOTAL JACKET WATER CIRCUIT (JW+1AC)	(15)(16)	Btu/min	46200	
TOTAL STAGE 2 AFTERCOOLER CIRCUIT (OC+2AC)	(15)(16)	Btu/min	22683	

A cooling system safety factor of 0% has been added to the cooling system sizing criteria.

CONDITIONS AND DEFINITIONS

Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Refer to product O&M manual for details on additional lower load capability. No overload permitted at rating shown.

For notes information consult page three.



Note:

At site conditions of 3500 ft and 100°F inlet air temp., constant torque can be maintained down to 750 rpm. The minimum speed for loading at these conditions is 750 rpm.

NOTES:

1. Fuel pressure range specified is to the engine gas shutoff valve (GSOV). Additional fuel train components should be considered in pressure and flow calculations.
2. Engine rating is with two engine driven water pumps. Tolerance is $\pm 3\%$ of full load.
3. Fuel consumption tolerance is $\pm 2.5\%$ of full load data.
4. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of $\pm 5\%$.
5. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.
6. Inlet manifold pressure is a nominal value with a tolerance of $\pm 5\%$.
7. Exhaust temperature is a nominal value with a tolerance of $(+)63^{\circ}\text{F}$, $(-)54^{\circ}\text{F}$.
8. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of $\pm 6\%$.
9. Emissions data is at engine exhaust flange prior to any after treatment.
10. CO, NMHC, NMNEHC, and HCHO emission values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate the maximum values expected under steady state conditions. Fuel methane number cannot vary more than ± 3 . NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.
11. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ
12. CO₂ tolerance is $\pm 2.5\%$. CH₄ tolerance is $\pm 26.0\%$. Fuel methane number cannot vary more than ± 3 .
13. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NO_x level. Tolerance is ± 0.5 .
14. Heat rejection values are nominal. Tolerances, based on treated water, are $\pm 10\%$ for jacket water circuit, $\pm 50\%$ for radiation, $\pm 20\%$ for lube oil circuit, and $\pm 5\%$ for aftercooler circuit.
15. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.
16. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0000	0.0000
Methane	CH4	67.6450	67.6450
Ethane	C2H6	13.9340	13.9340
Propane	C3H8	8.1510	8.1510
Isobutane	iso-C4H10	0.9240	0.9240
Norbutane	nor-C4H10	2.3770	2.3770
Isopentane	iso-C5H12	0.3660	0.3660
Norpentane	nor-C5H12	0.3570	0.3570
Hexane	C6H14	0.1590	0.1590
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	3.1550	3.1550
Carbon Dioxide	CO2	2.9320	2.9320
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:
Unit of Measure:

DKL - Aztec
English

Calculated Fuel Properties:

Caterpillar Methane Number:	52.7
Lower Heating Value (Btu/scf):	1167
Higher Heating Value (Btu/scf):	1284
WOBBE Index (BTU/scfm):	1298
THC: Free Inert Ratio:	15.43
Total % Inerts (% N2, CO2, He):	6.09%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.996
Stoich A/F Ratio (Vol/Vol):	12.08
Stoich A/F Ratio (Mass/Mass):	14.96
Specific Gravity (Relative to Air):	0.808
Fuel Specific Heat Ratio (K):	1.274

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

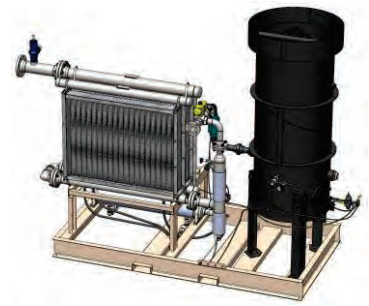
To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.



3532 Miller Park Dr. Garland, TX 75042

SNC-Lavalin/Valerus
ATTN: Matthew Harris
919 Milam
Houston, TX 77002

Ref: Zap Dehy 43466



Electric Standard Features

Value added only from SpiralXLLC

Removable Tube Bundles
Blowcase valve oiler for improved reliability
Kimray Level Switches
Taylor Relief Valves
Heavy Duty Base / Powder Coated
Completely Assembled and tested before shipment
ASME Code paperwork including MTR Test Reports
3D Model Available
Lifetime Versa brand 3 way valves
Low Shipping/set up costs (Location Specific)

Series III BTEX System

The SpiralX Series III System takes in the boiled off water vapors from the glycol regenerator's still column. As the water vapors travel through the tube bundles the vapors are cooled down. Cooling of the vapors causes them to separate into condensate and non-condensable gasses. The condensate is drained from the tube bundles and into the blowcase tank. The lightweight non-condensable gasses (BTEX) exit the unit where they are sent to the CFR 40 combustor or fuel ring and destroyed.

For Blowcase units:

The blowcase outlet pipe sends the condensate out of the tank and is typically routed to some means of onsite storage or disposal.

Blowcase Rating: 650 lb/hr of steam/condensate, minimum .50 specific gravity fluid
Blowcase Vent Rating: 4.5 cubic ft @ 120 psi, 3.8 cubic ft @ 100 psi, 1.54 cubic feet @ 40 psi
Blowcase Material: Stainless Steel

For diaphragm pump option:

Pump rating: 15 GPM at 100 psi supply pressure.
Diaphragm material: Teflon

IIIe System

SpiralX Electric Emission Systems offer customers a complete solution for capturing BTEX and VOCs from a regenerator's still column, where electricity is available. Performance of these units are independent on the natural wind blowing across the tube bundle. This unit has an electric driven forced draft fan that works year round. These units are considerably more compact than ambient units, and do a much better job of condensing BTEX vapors.

Power requirement is 4 AMPS @480 VAC

With all stainless steel construction, these systems are built to last. Most systems are an All-in-One Solution. We use only the best pneumatics which are readily available for easy, no-hassle parts replacement. Enjoy the benefits of our extensive documentation with operators manuals, drawings and diagrams. We even offer SpiralX certification exams for field technicians.

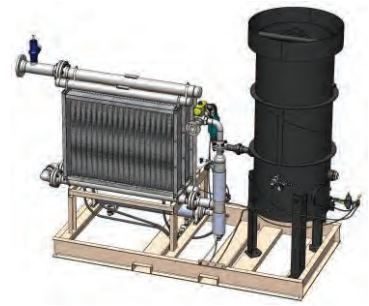
30" Combustor

Environmental Rating: CFR 40



3532 Miller Park Dr. Garland, TX 75042

SNC-Lavalin/Valerus
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919 Milam
Houston, TX 77002



Ref: Zap Dehy 43466

EPA Efficiency Rating: 99%
Combustor Rating: **Maximum dry BTEX 15 MSCFD**
Combustor Location: Within 10 ft. of the BTEX system
Combustor Height: 9 ft.
Pilot Gas Used: 14-17 cfh @ 5-7 psig

No cold weather protection is included

System Color

Gray (Cardinal powder coat spec# P004-GR09)

Options

Optional Heat Trace Only **Included**

ELECTRICAL CONNECTION KIT DEKORON PN 1548-40000 shipped loose to be installed by the end user.

We use 10W electrical heat trace as a part of our cold weather package. We wrap all pipes, tubes and valves which come in contact with liquids, pursuant to Class 1 Group D Division 2.

ESD Loop Pneumatic **Included**

Emergency Shut Down Loop, where the Combustor can be turned off and the system thrown into bypass if the regen goes down. Requires pneumatic line run to the combustor

Design Data Sheet

Process Design Conditions

Waste Flare Stream	Flow Rate (MMSCFD)	Molecular Weight	Lower Heating Value (Btu/SCF)	Inlet Pressure (psig)	Temp. (F)
Design Flow	0 to 0.1	18 – 35	1100 – 1800	0.25	amb

Utilities

Pilot Gas (per pilot)	78 scfh at 5 psig. Clean, dry natural gas.
Plant Air	No Plant Air Required
Electricity	None required (Solar powered (12VDC) igniton system is being offered)
Blowers	Electric: No blower required Blower Size:N/A

Mechanical

Design Wind Speed	120 mph ASCE 7-10
Site Conditions	Temp: 0 to 120°F Elevation: 14.0 Psia
Corrosion Allowance	1/16" (standard)
Electrical Area	Non-classified area
Control Panel Type	Nema 4 (Painted Carbon Steel)
Blower Motor	No blower included with this offer

Emission & Performance Guarantees

Destruction	98% or greater hydrocarbon destruction efficiency will be achieved
Stability	Flare will be stable over the entire operating range
Smokeless Rate	May smoke, but should be less than Ringleman 1 due to small flow rate.
Max Radiation	Less than 500 Btu/hr/SF at normal & 1500 Btu/hr at max flow rates
Tip Velocity	Meets EPA regulations over full operating range

Flare Construction

Component	Dimension	Material	Conn. @ Joints	Connection Type	Connection Elevation
Flare Stack	20' H x 4" Dia.	A-36/A53B	Full Pen. Buttweld	----	----
Inlet Flange	4" dia	CS	---	150# RFSO	6'
Flare Tip Ø	4"	304SS	Full Pen.	Integral	---
Pilots	Hero HS	Stainless Steel	NPT / SW	---	flare tip
Pilot Tubing Ø	3/8"	SS tubing or SS flexhose	Swagelok	NPT at regulator	3'-10"
Pilot Conduit	---	rigid conduit or flexible SO cord	NPT	NPT	stack base

Equipment Description

Hotspot Ignition System (HS) and Control Panel

The flare gas is ignited by one or more continuously sparking pilots. This design has been used on hundreds of gas flares with good success.

- High stability pilot flame in all wind conditions.
- Stainless steel construction for long life and corrosion resistance.
- Wind bonnet on pilot tip for improved flame stability.
- Automatic spark ignition system. The control panel spark module sends a low voltage current to the exciter mounted on the pilot. A high energy spark lights the pilot flame.
- Pilot flame monitoring system. A thermocouple continuously monitors the pilot flame status. Dry contacts are included for remote indication of pilot status.
- Solar panel and battery charger. No other power is required.
- One control panel per pilot. Can be mounted on rack, Unistrut or 2" pipe.
- Pilot gas regulator with gauge set for 10 psig outlet pressure. One per pilot.

Panel to Pilot Interconnection (by client)

- One ¾" conduit between the each control panel and the associated pilot. Each pilot is operated by one control panel. Interconnecting wire is 5 wires per pilot (one pair of Type K thermocouple wires, three 14ga power wires). For simplicity sake, we recommend one conduit run per pilot.
- One 3/8"-1/2" stainless tubing for fuel gas to pilots. HERO Flare supplies the pilot gas regulator.

Equipment Description

Utility Flare Tip

The flare uses a utility flare tip that is well proven and has lasted well in previous applications. The flare gas is ignited by a continuously sparking pilot. This design has been used on hundreds of gas flares with good success. The flare tip includes:

- Stainless steel upper tip section for temperature and corrosion resistance.
- Flame stabilizers for good destruction efficiency at high Mach flow rates.
- Pilot support brackets.

Free Standing Utility Flare Stack

The flare height will minimize thermal radiation and SO₂ ground level emissions. The flare stack includes:

- Free standing stack complete with base ring (CS).
- Flare stack and tip will be shipped as one piece. No field welding required.
- Tubing, wiring and conduit for pilot (ships loose for field installation).
- Sandblast, prime and finish coat.
- Flat plate diverter located just below inlet flange to drain liquid to separate knock out pot. See optional pricing to incorporate knock out pot in base of flare stack.
- Mechanical drawings and operating manual.
- Complete structural calculations for the stack, lifting trunnions and base ring. Finite element analysis of the inlet nozzle and lifting trunnions. For the record, not for approval.

Flame Arrestor

Flame arrestors are available in a wide variety of sizes and materials. For most applications, we recommend:

- Carbon steel body for strength compared to aluminum body arrestors.
- 304SS flame cell for greatly increased resistance to flashback and overtemperature.
- 150# RF flanged ends.
- 2" -6" flame arrestors are stock items.

The flame arrestor is normally mounted at the inlet to the flare stack. Deflagration and detonation arrestors are also available for special applications.

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/10⁶ scf to kg/10⁶ m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from lb/10⁶ 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 NO₂. 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 ₂ O (Uncontrolled)	2.2	E
N ₂ O (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/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ 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. TOC = Total Organic Compounds.

VOC = Volatile Organic Compounds.

^b Based on approximately 100% conversion of fuel carbon to CO₂. CO₂[lb/10⁶ scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.

^c All PM (total, condensable, 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 PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensable PM. Condensable 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 SO₂.

Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ 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-Methylcholanthrene ^{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
207-08-9	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	Phenanthrene ^{b, c}	1.7E-05	D
74-98-6	Propane	1.6E+00	E

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
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/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. Emission Factors preceded 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 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES^a
(SCC 2-02-002-54)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	4.08 E+00	B
NO _x ^c <90% Load	8.47 E-01	B
CO ^c 90 - 105% Load	3.17 E-01	C
CO ^c <90% Load	5.57 E-01	B
CO ₂ ^d	1.10 E+02	A
SO ₂ ^e	5.88 E-04	A
TOC ^f	1.47 E+00	A
Methane ^g	1.25 E+00	C
VOC ^h	1.18 E-01	C
PM10 (filterable) ⁱ	7.71 E-05	D
PM2.5 (filterable) ⁱ	7.71 E-05	D
PM Condensable ^j	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^k	<4.00 E-05	E
1,1,2-Trichloroethane ^k	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene ^k	2.67E-04	D
1,3-Dichloropropene ^k	<2.64 E-05	E
2-Methylnaphthalene ^k	3.32 E-05	C
2,2,4-Trimethylpentane ^k	2.50 E-04	C
Acenaphthene ^k	1.25 E-06	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Acenaphthylene ^k	5.53 E-06	C
Acetaldehyde ^{k,l}	8.36 E-03	A
Acrolein ^{k,l}	5.14 E-03	A
Benzene ^k	4.40 E-04	A
Benzo(b)fluoranthene ^k	1.66 E-07	D
Benzo(e)pyrene ^k	4.15 E-07	D
Benzo(g,h,i)perylene ^k	4.14 E-07	D
Biphenyl ^k	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	C
Carbon Tetrachloride ^k	<3.67 E-05	E
Chlorobenzene ^k	<3.04 E-05	E
Chloroethane	1.87 E-06	D
Chloroform ^k	<2.85 E-05	E
Chrysene ^k	6.93 E-07	C
Cyclopentane	2.27 E-04	C
Ethane	1.05 E-01	C
Ethylbenzene ^k	3.97 E-05	B
Ethylene Dibromide ^k	<4.43 E-05	E
Fluoranthene ^k	1.11 E-06	C
Fluorene ^k	5.67 E-06	C
Formaldehyde ^{k,l}	5.28 E-02	A
Methanol ^k	2.50 E-03	B
Methylcyclohexane	1.23 E-03	C
Methylene Chloride ^k	2.00 E-05	C
n-Hexane ^k	1.11 E-03	C
n-Nonane	1.10 E-04	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN
ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
n-Octane	3.51 E-04	C
n-Pentane	2.60 E-03	C
Naphthalene ^k	7.44 E-05	C
PAH ^k	2.69 E-05	D
Phenanthrene ^k	1.04 E-05	D
Phenol ^k	2.40 E-05	D
Propane	4.19 E-02	C
Pyrene ^k	1.36 E-06	C
Styrene ^k	<2.36 E-05	E
Tetrachloroethane ^k	2.48 E-06	D
Toluene ^k	4.08 E-04	B
Vinyl Chloride ^k	1.49 E-05	C
Xylene ^k	1.84 E-04	B

^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 NO_x 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. PM-10 = 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/10⁶ 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 CO₂. CO₂ [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10⁶ scf, and

- h = heating value of natural gas (assume 1020 Btu/scf at 60°F).
- ^e Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content in natural gas of 2,000 gr/10⁶ scf.
- ^f Emission factor for TOC is based on measured emission levels from 22 source 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, 1.31 lb/MMBtu vs. 1.25 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 $\leq 1 \mu\text{m}$ in aerodynamic diameter. Therefore, for filterable PM emissions, PM₁₀(filterable) = PM_{2.5}(filterable).
- ^j PM Condensable = PM Condensable Inorganic + PM-Condensable Organic
- ^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.

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN
 ENGINES^a
 (SCC 2-02-002-53)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	2.21 E+00	A
NO _x ^c <90% Load	2.27 E+00	C
CO ^c 90 - 105% Load	3.72 E+00	A
CO ^c <90% Load	3.51 E+00	C
CO ₂ ^d	1.10 E+02	A
SO ₂ ^e	5.88 E-04	A
TOC ^f	3.58 E-01	C
Methane ^g	2.30 E-01	C
VOC ^h	2.96 E-02	C
PM ₁₀ (filterable) ^{i,j}	9.50 E-03	E
PM _{2.5} (filterable) ^j	9.50 E-03	E
PM Condensable ^k	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^l	2.53 E-05	C
1,1,2-Trichloroethane ^l	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene ^l	6.63 E-04	D
1,3-Dichloropropene ^l	<1.27 E-05	E
Acetaldehyde ^{l,m}	2.79 E-03	C
Acrolein ^{l,m}	2.63 E-03	C
Benzene ^l	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride ^l	<1.77 E-05	E

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN ENGINES
(Concluded)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Chlorobenzene ¹	<1.29 E-05	E
Chloroform ¹	<1.37 E-05	E
Ethane ⁿ	7.04 E-02	C
Ethylbenzene ¹	<2.48 E-05	E
Ethylene Dibromide ¹	<2.13 E-05	E
Formaldehyde ^{1,m}	2.05 E-02	A
Methanol ¹	3.06 E-03	D
Methylene Chloride ¹	4.12 E-05	C
Naphthalene ¹	<9.71 E-05	E
PAH ¹	1.41 E-04	D
Styrene ¹	<1.19 E-05	E
Toluene ¹	5.58 E-04	A
Vinyl Chloride ¹	<7.18 E-06	E
Xylene ¹	1.95 E-04	A

^a Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM-10, “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 NO_x 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/10⁶ 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 CO₂. CO₂ [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO₂,

C = carbon content of fuel by weight (0.75), D = density of fuel, $4.1 \text{ E}+04 \text{ lb}/10^6 \text{ scf}$, and h = heating value of natural gas (assume 1020 Btu/scf at 60°F).

^e Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content in natural gas of $2,000 \text{ gr}/10^6 \text{ scf}$.

^f Emission factor for TOC is based on measured emission levels from 6 source tests.

^g Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor.

^h VOC emission factor is based on the sum of the emission factors for all speciated organic compounds. Methane and ethane emissions were not measured for this engine category.

ⁱ No data were available for uncontrolled engines. PM10 emissions are for engines equipped with a PCC.

^j Considered $\leq 1 \mu\text{m}$ in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).

^k No data were available for condensable emissions. The presented emission factor reflects emissions from 4SLB engines.

^l Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.

^m For rich-burn engines, no interference is suspected in quantifying aldehyde emissions. The presented emission factors are based on FTIR and CARB 430 emissions data measurements.

ⁿ Ethane emission factor is determined by subtracting the VOC emission factor from the NMHC emission factor.

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES^a

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO _x	0.011	1.63	0.031	4.41	D
CO	6.96 E-03 ^d	0.99 ^d	6.68 E-03	0.95	D
SO _x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10 ^b	7.21 E-04	0.10	2.20 E-03	0.31	D
CO ₂ ^c	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

^a References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

^b PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

^c Assumes 99% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

^d Instead of 0.439 lb/hp-hr (power output) and 62.7 lb/mmBtu (fuel input), the correct emissions factors values are 6.96 E-03 lb/hp-hr (power output) and 0.99 lb/mmBtu (fuel input), respectively. This is an editorial correction. March 24, 2009

Table 3.3-2. SPECIATED ORGANIC COMPOUND EMISSION
FACTORS FOR UNCONTROLLED DIESEL ENGINES^a

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (Fuel Input) (lb/MMBtu)
Benzene ^b	9.33 E-04
Toluene ^b	4.09 E-04
Xylenes ^b	2.85 E-04
Propylene	2.58 E-03
1,3-Butadiene ^{b,c}	<3.91 E-05
Formaldehyde ^b	1.18 E-03
Acetaldehyde ^b	7.67 E-04
Acrolein ^b	<9.25 E-05
Polycyclic aromatic hydrocarbons (PAH)	
Naphthalene ^b	8.48 E-05
Acenaphthylene	<5.06 E-06
Acenaphthene	<1.42 E-06
Fluorene	2.92 E-05
Phenanthrene	2.94 E-05
Anthracene	1.87 E-06
Fluoranthene	7.61 E-06
Pyrene	4.78 E-06
Benzo(a)anthracene	1.68 E-06
Chrysene	3.53 E-07
Benzo(b)fluoranthene	<9.91 E-08
Benzo(k)fluoranthene	<1.55 E-07
Benzo(a)pyrene	<1.88 E-07
Indeno(1,2,3-cd)pyrene	<3.75 E-07
Dibenz(a,h)anthracene	<5.83 E-07
Benzo(g,h,i)perylene	<4.89 E-07
TOTAL PAH	1.68 E-04

^a Based on the uncontrolled levels of 2 diesel engines from References 6-7. Source Classification Codes 2-02-001-02, 2-03-001-01. To convert from lb/MMBtu to ng/J, multiply by 430.

^b Hazardous air pollutant listed in the *Clean Air Act*.

^c Based on data from 1 engine.

5.2 Transportation And Marketing Of Petroleum Liquids¹⁻³

5.2.1 General

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

5.2.2 Emissions And Controls

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

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

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

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

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

5.2.2.1.1 Loading Losses -

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

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

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

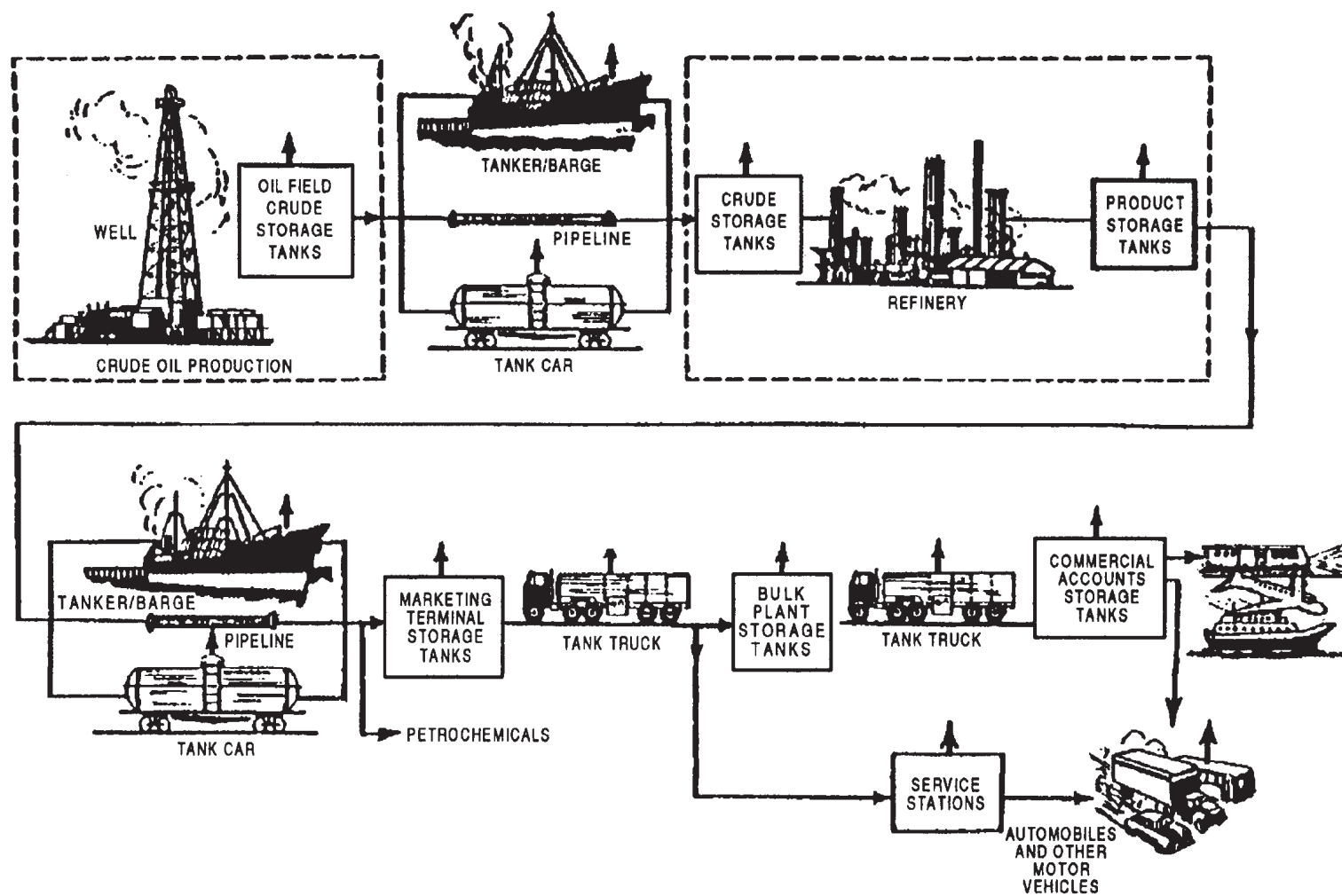


Figure 5.2-1. Flow sheet of petroleum production, refining, and distribution systems.
(Points of organic emissions are indicated by vertical arrows.)

