



Crestwood New Mexico Pipeline LLC
Willow Lake Gas Processing Plant
NMED Air Quality Bureau
NSR Significant Permit Revision
July 2025

Energy Transfer LP
Alena Miro
Manager Environmental Compliance, Western Division
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Loving, NM 88256
713-865-6825
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Prepared by:
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July 17, 2025

Mr. Ted Schooley
Permit Programs Manager
NMED Air Quality Bureau
525 Camino de Los Marquez Suite 1
Santa Fe, NM 87505-1816

Subject: Crestwood New Mexico Pipeline LLC
Willow Lake Gas Processing Plant
NSR Significant Revision Application

Dear Mr. Schooley:

Crestwood New Mexico Pipeline LLC (Crestwood) is submitting this minor New Source Review (NSR) significant revision application for the existing Willow Lake Gas Processing Plant (Willow Lake). The facility is located at 393 Higby Hole Road, Malaga, NM 88263; and, is currently authorized under NSR permit 5142-M8. This application is being submitted pursuant to 20.2.72.219.D(1)(a) NMAC to affect the following modifications. (also detailed in **Section 3** of this application):

- Crestwood is shutting down both natural gas processing units located at the facility. Willow Lake will be operated solely as a compressor station;
- The following equipment deletions/modifications are associated with this project:
 - o The following emission sources will be removed from service:
 - DEHY-803
 - DEHY-804
 - DEHY-EG
 - HTR-802
 - HTR-803
 - HTR-804
 - HTR-730
 - NGL-LOAD
 - o The following sources will be modified due to gas plant shut down:
 - WL2-FL
 - WL2-FL BLOWDOWN
 - WL1-FL
 - FUG-1
 - FUG-2
 - PIGGING (frequency has increased to 156 events/year)

There are net, site-wide pph/tpy criteria/HAP pollutant emission reductions associated with this significant permit revision request. Additionally, NMED has approved the air dispersion modeling waiver request.

The format and content of this application are consistent with NMED Air Quality Bureau current policy regarding NSR application and is a complete application package using the most current universal application forms.

Enclosed are two (2) hard copies of the application (one original and one copy), including the original certification, and an application check for \$500. Please contact Mr. Micheal (Mike) Harris, P.E. at 936-443-5332 regarding application technical/agency review issues or me at 713-865-6825.

Sincerely,

Ms. Alena Miro
Energy Transfer
Manager, Environmental Compliance
Western Division

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.: 4765 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.): 32575	Updating Permit/NOI #: NSR-5142-M8
1	Facility Name: Willow Lake Compressor Station	Plant primary SIC Code (4 digits): 4922	
		Plant NAIC code (6 digits): 486210	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 393 Higby Hole Road, Malaga, NM 88263		
2	Plant Operator Company Name: Crestwood New Mexico Pipeline LLC	Phone/Fax: 713-865-6825	
a	Plant Operator Address: 1025 Bounds Road, Loving, NM 88256		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 4407086		

3	Plant Owner(s) name(s): Crestwood New Mexico Pipeline LLC	Phone/Fax: 832-519-2200
a	Plant Owner(s) Mailing Address(s): PO Box 450, Loving, NM 88256	
4	Bill To (Company): Crestwood New Mexico Pipeline LLC	Phone/Fax: 832-519-2200
a	Mailing Address: PO Box 450, Loving, NM 88256	E-mail: alena.miro@energytransfer.com
5	☒ Preparer: Micheal K. Harris ☒ Consultant: EnTech Consulting Corp.	Phone/Fax: 936-443-