Table C-1 to Subpart C of Part 98—Default CO₂ Emission Factors and High Heat Values for Various Types of Fuel

DEFAULT CO₂ EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

Fuel type	Default high heat value	Default CO ₂ emission factor
Coal and coke	mmBtu/short ton	kg CO ₂ /mmBtu
Anthracite	25.09	103.69
Bituminous	24.93	93.28
Subbituminous	17.25	97.17
Lignite	14.21	97.72
Coal Coke	24.80	113.67
Mixed (Commercial sector)	21.39	94.27
Mixed (Industrial coking)	26.28	93.90
Mixed (Industrial sector)	22.35	94.67
Mixed (Electric Power sector)	19.73	95.52
Natural gas	mmBtu/scf	kg CO ₂ /mmBtu
(Weighted U.S. Average)	1.026×10^{-3}	53.06
Petroleum products—liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10

¹ The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

² Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

³ Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

⁴ Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO₂ emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

⁵ Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100) * HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

Fuel type	Default high heat value	Default CO ₂ emission factor
Used Oil	0.138	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG) ¹	0.092	61.71
Propane ¹	0.091	62.87
Propylene ²	0.091	67.77
Ethane ¹	0.068	59.60
Ethanol	0.084	68.44
Ethylene ²	0.058	65.96
Isobutane ¹	0.099	64.94
Isobutylene ¹	0.103	68.86
Butane ¹	0.103	64.77
Butylene ¹	0.105	68.72
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.88
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.125	71.02
Special Naphtha	0.125	72.34
Unfinished Oils	0.139	74.54
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22
Asphalt and Road Oil	0.158	75.36

¹ The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

² Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

³ Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

⁴ Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO₂ emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

⁵ Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100) * HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

Fuel type	Default high heat value	Default CO ₂ emission factor
Crude Oil	0.138	74.54
Petroleum products—solid	mmBtu/short ton	kg CO ₂ /mmBtu.
Petroleum Coke	30.00	102.41.
Petroleum products—gaseous	mmBtu/scf	kg CO ₂ /mmBtu.
Propane Gas	2.516×10^{-3}	61.46.
Other fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Municipal Solid Waste	9.95^3	90.7
Tires	28.00	85.97
Plastics	38.00	75.00
Other fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Blast Furnace Gas	0.092×10^{-3}	274.32
Coke Oven Gas	0.599×10^{-3}	46.85
Fuel Gas ⁴	1.388×10^{-3}	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO ₂ /mmBtu
Wood and Wood Residuals (dry basis) ⁵	17.48	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	10.39	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO ₂ /mmBtu
Landfill Gas	0.485×10^{-3}	52.07
Other Biomass Gases	0.655×10^{-3}	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Ethanol	0.084	68.44
Biodiesel (100%)	0.128	73.84

¹ The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

² Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

³ Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

⁴ Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO₂ emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

⁵ Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100) * HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

Fuel type	Default high heat value	Default CO ₂ emission factor
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

¹ The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

² Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

³ Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

⁴ Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO₂ emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

⁵ Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100) * HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

[78 FR 71950, Nov. 29, 2013, as amended at 81 FR 89252, Dec. 9, 2016]

Table C-2 to Subpart C of Part 98—Default CH₄ and N₂O Emission Factors for Various Types of Fuel

Fuel type	Default CH ₄ emission factor (kg CH ₄ /mmBtu)	Default N ₂ O emission factor (kg N ₂ O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1×10^{-02}	1.6×10^{-03}
Natural Gas ¹	1.0×10^{-03}	1.0×10^{-04}
Petroleum Products (All fuel types in Table C-1)	3.0×10^{-03}	6.0×10^{-04}
Fuel Gas	3.0×10^{-03}	6.0×10^{-04}
Other Fuels—Solid	3.2×10^{-02}	4.2×10^{-03}
Blast Furnace Gas	2.2×10^{-05}	1.0×10^{-04}
Coke Oven Gas	4.8×10^{-04}	1.0×10^{-04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the “Energy Industry” or “Manufacturing Industries and Construction”. In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC “Energy Industry” category may employ a value of 1g of CH₄/mmBtu.

Fuel type	Default CH ₄ emission factor (kg CH ₄ /mmBtu)	Default N ₂ O emission factor (kg N ₂ O/mmBtu)
Biomass Fuels—Solid (All fuel types in Table C-1, except wood and wood residuals)	3.2×10^{-02}	4.2×10^{-03}
Wood and wood residuals	7.2×10^{-03}	3.6×10^{-03}
Biomass Fuels—Gaseous (All fuel types in Table C-1)	3.2×10^{-03}	6.3×10^{-04}
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1×10^{-03}	1.1×10^{-04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the “Energy Industry” or “Manufacturing Industries and Construction”. In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC “Energy Industry” category may employ a value of 1g of CH₄/mmBtu.

[78 FR 71952, Nov. 29, 2013, as amended at 81 FR 89252, Dec. 9, 2016; 89 FR 42220, May 14, 2024]

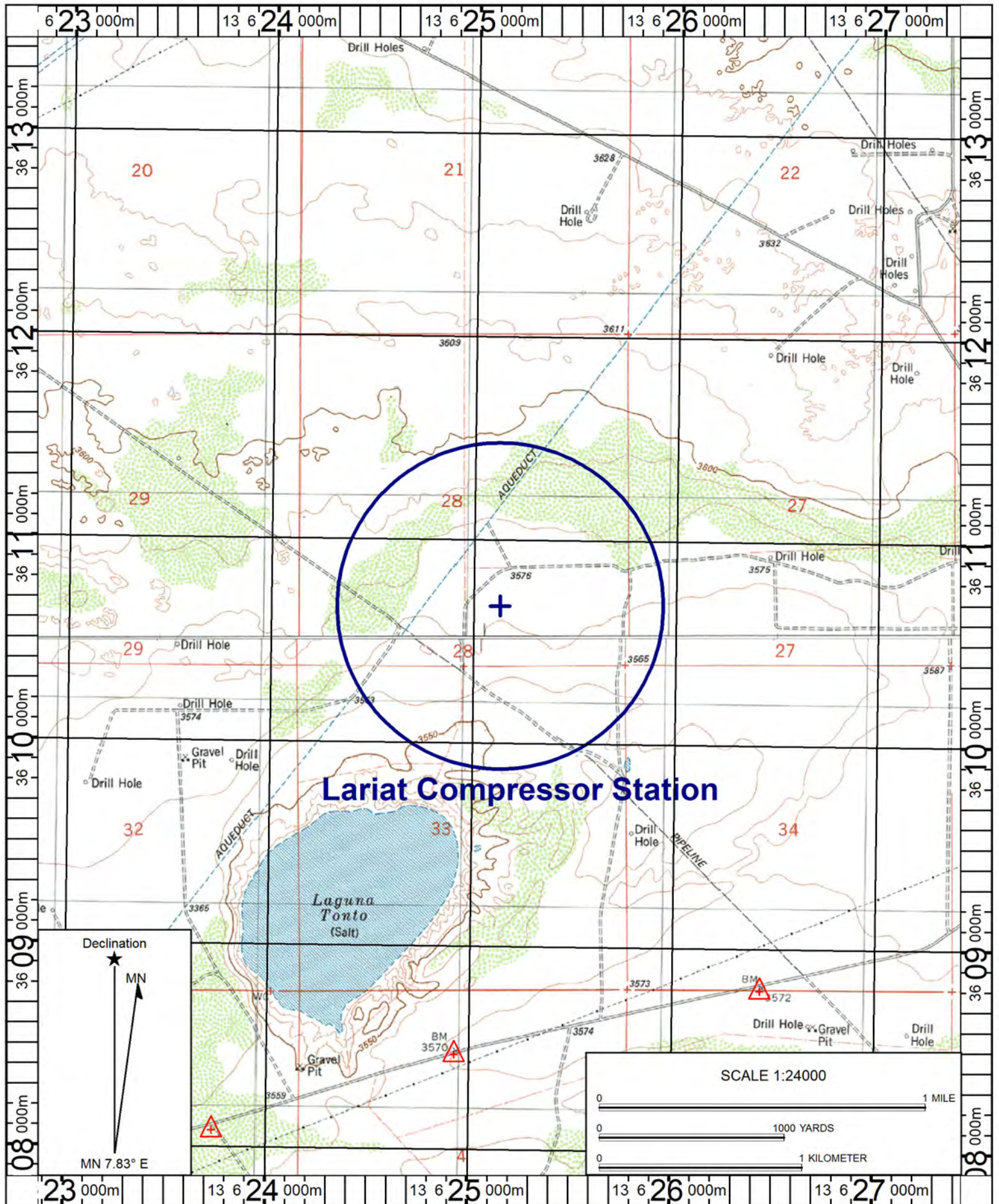
Section 8

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	

A topographic map is included below.



Name: Lariat Compressor Station
 Date: September 9, 2025
 Scale: 1 inch = 2,000 ft.

Location: 13 0625121 E 3610676 N

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.
-

7014 2870 0001 4719 4539

U.S. Postal ServiceTM
CERTIFIED MAIL[®] RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com.

Carlsbad, NM 88220

Postage	\$5.30
Certified Fee	\$0.00
Return Receipt Fee (Endorsement Required)	\$0.00
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$6.08

0109 05
SEP 24 2025
Postmark Here
09/24/2025

Sent To
EDDY COUNTY - COUNTY MANAGER
Street & Apt. No., or PO Box No. **101W GREENE ST, STE 312**
City, State, ZIP+4 **CARLSBAD, NM 88220**

PS Form 3800, July 2014

See Reverse for Instructions

7014 2870 0001 4719 4546

U.S. Postal ServiceTM
CERTIFIED MAIL[®] RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com.

Lovington, NM 88260

Postage	\$5.50
Certified Fee	\$0.00
Return Receipt Fee (Endorsement Required)	\$0.00
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$6.08

0109 05
SEP 24 2025
Postmark Here
09/24/2025

Sent To
LEA COUNTY - COUNTY MANAGER
Street & Apt. No., or PO Box No. **100 N MAIN AVE, STE 4**
City, State, ZIP+4 **LOVINGTON, NM 88260**

PS Form 3800, July 2014

See Reverse for Instructions

7014 2870 0001 4719 4553

U.S. Postal ServiceTM
CERTIFIED MAIL[®] RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com.

Hobbs, NM 88240

Postage	\$5.30
Certified Fee	\$0.00
Return Receipt Fee (Endorsement Required)	\$0.00
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$6.08

0109 05
SEP 24 2025
Postmark Here
09/24/2025

Sent To
SMITH, KENNETH INC.
Street & Apt. No., or PO Box No. **267 SMITH RANCH RD**
City, State, ZIP+4 **HOBBS, NM 88240**

PS Form 3800, July 2014

See Reverse for Instructions

September 24, 2025

CERTIFIED MAIL 7014 2870 0001 4719 4539

RETURN RECEIPT REQUESTED (certified mail is required, return receipt is optional)

Dear County Official,

Delek Logistics Partners, LP announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **compressor station** facility. The expected date of application submittal to the Air Quality Bureau is **September 30, 2025**.

The exact location for the proposed facility known as, **Lariat Compressor Station**, is at latitude 32 deg, 37 min, 36.0192 sec and longitude -103 deg, 40 min, 2.5356 sec. The approximate location of this facility is **22.5 miles east-southeast of Loco Hills, NM in Lea County**.

The proposed modifications consist of the replacement of the two (2) existing glycol dehydrators and one (1) dehydrator reboiler. The proposed additions to this facility will include nine (9) natural gas fired compressor engines, one (1) process flare, one (1) condensate tank and two (2) water tanks. A proposed facility throughput of 140 MMSCFD of natural gas is being requested in this permitting action.

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

Pollutant:	Pounds per hour	Tons per year
PM ₁₀	4	14
PM _{2.5}	4	14
Sulfur Dioxide (SO ₂)	2	7
Hydrogen Sulfide (H ₂ S)	1	1
Nitrogen Oxides (NO _x)	288	149
Carbon Monoxide (CO)	540	147
Volatile Organic Compounds (VOC)	681	225
Total sum of all Hazardous Air Pollutants (HAPs)	65	79
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO ₂ e	N/A	170,021

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

The owner and/or operator of the Facility is:

Delek Logistics Partners, LP
5850 Granite Parkway, Ste. 450
Plano, Texas, 75024

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

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

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

Atención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-7748.

Notice of Non-Discrimination

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

September 24, 2025

CERTIFIED MAIL 7014 2870 0001 4719 4553

RETURN RECEIPT REQUESTED (certified mail is required, return receipt is optional)

Dear Neighbor,

Delek Logistics Partners, LP announces its application submittal to the New Mexico Environment Department for an air quality permit for the **modification** of its **compressor station** facility. The expected date of application submittal to the Air Quality Bureau is **September 30, 2025**.

The exact location for the proposed facility known as, **Lariat Compressor Station**, is at latitude 32 deg, 37 min, 36.0192 sec and longitude -103 deg, 40 min, 2.5356 sec. The approximate location of this facility is **22.5 miles east-southeast of Loco Hills, NM in Lea County**.

The proposed modifications consist of the replacement of the two (2) existing glycol dehydrators and one (1) dehydrator reboiler. The proposed additions to this facility will include nine (9) natural gas fired compressor engines, one (1) process flare, one (1) condensate tank and two (2) water tanks. A proposed facility throughput of 140 MMSCFD of natural gas is being requested in this permitting action.

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

Pollutant:	Pounds per hour	Tons per year
PM ₁₀	4	14
PM _{2.5}	4	14
Sulfur Dioxide (SO ₂)	2	7
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Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO ₂ e	N/A	170,021

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

The owner and/or operator of the Facility is:

Delek Logistics Partners, LP
5850 Granite Parkway, Ste. 450
Plano, Texas, 75024

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

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

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Table of Notified Citizens

Name	Address	City	State	Zip Code
SMITH, KENNETH INC.	267 SMITH RANCH RD	HOBBS	NM	88240

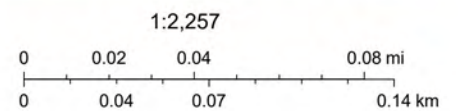
Table of Notified Counties

Name	Address	City	State	Zip Code
LEA COUNTY – COUNTY MANAGER	100 N MAIN AVE, STE. 4	LOVINGTON	NM	88260
EDDY COUNTY – COUNTY MANAGER	101 W GREENE ST, STE. 312	CARLSBAD	NM	88220

Lea County Map



9/17/2025, 3:48:05 PM

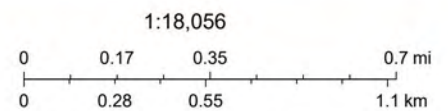


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Lea County Map



9/17/2025, 3:54:20 PM



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Click to Print

Owner Information

Owner #:42052 **District:**160

Name: SMITH, KENNETH INC

Co Name:

Address1:

Address2: 267 SMITH RANCH RD

City: HOBBS **State:** NM **Zip Code:** 88240

Estimated Taxes for Owner

Estimated Tax Estimated Year used

\$13675.76 2025

Calculate Estimated Tax

Recap Value Information

Central Full Value	0	Full Value	1266435
---------------------------	---	-------------------	---------

Land Full Value	17196	Taxable Value	422145
------------------------	-------	----------------------	--------

Improvements Full value	452469	Exempt Value	2000
--------------------------------	--------	---------------------	------

Personal Property Full Value	0	Net Value	420145
-------------------------------------	---	------------------	--------

Manufactured Home Full Value	0		
-------------------------------------	---	--	--

Livestock Full Value

796770

Property Information

Property Code:4000420520004

Book:

Page:0

Reception#:0

Physical Address:

Bldg:

Apt:

Section:33

Township:19S

Range:33E

160.00 AC LOC NE4

Appraisal Information

Basement Sq. Ft. 0 First Floor Sq. Ft. 1 Second Floor Sq. Ft. 0 Year built 1955

Property Value Information

230 Non-Residential Improvements 0.00 7590

Submittal of Public Service Announcement – Certification

I, Kaelin Gagnon, the undersigned, certify that on **September 26, 2025**, submitted a public service announcement to 1 Radio Square (**KZOR-KIXN-KPZA-KEJL-KLEA-KBIM FM-KBIM**) that serves the City\Town\Village of **Hobbs, Lea** County, New Mexico, in which the source is or is proposed to be located and that 1 Radio Square **DID NOT RESPOND**.

Signed this 28 day of October, 2025.

Kaelin Gagnon
Signature

Oct - 28 - 2025
Date

Kaelin Gagnon
Printed Name

Associate Consultant
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

From: [Kaelin Gagnon](#)
To: ["dawn@1radiosquare.com"](mailto:dawn@1radiosquare.com)
Cc: [Adam Erenstein](#); [Ryan Ahlberg](#); ["jason.booth@deleklogistics.com"](mailto:jason.booth@deleklogistics.com); ["jonathon.smith@deleklogistics.com"](mailto:jonathon.smith@deleklogistics.com)
Subject: Delek Logistics Partners, LP Lariat Compressor Station - PSA Public Notice Request
Date: Friday, September 26, 2025 1:27:39 PM
Attachments: [image001.png](#)

Hello,

Per New Mexico Administrative Code 20.2.72.203.B NMAC and according to the Guidance for Public Notice for Air Quality Permit Applications – **(5) Notifications: Submittal of Public Service Announcement (PSA):** A public service announcement required for permits and significant permit revisions must be submitted to at least one radio or television station, which services the municipality, or county which the facility is or will be located. **Therefore, based on the above, we respectfully ask you to air the following script as a Public Service Announcement.**

"This is a Public Service Announcement for a revision to the air quality permit of a compressor station facility per the requirements of New Mexico Administrative Code 20.2.72.203.D. The name of the facility is the Lariat Compressor Station. The Lariat Compressor Station is located at the following coordinates: 32.626672 degrees North and 103.667371 degrees West. The type of change for which the permit is sought is a New Source Review modification which consists of the replacement of two existing glycol dehydrators and one dehydrator reboiler. It also includes the addition of nine natural gas fired compressor engines, one process flare, one condensate tank and two water tanks. There is also a proposed throughput of 140 million standard cubic feet per day of natural gas.

Public notice has been posted near Loco Hills, New Mexico at the following locations:

- (1) At the facility entrance of the Lariat Compressor Station,
- (2) At the Eunice Public Library located at 1003 Avenue North, Eunice, New Mexico Zip code 88231
- (3) At the Eunice City Hall located at 1106 Avenue J, Eunice, New Mexico Zip code 88231
- (4) At Lowe's Pay-N-Save located at 1326 Avenue J, Eunice, New Mexico Zip code 88231

Comments may be directed to the following address: Permits Program Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez; Suite 1, Santa Fe, New Mexico, 87505-1816. Comments may be directed to the following telephone numbers: (505) 476-4300 or 1(800) 224-7009."

Please let me know if you have any questions.

Thanks!

Sincerely,

Kaelin Gagnon
Associate Consultant

P 505.266.6611 M 915.538.7932
Email: kaelin.gagnon@trinityconsultants.com
9400 Holly Avenue NE, Building 3, Suite B, Albuquerque, NM 87122



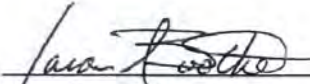
Connect with us: [LinkedIn](#) / [YouTube](#) / trinityconsultants.com
View our capabilities in the [Environmental Consulting](#), [Built Environment](#), [Life Sciences](#), and [Water & Ecology](#) markets.

General Posting of Notices – Certification

I, Jason S. Boothe, the undersigned, certify that on 9/24/2025, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the City of Eunice, Lea County, State of New Mexico on the following dates:

1. Facility Entrance - 9/24/2025
2. Public Library - 1003 Ave. N., Eunice, NM 88231 - 9/24/2025
3. City Hall - 1106 Ave. J, Eunice, NM 88231 - 9/24/2025
4. Lowe's Pay-N-Save - 1326 Ave. J, Eunice, NM 882321 - 9/24/2025

Signed this 24th day of September, 2025


Signature

9/24/2025

Date

JASON S. BOOTHE
Printed Name

SR. MANAGER, ENVIRONMENTAL
Title



Add a Caption

Wednesday • Sep 24, 2025 • 2:02 PM

Adjust

IMG_0645

Apple iPhone 16 Pro Max

HEIF

Fusion Camera — 24 mm f1.78

24 MP • 4284 × 5712 • 2.4 MB

STANDARD

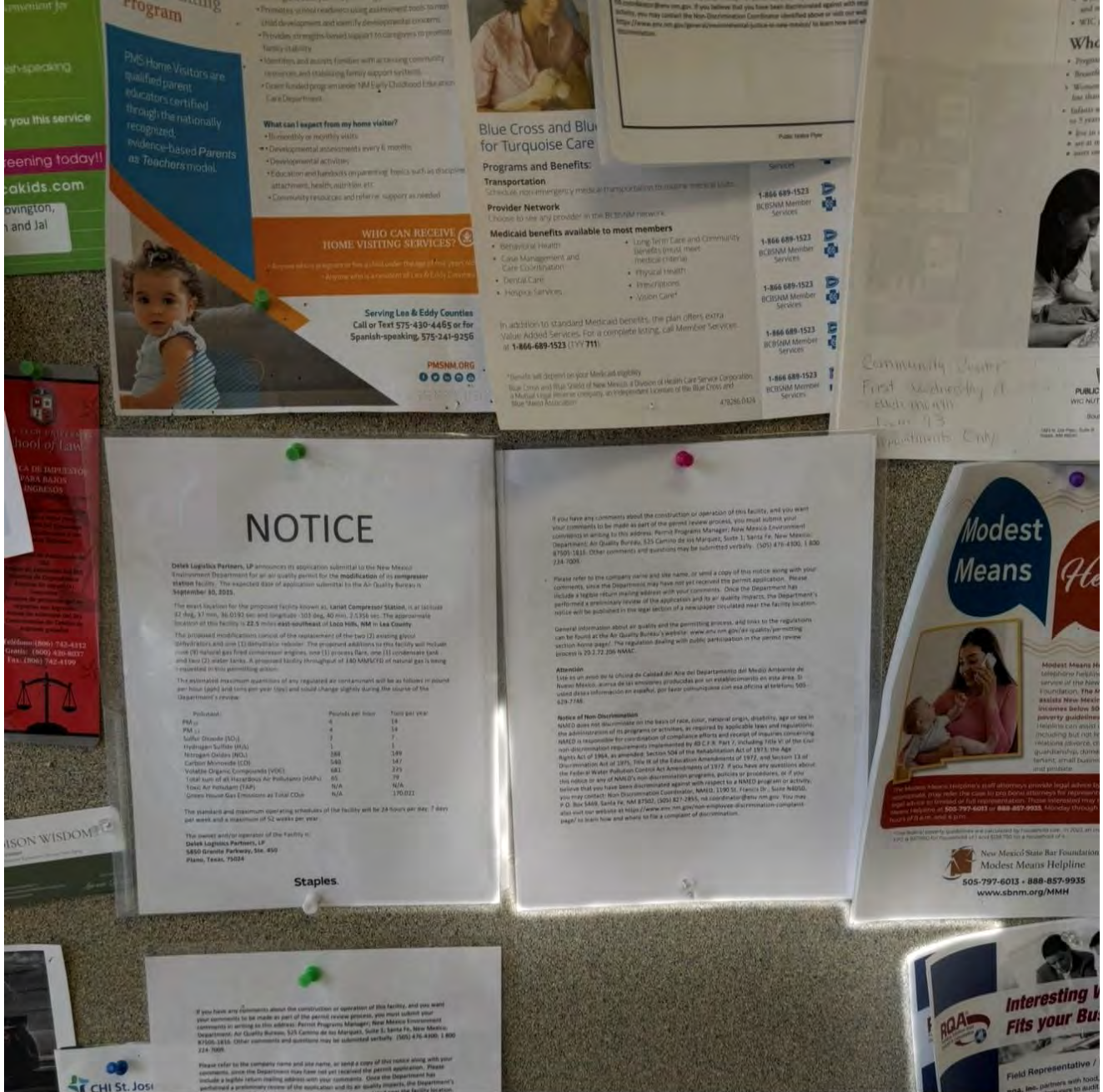
ISO80

42mm

0ev

f1.78

1/14286s



Add a Caption

Wednesday • Sep 24, 2025 • 3:43 PM

Adjust

IMG_0655

Apple iPhone 16 Pro Max

HEIF

Fusion Camera — 24 mm f1.78

24 MP • 4284 × 5712 • 4 MB

STANDARD

ISO50

24mm

0ev

f1.78

1/143s

Eunice Community Board

NOTICE

Deep Leggett Partners, LP announced its intention to submit to the New Mexico Environment Department for an air quality permit for the modification of its compressor station facility. The expected date of application submitted to the Air Quality Bureau is September 30, 2025.

The exact location for the proposed facility known as, LaPalat Compressor Station, is at latitude 32 deg, 57 min, 34.032 sec and longitude -103 deg, 40 min, 2.535 sec. The approximate location of this facility is 22.5 miles east-southeast of Lordsburg, NM in Lea County.

The proposed modifications consist of the replacement of the two (2) existing glycol dehydrators and one (1) dehydrator receiver. The proposed additions to this facility will include nine (9) natural gas fired compressor engines, one (1) process flare, one (1) condensate tank and two (2) water tanks. A proposed facility throughout of 140 MMSCFD of natural gas is being requested in this permitting action.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (lph) and 50m per year (tpy) and could change slightly during the course of the Department's review:

Pollutant	Pounds per hour	Tons per year
PM ₁₀	4	14
PM _{2.5}	4	14
Sulfur Dioxide (SO ₂)	2	7
Perchloroethylene (PCE)	1	1
Nitrogen Dioxide (NO ₂)	388	149
Nitrogen Monoxide (NO)	540	147
Carbon Monoxide (CO)	884	225
Volatile Organic Compounds (VOC)	88	29
Total sum of all hazardous Air Pollutants (HAPs)	N/A	N/A
Total Air Pollutant (TAP)	N/A	270,021
Green House Gas Emissions as Total CO ₂ e	N/A	

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

The owner and/or operator of the facility is:

Deep Leggett Partners, LP
5830 Granite Parkway, Ste. 650
Pleasanton, Texas 75684

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager, New Mexico Environment Department, Air Quality Bureau, 525 Camino de los Marques, Suite 1, Santa Fe, New Mexico, 87505-1815. Other comments and questions may be submitted verbally. (505) 476-4300; 1-800-224-7009.

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

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

Atención

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Add a Caption

Wednesday • Sep 24, 2025 • 3:36 PM

Adjust



IMG_0653

Apple iPhone 16 Pro Max

HEIF

Fusion Camera — 24 mm f1.78

24 MP • 4284 × 5712 • 3 MB

STANDARD

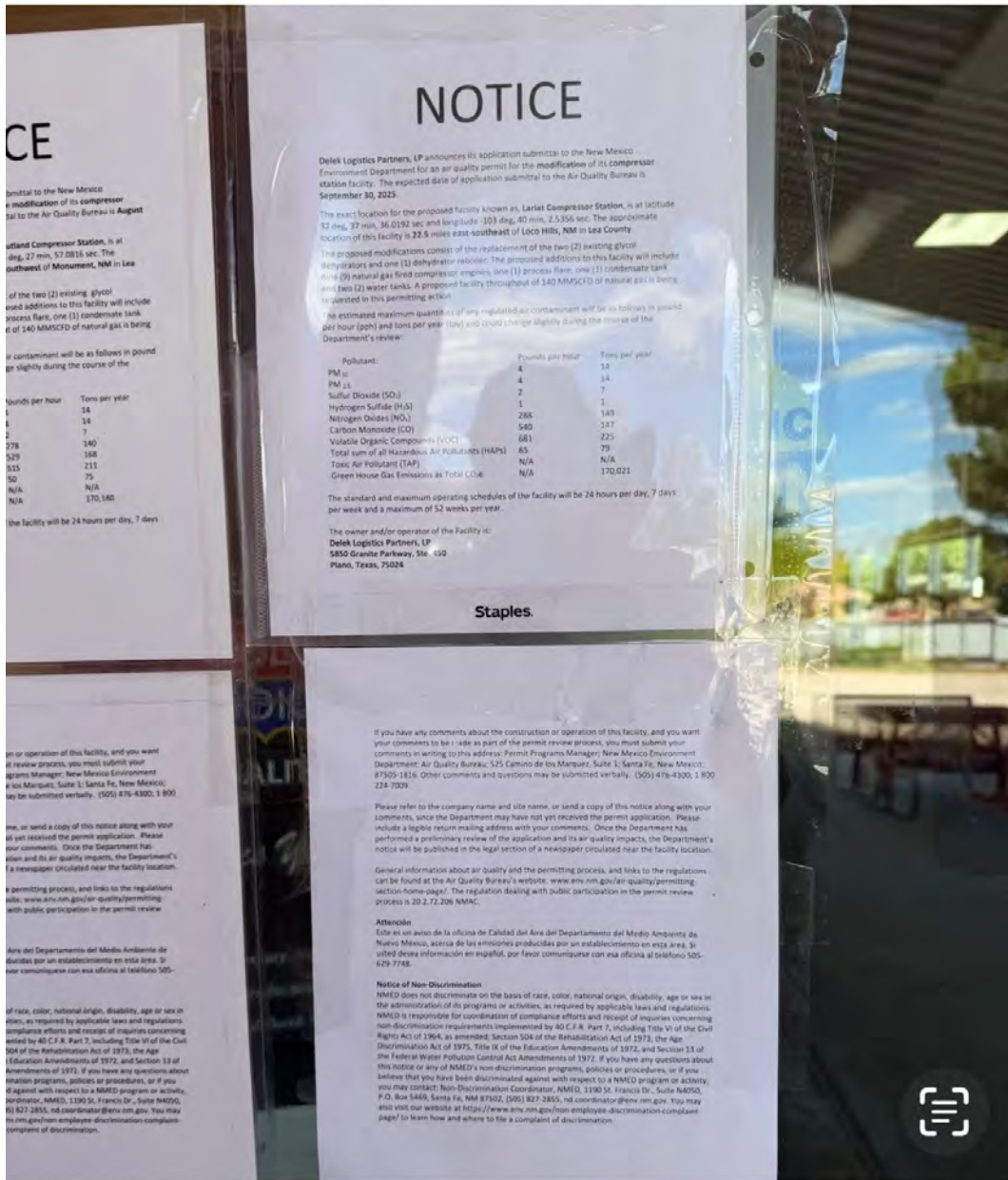
ISO80

24mm

0ev

f1.78

1/2801s



Add a Caption

Wednesday • Sep 24, 2025 • 3:27 PM

Adjust

IMG_0649

Apple iPhone 16 Pro Max

HEIF

Fusion Camera — 24 mm f1.78

24 MP • 4284 × 5712 • 3.1 MB

STANDARD

ISO80

24mm

0ev

f1.78

1/858s

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

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

Beginning with the issue dated
September 28, 2025
and ending with the issue dated
September 28, 2025.


Publisher

Sworn and subscribed to before me this
28th day of September 2025.


Business Manager

My commission expires
January 29, 2027

(Seal) STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087526
COMMISSION EXPIRES 01/29/2027

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

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Hydrogen Sulfide (H ₂ S)	1	1
Nitrogen Oxides (NO _x)	288	149
Carbon Monoxide (CO)	540	147
Volatile Organic Compounds (VOC)	681	225
Total sum of all Hazardous Air Pollutants (HAPs)	65	79
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO _{2e}	N/A	170,021

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

The owner and/or operator of the Facility is:
Delek Logistics Partners, LP
5850 Granite Parkway, Ste. 450
Plano, Texas, 75024

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

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

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Notice of Non-Discrimination

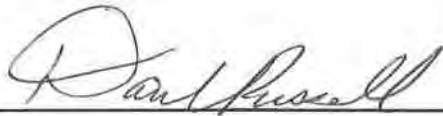
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

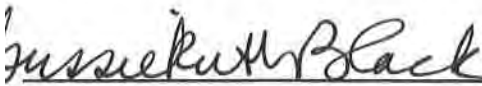
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
September 28, 2025
and ending with the issue dated
September 28, 2025.



Publisher

Sworn and subscribed to before me this
28th day of September 2025.



Business Manager

My commission expires

January 29, 2027

(Seal)

NOTARY PUBLIC

GUSSIE RUTH BLACK

COMMISSION # 1087526

COMMISSION EXPIRES 01/29/2027

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

September 28, 2025

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TRACY POWELL
TRINITY CONSULTANTS, INC.
12700 PARK CENTRAL DR., STE. 600
DALLAS, TX 75251

Pet Talk

A toxic detour: Understanding liver shunts

Sometimes, the body takes a wrong turn. In pets with a liver shunt, an abnormal blood vessel creates a detour that sends blood around the liver rather than through it — and that single wrong turn can have a big impact on their health.

Dr. Genna Atiee, a clinical associate professor at the Texas A&M College of Veterinary Medicine & Biomedical Sciences, explains what liver shunts are, how to recognize the signs, and the options available for treatment.

A shortcut gone wrong

A liver shunt is a problem with the way blood flows in the body. Normally, blood from the gastrointestinal tract, which carries nutrients and waste from digestion, travels directly to the liver.

The liver’s job is to filter and process this “dirty” blood before it moves into the rest of the body. In dogs with a liver shunt, however, there’s an abnormal blood vessel — a connection that shouldn’t exist — that causes this unfiltered blood to bypass the liver entirely.

“Instead of being ‘cleaned,’ the dirty blood is sent straight into the body’s regular circulation,” Atiee said. “This means the body is exposed to harmful substances and the liver doesn’t get the blood it needs to grow and function properly.”

Most liver shunts in dogs are congenital, meaning the dog is born with them. Less commonly, shunts can be acquired later in life. In those cases, high blood pressure in the portal circulation (the vessels that carry blood within the liver) forces blood to find alternate routes, or pop-offs, creating new vessels that bypass the liver.

Spotting the signs

Because dogs are usually born with liver shunts, problems often show up early in puppyhood. Without normal blood flow, the liver doesn’t grow the way it should, leaving it small and underdeveloped. As a result, the puppy’s overall health begins to suffer.

“Most commonly, you see a failure to thrive,” Atiee said. “These dogs are scrawny and just overall not doing as well as their siblings.”

When toxins like ammonia bypass the liver, accumulate in the blood, and make

their way to the brain, they can cause hepatic encephalopathy, a condition that affects brain function. This is why many dogs with liver shunts develop neurological problems such as seizures, drooling, bumping into walls, or general disorientation.

Other body systems can also be affected. Digestive signs may include vomiting or diarrhea, while urinary issues may appear as frequent drinking, excessive urination, or even the development of urinary stones.

When a veterinarian suspects a shunt, the first step is routine blood work, as shunts often leave recognizable clues in the blood that point the vet toward the diagnosis.

“Certain things the liver produces might be low,” Atiee said. “A lot of times, their red blood cells are small, they may have a low platelet count, or they might have elevated liver enzymes. The next step is usually a liver function test called bile acids, which are usually quite abnormal. If ammonia is measured, it will frequently be high.”

To ultimately confirm the diagnosis and understand where the shunt is located, ultrasound or CT scans are used to provide a clear, detailed map of the blood vessels.

Finding the right fix

Once diagnosed, treatment depends on the type of shunt and the individual dog’s condition. When intervention is needed, the overall goal is the same — to gradually close the abnormal vessel and redirect blood flow through the liver — but the method varies depending on where the shunt is located.

Most shunts are extrahepatic, meaning they are outside the liver. These are more common in smaller, toy breeds and are usually corrected with surgery. Surgeons directly access and close the vessel, usually by placing a constricting device that tightens over time.

Intrahepatic shunts, on the other hand, occur inside the liver and are more common in larger breeds. Because these are harder to reach surgically, veterinarians often use a minimally invasive procedure called transvenous percutaneous coil embolization.

“In this procedure, a catheter is directed through a vein — the jugular vein in the neck — to reach the abnormal vessel inside the liver,” Atiee said. “Through this catheter, a stent is placed in the vena cava over



the opening of the shunt and metal coils are placed into the shunt, which cause a clot to form in the vessel and gradually close it off. The stent is used to keep the coils from leaving the shunt, like a dam.”

Regardless of the approach, the closure has to happen slowly so that the liver has time to adjust.

“The liver in dogs with shunts is tiny and doesn’t have capacity for a lot of blood because it developed with very little blood supply,” Atiee said. “If we direct all of the blood to the liver at once, it can’t accommodate it. Then the pressure in the liver rises and the blood backs up, which can be fatal.”

While many dogs benefit from surgery or embolization, some with milder shunts

— especially those diagnosed later in life — may be managed medically with drugs and diet that help control neurological side effects. Diet is a very important aspect of management and can be very helpful in reducing clinical signs of liver shunts.

A liver shunt may send the body down the wrong road, but with the right treatment, dogs can find their way back to a happy, healthy life.

Pet Talk is a service of the College of Veterinary Medicine & Biomedical Sciences, Texas A&M University. Stories can be viewed on the web at vetmed.tamu.edu/news/pet-talk. Suggestions for future topics may be directed to vmbs-editor@tamu.edu.

Ways to knit creatively

Knitting is one of the oldest and most popular forms of needlework. There is some debate on whether knitting originated in the Middle East or in Scotland, nevertheless sailors and traders learned how to knit as they traveled from place to place and taught their families and friends when they returned home. Wherever it began, it was popular among men and women.

Today there are many ways to knit: using knitting needles, on modern looms or by hand. No matter the method you choose, knitting is a relaxing and satisfying pastime for many. Never has there been such a wide variety of colors and types of yarn or such a variety of creative patterns for knitting projects. Items such as socks, hats, gloves, sweaters, shawls, afghans, spreads and many other items have become popular over the years. Enthusiastic, creative craftsmen may try more adventurous projects such as wall hangings, rugs and sculptured pieces.

So, why learn to knit... Knitting isn’t just for Grandmas and Homemakers: Knitting happens to be a very cool art form popular among many generations. In fact, the Craft Yarn Council reports that a third of women ages 25 to 35 now knit or crochet. It’s a great way to eliminate boredom, build

On the Back Burner

By: Tamara Schubert



confidence and be creative. And it all starts with yarn. So here are some things to know about yarn before you dive off into the world of knitting. Yarn is a general term for that string stuff we use to knit with and comes in several varieties including plant, animal, synthetic, and blended yarns.

■ Yarn made from plant fibers is a popular choice for many crafters, and for good reasons! Plant fibers are breathable and lightweight, making them ideal for warm weather garments. They’re also biodegradable and eco-friendly. Some examples include cotton, linen, and hemp/bamboo

■ Known for their warmth and durability, animal fibers are another popular type of yarn. Animal fibers can be super soft or a little bit scratchy, depending on the breed of the animal. Examples include wool, silk, alpaca or mohair.

■ Synthetic yarns are made from man-made fibers, which are often cheaper to produce than natural fibers. These types of yarns are generally durable, easy

to care for, and come in a wide range of colors. Plus, they’re suitable for people with sensitive skin or allergies. Examples include acrylic and nylon.

■ Blended yarns combine different natural or synthetic fibers to create yarns with the best properties of both. Examples include wool-nylon, mohair- silk, or acrylic-wool.

Whichever yarn we choose to create with, we will want to pay special attention to the label on the skein. This is where we will learn the fiber content, weight, type of yarn, washing instructions and approximately how many yards you have. There will also be a dye lot number which is important. Yarn is dyed in batches, and these batches differ slightly from one another, although they are considered to be batches of the same color. Buy enough yarn to complete the project, usually a skein more than the pattern asks for so the project can be completed from the same dye lot.

What will you create?



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Section 10

Written Description of the Routine Operations of the Facility

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.

Lariat Compressor Station is a natural gas compressor station that compresses received natural gas and delivers compressed gas to a pipeline for mainline transportation. This facility will consist of eighteen (18) natural gas-fired compressor engines, identified as units 2100 through 3800, which provide power to the compressors. Compressed gas is then routed through two (2) glycol dehydrators, identified as units DEHY-1 & DEHY-2, after which the dehydrated gas is sent offsite via pipeline. Both DEHY's are equipped with BTEX condensers and 1.5 MMBtu/hr reboilers, identified as units HTR-1 & HTR-2. BTEX emissions are controlled by enclosed combustion units, identified as units ECD-1 & ECD-2. A gunbarrel tank, identified as unit TK-1, separates inlet liquids into condensate and produced water, with condensate routed to the condensate storage tanks, identified as units TK-2 through TK-5, and produced water to the produced water storage tanks, identified as units PWTK-1 through PWTK-4. All tanks at the facility are controlled by a tank flare, identified as FL-2. Condensate and produced water are trucked offsite, identified as CONDLOAD & PWLOAD. Haul roads, identified as HR-1, is exempt pursuant to 20.2.72.202.B (5) NMAC. A process flare, identified as FL-1, controls process gas SSM, plant blowdowns, and compressor blowdowns. An auxiliary emergency generator engine (GEN-1), is maintained at the facility to provide electric power in the event that service from the local utility is interrupted. This unit is exempt pursuant to 20.2.72.202.B.(3) NMAC).

Section 11

Source Determination

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

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, 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, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

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

See Table 2-A in Section 2 of this application.

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

Section 12

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.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- ☒ **a minor PSD source before and after this modification (if so, delete C and D below).**
 - ☐ **a major PSD source before this modification. This modification will make this a PSD minor source.**
 - ☐ **an existing PSD Major Source that has never had a major modification requiring a BACT analysis.**
 - ☐ **an existing PSD Major Source that has had a major modification requiring a BACT analysis**
 - ☐ **a new PSD Major Source after this modification.**
-

This application is for an initial NSR permit.

Section 13

Determination of State & Federal Air Quality Regulations

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

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

Required Information for Specific Equipment:

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

Required Information for Regulations that Apply to the Entire Facility:

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

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

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

Regulatory Citations for Emission Standards:

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

Federally Enforceable Conditions:

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

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

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

Table for State Regulations:

<u>State Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emissions per 20.2.7.110 NMAC.
20.2.23 NMAC	Fugitive Dust Control	No	Facility	This regulation does not apply because this application is not for a Notice of Intent.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	Yes	HTR-1, HTR-2	This facility has 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	No	N/A	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	No	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. This facility is a compressor station and not a natural gas process plant. Therefore, this regulation does not apply.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	No	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
20.2.38 NMAC	Hydrocarbon Storage Facility	Yes	TK-2, TK-3, TK-4, TK-5	The condensate storage tanks at this facility are applicable to this regulation and will comply via control by a tank flare (Unit FL-2).
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This facility is not a sulfur recovery plant; therefore, this regulation does not apply.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	2100 through 3800, FUG, COND LOAD, PW LOAD, DEHY-1, DEHY-2, TK-1, TK-2, TK-3, TK-4, TK-5, PWTK-1, PWTK-2, PWTK-3, PWTK-4	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below: Include the construction status of applicable units as “New”, “Existing”, “Relocation of Existing”, or “Reconstructed” as defined by this Part in your justification: Check the box for the subparts that are applicable: ☒ 113 – Engines and Turbines ☒ 114 – Compressor Seals ☒ 115 – Control Devices and Closed Vent Systems ☒ 116 – Equipment Leaks and Fugitive Emissions ☐ 117 – Natural Gas Well Liquid Unloading ☒ 118 – Glycol Dehydrators ☐ 119 – Heaters ☒ 120 – Hydrocarbon Liquid Transfers ☐ 121 – Pig Launching and Receiving ☒ 122 – Pneumatic Controllers and Pumps ☒ 123 – Storage Vessels ☐ 124 – Well Workovers ☐ 125 – Small Business Facilities ☐ 126 – Produced Water Management Unit

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
				☐ 127 – Flowback Vessels and Preproduction Operations
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	2100 through 3800, HTR-1, HTR-2, ECD-1, ECD-2, FL-1, FL-2	This regulation establishes controls on smoke and visible emissions from certain sources, including stationary combustion equipment such as engines, reboilers, incinerators, and flares. The compressor engines (2100 through 3800), glycol reboilers (HTR-1 & HTR-2), enclosed combustion devices (ECD-1 & ECD-2), and flares (FL-1 and FL-2) are subject to this regulation.
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining an operating permit. This facility is a major source with respect to Title V. The facility will comply with all operating permit conditions as applicable.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.70 NMAC and is therefore subject to requirements of this regulation.
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.72 NMAC and is therefore subject to requirements of this regulation.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet all applicable reporting requirements under 20.2.73.300.B.1 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. This facility is not a PSD major source. Therefore, this regulation does not apply.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. This facility is subject to 20.2.72 NMAC and in turn subject to 20.2.75 NMAC. The facility is exempt from annual fees under this part (20.2.75.11.E NMAC) as it is subject to fees pursuant to 20.2.71 NMAC.
20.2.77 NMAC	New Source Performance	Yes	2100 through 3800, FUG	This is a stationary source which is subject to the requirements of 40 CFR Part 60.
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This facility emits hazardous air pollutants which are subject to the requirements of 40 CFR Part 61. However, there are no units subject to 40 CFR Part 61; therefore, this regulation does not apply.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights	No	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply, as all stacks at the facility will follow good engineering practice.

<u>State Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	DEHY-1, DEHY-2, 2100 through 3800	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

Applicable Federal Regulations:

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	The modeling and conditions developed from the modeling are the applicable requirements to demonstration compliance with the NAAQS.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	2100 through 3800, FUG	This regulation establishes state authority to implement new source performance standards (NSPS) for stationary sources, as amended through January 15, 2017. • 2100 through 3800 are subject to 40 CFR 60, Subpart JJJJ. • 2100 through 2700 are subject to 40 CFR 60, Subpart OOOOa • 2800 through 3800, and FUG are subject to 40 CFR 60, Subpart OOOOb
NSPS 40 CFR 60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for fossil-fuel-fired steam generators. This regulation does not apply as the facility does not have any fossil fuel-fired steam generating units with a heat input rate of 250 MMBtu/hr [60.40(a)(1)].
NSPS 40 CFR 60.40b Subpart Db	Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	N/A	This regulation does not apply as there are no small industrial commercial instructional steam generating units at this facility.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
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	No	N/A	This facility does not operate storage vessels constructed between May 18, 1978 and July 23, 1984. Therefore, this subpart does not apply.
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	No	N/A	This facility does not have storage vessels with design capacities > 75m ³ .
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No	N/A	This Facility does not operate stationary gas turbines with a heat input equal to or greater than 10 million Btu per hour. Therefore, this regulation does not apply.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No	N/A	The facility was constructed after the applicability date of 40 CFR 60 Subpart KKK (August 23, 2011).
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions	No	N/A	The facility was constructed after the applicability date of 40 CFR 60 Subpart LLL (August 23, 2011).
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	No units at this facility were constructed, modified or reconstructed within the applicability dates of this regulation; therefore, this Subpart does not apply.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for	Yes	2100 through 2700	This regulation is applicable to onshore affected facilities listed in paragraphs (a) through (j) of this section constructed after September 18, 2015, and on or before December 6, 2022. The reciprocating compressors associated with units 2100 through 2700 were constructed/reconstructed between the applicability dates of

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	which Construction, Modification or Reconstruction Commenced After September 18, 2015			this regulation and are therefore subject to the requirements of this subpart. Storage tanks TK-1 through TK-4, PWTK-1, and PWTK-2 have a PTE of less than 6 tpy of VOC and are therefore not subject to this regulation.
NSPS 40 CFR Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022	Yes	2800 through 3800, FUG	This regulation is applicable to onshore affected facilities listed in paragraphs (a) through (i) of this section constructed after December 6, 2022. The reciprocating compressors associated with units 2800 through 3800 were manufactured after the applicability date of this regulation and are therefore subject to the requirements of this subpart. The site will be subject to leak monitoring from fugitive components per §60.5365b(i). Storage tanks TK-5, PWTK-3, and PWTK-4 have a PTE of less than 6 tpy of VOC and less than 20 tpy of methane, so, are therefore not subject to this regulation.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary compression ignition internal combustion engines. This rule applies to IC engines (diesel engines) that commenced construction after July 11, 2005. There are no IC engines at this facility; therefore, this regulation does not apply.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	2100 through 3800	This regulation establishes standards of performance for stationary spark ignition combustion engines. The compressor engines (Units: 2100 through 3800) will comply with the applicable requirements of this regulation.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This facility does not have any steam generating units; therefore, the facility is not subject to this regulation.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This facility does not generate electricity; therefore, this regulation does not apply.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	This facility is not a landfill; therefore, this regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	NSPS 40 CFR 61 does not apply to the facility because the facility does not emit or have the triggering substances on site and/or the facility is not involved in the triggering activity. The facility is not subject to this regulation. None of the subparts of Part 61 apply to the facility.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for Mercury	No	N/A	The provisions of this subpart are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. Therefore, this subpart does not apply.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No	N/A	Not applicable as the facility equipment does not operate in VHAP service. VHAP service is a piece of equipment, which contains or encounters a fluid that is at least 10% weight of VHAP. VHAP is a substance regulated under this subpart for which a standard for equipment leaks of VHAPs has been promulgated.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	DEHY-1, DEHY-2, 2100 through 3800	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because 40 CFR 63 Subpart HH applies to the dehydrators (Units: DEHY-1 & DEHY-2), and 40 CFR Part 63 Subpart ZZZZ applies to the compressor engines (Units: 2100 through 3800).
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	DEHY-1, DEHY-2	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. The facility is a major source of HAPs and meets the definition of a natural gas processing plant. The dehydrators will have a natural gas flow rates equal to or greater than 85 thousand standard cubic meters per day. The dehydrators do meet the definition of a Large Glycol Dehydration Units in 40 CFR 63.761. When determining the benzene emissions with federally enforceable controls as allowed in 40 CFR 63.772(b)(2), the benzene emissions are less than 0.9 Mg/yr.
MACT 40 CFR 63 Subpart HHH		No	N/A	This facility is not a natural gas transmission or storage facility. Thus this subpart does not apply.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	This regulation establishes the national emissions standards for hazardous air pollutants for major industrial, commercial, and institutional boilers and process heaters. This facility operates a glycol reboiler which meets the definition of a process heater as defined in § 63.7575 but it is not located at a major source of HAPs and is therefore not subject to the requirements of this regulation.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from coal- and oil-fired electric utility steam generating units (EGUs) as defined in §63.10042 of this subpart. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations. This facility does not contain the affected units and is therefore not subject to this regulation.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	2100 through 3800	This regulation defines national emissions standards for HAPs from stationary reciprocating Internal Combustion Engines. 2100 through 3800 are subject to MACT ZZZZ and comply by following the requirements of NSPS JJJJ.
40 CFR 64	Compliance Assurance Monitoring	No	N/A	This regulation establishes requirements for a Compliance Assurance Monitoring (CAM) plan for pollutant-specific emissions units at a major source required for part 70 or 71 permitting. This application is being submitted under part 72 and is therefore not subject to this regulation.

<u>Federal Regulation Citation</u>	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 68	Chemical Accident Prevention	No	N/A	This facility does not have any sources listed in this subpart. Therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 72	Acid Rain	No	N/A	Not applicable as this facility is not an acid rain source.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No	N/A	Not applicable as this facility is not an acid rain source.
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No	N/A	Not applicable as this facility does not generate commercial electric power or electric power for sale.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No	N/A	Not applicable as this facility is not an acid rain source.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	Not applicable as the facility does not service, maintain, repair class I or class II appliances nor disposes of the appliances.

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.
-

Delek maintains the required planning and excess emission mitigation documents at Lariat Compressor Station.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

The term “alternative operating scenario” is not defined by regulation. Delek understands this term to apply to a source which may routinely operate with alternative fuels or processes in such a manner as to potentially affect emissions. Based on this understanding, this facility has no alternative operating scenarios.

Units at the facility may be shut down from time to time due to factors including but not limited to market demand, maintenance, malfunctions, and emergency shutdowns. Operating in alternative modes and temporary shutdowns are not alternative operating scenarios as Delek understands the term.

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

- ☐ See attached, approved modeling **waiver for all** pollutants from the facility.
- ☐ See attached, approved modeling **waiver for some** pollutants from the facility.
- ☒ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.
- ☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.
- ☐ No modeling is required.

From: [Ryan Ahlberg](#)
To: [Fong, Bryant, ENV](#)
Cc: [Mustafa, Sufi A., ENV](#); [Adam Erenstein](#); [Daniel Dolce](#)
Subject: RE: [EXTERNAL] Modeling Protocol for Delek Logistics Partners, LP Lariat Compressor Station (Initial NSR)
Date: Wednesday, September 24, 2025 4:23:19 PM
Attachments: [image001.png](#)

Hello Bryant,

Thank you for reaching out. We do not expect to exceed any standards from modeling at this facility. However, if standards were to be exceeded, per the air dispersion modeling guidelines of section 7.7, an analysis would be conducted to determine that the new source contribution would be less than the significance level for the specific pollutant.

A table will be provided to show the cumulative model impact and the contribution of the new source will be provided as well. If sources are to be excluded, an explanation for each will be explained in detail. The MAXDCONT output option in AERMOD will be used to obtain the results for source contributions paired in time and space for 24-hour PM2.5, 1-Hour NO2, 1-Hour H2S and 1-Hour SO2. A similar analysis will be conducted for annual models, as needed.

Please let me know if you have further questions. Thank you,

Ryan Ahlberg
Associate Consultant

P 505.266.6611 M 815.341.2524
Email: <mailto:ryan.ahlberg@trinityconsultants.com>
9400 Holly Ave NE, Bldg 3, Ste B Albuquerque, NM 87122



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From: Fong, Bryant, ENV <bryant.fong@env.nm.gov>
Sent: Wednesday, September 24, 2025 8:34 AM
To: Ryan Ahlberg <Ryan.Ahlberg@trinityconsultants.com>
Cc: Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>
Subject: FW: [EXTERNAL] Modeling Protocol for Delek Logistics Partners, LP Lariat Compressor Station (Initial NSR)

Ryan,

I am an air dispersion modeler with New Mexico AQB and was forwarded your modeling protocol.

Do you expect any exceedances with standards? Please describe how culpability

analyses would occur if exceedances were measured.

Otherwise, the modeling protocols appear to meet guidelines.

Please proceed with air dispersion modeling if you do not expect any exceedances.

Bryant Fong
Environmental Scientist / Air Dispersion Modeler
New Mexico Environment Department / Air Quality Bureau
525 Camino de los Marquez, Suite 1
Sante Fe, NM 87505
bryant.fong@env.nm.gov
TEL: 505-660-3981

From: Ryan Ahlberg <Ryan.Ahlberg@trinityconsultants.com>
Sent: Friday, September 19, 2025 3:25 PM
To: Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>
Cc: Adam Erenstein <AErenstein@trinityconsultants.com>; Daniel Dolce <Daniel.Dolce@trinityconsultants.com>; Kaelin Gagnon <Kaelin.Gagnon@trinityconsultants.com>; Jason Boothe <jason.boothe@deleklogistics.com>; Jonathon A Smith <jonathon.smith@deleklogistics.com>
Subject: [EXTERNAL] Modeling Protocol for Delek Logistics Partners, LP Lariat Compressor Station (Initial NSR)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Afternoon Sufi,

Please find attached the modeling protocol for Delek Logistics Partners, LP Lariat Compressor Station (**GCP-O&G 7600M3**). Modeling is being completed as a part of an initial NSR application.

Ryan Ahlberg
Associate Consultant

P 505.266.6611 M 815.341.2524
Email: mailto:ryan.ahlberg@trinityconsultants.com
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Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	Lariat Compressor Station
2	Name of company:	Delek Logistics Partners, LP
3	Current Permit number:	GCP-O&G #7600-M3
4	Name of applicant's modeler:	Adam Erenstein
5	Phone number of modeler:	(505) 266-6611
6	E-mail of modeler:	aerenstein@trinityconsultants.com

16-B: Brief

1	Was a modeling protocol submitted and approved?	Yes☒	No☐
2	Why is the modeling being done? Submission of an application for an initial NSR permit.	Other (describe below)	
3	Describe the permit changes relevant to the modeling.		
	This permit application is for an initial NSR and a full facility modeling demonstration is required.		
4	What geodetic datum was used in the modeling?	WGS84	
5	How long will the facility be at this location?	Longer than 1 year	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒

7	Identify the Air Quality Control Region (AQCR) in which the facility is located	155
8	List the PSD baseline dates for this region (minor or major, as appropriate).	
	NO2	3/16/1988
	SO2	7/28/1978
	PM10	2/20/1979
	PM2.5	11/13/2013
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).	
	N/A – No Class I areas within 50 km of the facility.	
10	Is the facility located in a non-attainment area? If so describe below	Yes ☐ No ☒
	N/A	
11	Describe any special modeling requirements, such as streamline permit requirements.	
	N/A	

16-C: Modeling History of Facility

1	Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).			
	Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
	CO	N/A	N/A	N/A
	NO ₂	N/A	N/A	N/A
	SO ₂	N/A	N/A	N/A
	H ₂ S	N/A	N/A	N/A
	PM2.5	N/A	N/A	N/A
	PM10	N/A	N/A	N/A
	Lead	N/A	N/A	N/A
	Ozone (PSD only)	N/A	N/A	N/A
	NM Toxic Air Pollutants (20.2.72.402 NMAC)	N/A	N/A	N/A

16-D: Modeling performed for this application

1	For each pollutant, indicate the modeling performed and submitted with this application. Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.					
	Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
	CO	☒	☐	☐	☐	☐

	NO ₂	☒	☒	☐	☐	☐
	SO ₂	☒	☒	☐	☐	☐
	H ₂ S	☒	☒	☐	☐	☐
	PM _{2.5}	☒	☒	☐	☐	☐
	PM ₁₀	☒	☒	☐	☐	☐
	Lead	☐	☐	☐	☐	☒
	Ozone	☐	☐	☐	☐	☒
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☐	☒

16-E: New Mexico toxic air pollutants modeling

1	List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application. N/A					
2	List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.					
	Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor
	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes ☒	No ☐
	N/A		

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	September 25, 2025
2	If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.	
	AQB Source ID	Description of Corrections
	39796E1 39796E2 39796E3 39796E22	Sources were in the wrong location (283005.17 m E, 4067882.789 m N). Source coordinates updated to facility's coordinates (644645 m E, 3602742 m N).

16-H: Building and structure downwash

1	How many buildings are present at the facility?	0	
2	How many above ground storage tanks are present at the facility?	9	
3	Was building downwash modeled for all buildings and tanks? If not explain why below.	Yes ☒	No ☐
	N/A		
4	Building comments	N/A	

16-I: Receptors and modeled property boundary

1	“Restricted Area” is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area. The property is enclosed by a fence and receptors are placed starting along the fence line.					
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?				Yes ☐	No ☒
3	Are restricted area boundary coordinates included in the modeling files?				Yes ☐	No ☒
4	Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.					
	Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments
	Cartesian	Circular	50	0	800	
	Cartesian	Circular	100	800	3000	
	Cartesian	Circular	250	3000	6000	
	Cartesian	Circular	500	6000	10000	
	Cartesian	Circular	1000	10000	50000	
5	Describe receptor spacing along the fence line.					
	A spacing of 50 meters will be used for receptors along the fence line of the property.					
6	Describe the PSD Class I area receptors.					
	N/A – No Class I area is within 50 km of the facility.					

16-J: Modeling Scenarios

1	Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).											
	N/A – This facility does not have any alternate operating scenarios and operates continuously (8760 hr/yr)											
2	Which scenario produces the highest concentrations? Why?											
	N/A											
3	Were emission factor sets used to limit emission rates or hours of operation? (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)									Yes ☐	No ☒	
4	If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.) Sources: N/A											
5	Hour of Day	Factor	Hour of Day	Factor								
	1	-	13	-								
	2	-	14	-								
	3	-	15	-								
	4	-	16	-								
	5	-	17	-								
	6	-	18	-								
	7	-	19	-								
	8	-	20	-								
	9	-	21	-								
	10	-	22	-								
	11	-	23	-								
	12	-	24	-								
	If hourly, variable emission rates were used that were not described above, describe them below.											
N/A												
6	Were different emission rates used for short-term and annual modeling? If so describe below.									Yes ☐	No ☒	
	N/A											

16-K: NO₂ Modeling

1	Which types of NO ₂ modeling were used? Check all that apply.	
	☒	ARM2

	☐	100% NO _x to NO ₂ conversion	
	☐	PVMRM	
	☐	OLM	
	☐	Other:	
2	Describe the NO ₂ modeling.		
	The ARM2 method was used for NO ₂ modeling.		
3	Were default NO ₂ /NO _x ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes ☒	No ☐
	N/A		
4	Describe the design value used for each averaging period modeled. N/A		
	1-hour: High eighth high Annual Other (Describe): Highest annual average of five years.		

16-L: Ozone Analysis

1	NMED has performed a generic analysis that demonstrates sources that are minor with respect to PSD do not cause or contribute to any violations of ozone NAAQS. The analysis follows. The basis of the ozone SIL is documented in Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program, EPA, April 17, 2018 and associated documents. NMED accepts this SIL basis and incorporates it into this permit record by reference. Complete documentation of the ozone concentration analysis using MERPS is included in the New Mexico Air Quality Bureau Air Dispersion Modeling Guidelines.				
2	The MERP values presented in Table 10 and Table 11 of the NM AQB Modeling Guidelines that produce the highest concentrations indicate that facilities emitting no more than 250 tons/year of NO_x and no more than 250 tons/year of VOCs will cause less formation of O₃ than the O₃ significance level. $[O_3]_{8-hour} = \left(\frac{250 \frac{ton}{yr}}{340_{MERP_{NOX}}} + \frac{250 \frac{ton}{yr}}{4679_{MERP_{VOC}}} \right) \times 1.96 \mu g/m^3$ =1.546 μg/m³, which is below the significance level of 1.96 μg/m³. Sources that produce ozone concentrations below the ozone SIL do not cause or contribute to air contaminant levels exceeding the ozone NAAQS.				
3	Does the facility emit at least 250 tons per year of NO _x or at least 250 tons per year of VOCs? Sources that emit at least 250 tons per year of NO _x or at least 250 tons per year of VOCs are covered by the analysis above and require an individual analysis.		Yes ☐	No ☒	
5	For new PSD Major Sources or PSD major modifications, if MERPs were used to account for ozone fill out the information below. If another method was used describe below.				
	NO _x (ton/yr)	MERP _{NOX}	VOCs (ton/yr)	MERP _{VOC}	[O ₃] _{8-hour}
	N/A	N/A	N/A	N/A	N/A
	NO _x was not affected by the scope of this project and therefore, ozone analysis is not required for this facility.				

16-M: Particulate Matter Modeling

	Select the pollutants for which plume depletion modeling was used.
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1	☐	PM2.5		
	☐	PM10		
	☒	None		
2	Describe the particle size distributions used. Include the source of information.			
	N/A			
3	Does the facility emit at least 40 tons per year of NO _x or at least 40 tons per year of SO ₂ ? Sources that emit at least 40 tons per year of NO _x or at least 40 tons per year of SO ₂ are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.	Yes ☒	No ☐	
4	Was secondary PM modeled for PM2.5?	Yes ☐	No ☒	
5	If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.			
	Pollutant	NO _x	SO ₂	[PM2.5] _{24-hour}
	MERP _{annual}	26780	14978	0.026
	MERP _{24-hour}	7331	1981	[PM2.5] _{annual}
	Emission rate (ton/yr)	134.60	5.89	1.08E-03

16-N: Setback Distances

1	Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.
	N/A
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	N/A

16-O: PSD Increment and Source IDs

1	The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below.	Yes ☒	No ☐
	Unit Number in UA-2	Unit Number in Modeling Files	
	N/A	N/A	
2	The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below.	Yes ☒	No ☐
	N/A		
3	Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled?	Yes ☐	No ☒

4	Which units consume increment for which pollutants?				
	Unit ID	NO ₂	SO ₂	PM10	PM2.5
	2310	X	X	X	X
	2320	X	X	X	X
	2330	X	X	X	X
	2340	X	X	X	X
	2350	X	X	X	X
	2360	X	X	X	X
	2370	X	X	X	X
	2380	X	X	X	X
	2390	X	X	X	X
	2400	X	X	X	X
	2410	X	X	X	X
	2420	X	X	X	X
	2430	X	X	X	X
	2440	X	X	X	X
	2450	X	X	X	X
	2460	X	X	X	X
	2470	X	X	X	X
	2480	X	X	X	X
	HTR1	X	X	X	X
	HTR2	X	X	X	X
	ECD1	X	X	X	X
	ECD2	X	X	X	X
FL1	X	X	-	-	
FL2	X	X	-	-	
5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).		The units at this facility were all constructed after the baseline dates and are therefore full increment consumers.		
6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.			Yes ☒	No ☐
	N/A				

16-P: Flare Modeling

1	For each flare or flaring scenario, complete the following			
	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)
	FL-1	24.71	117,150,813	30.99
	FL-2	35.66	286,320	1.48*
	*Diameter of flare tip was used for modeling as actual diameter is larger than the calculated effective diameter.			

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines?	Yes ☐	No ☒
	If yes, please explain below. N/A		
2	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		
	Section 5.3.2 of the New Mexico Air Dispersion Guidelines were used to determine the dimensions of fugitive sources at the facility for H ₂ S modeling.		
3	Describe how the volume sources are related to unit numbers. Or say they are the same.		
	Facility-wide Fugitives (Unit FUG-1), startup, shutdown & maintenance activities (SSM), condensate loading (Unit COND LOAD), and produced water loading (Unit PW LOAD) were modeled as a single volume source.		
4	Describe any open pits.		
	N/A		
5	Describe emission units included in each open pit.		
	N/A		

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.		Yes ☒	No ☐
	CO: N/A			
	NO ₂ : Hobbs-Jefferson (350250008)			
	PM _{2.5} : Hobbs-Jefferson (350450019)			
	PM ₁₀ : Hobbs-Jefferson (350250008)			
	SO ₂ : N/A			
	Other:			
	Comments:	N/A		
2	Were background concentrations refined to monthly or hourly values? If so describe below.		Yes ☐	No ☒
	N/A			

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used.		Yes ☒	No ☐
	Hobbs			
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.			
	N/A			

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes ☒	No ☐
	N/A		
2	What was the source of the terrain data?		
	Terrain was incorporated into the modeling analysis through the use of AERMAP with the most recent 1/3 degree DEM data currently available from https://apps.nationalmap.gov/downloader/#/		

16-U: Modeling Files

1	Describe the modeling files:		
	File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
	Meteorological data inputs – obtained from NMED web site.		
	Lariat CS_CO SIL_v1.0_2025 0929	CO	ROI/SIA
	Lariat CS_H2S SIL_v1.0_2025 0929	H ₂ S	ROI/SIA
	Lariat CS_NO2 SIL_v1.0_2025 0929	NO ₂	ROI/SIA, Cumulative
	Lariat CS_PM10 SIL_v1.0_2025 0929	PM ₁₀	ROI/SIA
	Lariat CS_PM2.5 SIL_v1.0_2025 0929	PM _{2.5}	ROI/SIA
	Lariat CS_SO2 SIL_v1.0_2025 0929	SO ₂	ROI/SIA
	Lariat CS_H2S 0.5hr CIA_v1.0_2025 0929	H ₂ S	Cumulative
	Lariat CS_PM2.5 Ann CIA_v1.0_2025 0929	PM _{2.5}	Cumulative
	Lariat CS_PM2.5 24hr CIA_v1.0_2025 0929	PM _{2.5}	Cumulative
	Lariat CS_PM10 24hr CIA_v1.0_2025 0929	PM ₁₀	Cumulative
	Lariat CS_SO2 1hr CIA_v1.0_2025 0929	SO ₂	Cumulative

16-V: PSD New or Major Modification Applications

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis.	Yes ☐	No ☒
	Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?		
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes ☐	No ☒
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		
	N/A		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
	N/A		
5	If required, have ozone and secondary PM _{2.5} ambient impacts analyses been completed? If so describe below.	Yes ☐	No ☒
	N/A		

16-W: Modeling Results

1	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes ☐	No ☒
	N/A		
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary.		

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
CO (8-hour) SIL	132.57	-	-	-	132.57	500	26.51%	624954	3610563	3569.72
CO (1-hour) SIL	173.42	-	-	-	173.42	2,000	8.67%	624915	3610835	3571.88
NO ₂ (Annual) SIL	6.80	-	-	-	6.80	1.0	Significant	625065	3610835	3572.08
NO ₂ (24-hour) SIL	61.95	-	-	-	61.95	5.0	Significant	624965	3610535	3569.52
NO ₂ (1-hour) SIL	128.25	-	-	-	128.25	7.52	Significant	624915	3610835	3571.88
PM _{2.5} (Annual) SIL	0.60	-	-	-	0.60	0.13	Significant	625015	3610885	3572.47
PM _{2.5} (24-hour) SIL	4.39	-	-	-	4.39	1.2	Significant	624915	3610535	3569.03
PM ₁₀ (Annual) SIL	0.60	-	-	-	0.60	1.0	60.42%	625015	3610885	3572.47
PM ₁₀ (24-hour) SIL	6.00	-	-	-	6.00	5.0	Significant	624965	3610535	3569.52
SO ₂ (Annual) SIL	0.39	-	-	-	0.39	1.0	38.89%	625015	3610835	3571.98

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
SO ₂ (24-hour) SIL	4.33	-	-	-	4.33	5.0	86.61%	624954	3610630	3570.05
SO ₂ (3-hour) SIL	11.54	-	-	-	11.54	25.0	46.17%	625074	3610676	3571.00
SO ₂ (1-hour) SIL	14.23	-	-	-	14.23	7.8	Significant	624954	3610680	3570.41
H ₂ S (1/2-hour) SIL	14.62	-	-	-	14.62	5.0	Significant	624954	3610680	3570.41
NO ₂ (Annual) PSD Inc. Class II	6.80	-	-	9.30	16.10	25	64.41%	625065	3610835	3572.08
NO ₂ (Annual) NMAAQS	6.80	-	-	9.3	16.10	94.02	17.13%	625065	3610835	3572.08
NO ₂ (1-hour) NAAQS	118.81	-	-	55	173.31	188.03	92.17%	625115	3610635	3571.03
PM _{2.5} (Annual) PSD Inc. Class II	0.60	1.30	1.08E-03	-	1.30	4	32.47%	625015	3610885	3572.47
PM _{2.5} (Annual) NAAQS	0.60	1.42	1.08E-03	7.1	8.52	9.0	94.65%	625015	3610885	3572.47
PM _{2.5} (24-hour) PSD Inc. Class II	3.54	3.87	0.026	-	3.87	9	43.02%	624915	3610585	3569.32
PM _{2.5} (24-hour) NAAQS	2.19	2.95	0.026	16.5	19.48	35	55.65%	625015	3610885	3572.47
PM ₁₀ (24-hour) PSD Inc. Class II	5.29	6.40	-	-	6.40	30	21.32%	624987	3610563	3569.69
PM ₁₀ (24-hour) NAAQS	5.29	6.42	-	37.3	43.72	150	29.14%	624987	3610563	3569.69
SO ₂ (1-hour) NAAQS	10.75	21.55	-	-	21.55	196.4	10.97%	624955	3610730	3571.13
H ₂ S (1/2-hour) NMAAQS	14.62	22.07	-	-	22.07	139.3	15.85%	624955	3610730	3571.13

16-X: Summary/conclusions

1

A statement that modeling requirements have been satisfied and that the permit can be issued.

Delek Logistics Partners, LP has demonstrated that the proposed NSR application would neither cause nor contribute to an exceedance of the standards for NO₂, CO, SO₂, PM₁₀, PM_{2.5} or H₂S.

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

Unit No.	Test Description	Test Date
2310	Test for NSPS JJJJ compliance	6/2/2025
2320	Test for NSPS JJJJ compliance	6/2/2025
2330	Test for NSPS JJJJ compliance	2/27/2025
2340	Test for NSPS JJJJ compliance	2/11/2025
2350	Test for NSPS JJJJ compliance	2/27/2025
2360	Test for NSPS JJJJ compliance	2/28/2025
2370	Test for NSPS JJJJ compliance	9/23/2025
2380	Test for NSPS JJJJ compliance	6/23/2025
2390	Test for NSPS JJJJ compliance	6/26/2025

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.

N/A – There is no other relevant information for this permit application.

Section 22: Certification

Company Name: Delek Logistics Partners, LP

I, MICHAEL ODIGIE, 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 28th day of August, 2025, upon my oath or affirmation, before a notary of the State of

Texas.

Michael Odigie
*Signature

08/28/2025
Date

Michael Odigie
Printed Name

SVP, DKL
Title

Scribed and sworn before me on this 28th day of August, 2025.

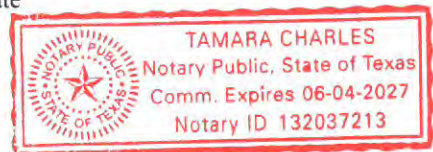
My authorization as a notary of the State of Texas expires on the

4th day of June, 2027.

Tamara Charles
Notary's Signature

08/28/2025
Date

Tamara Charles
Notary's Printed Name



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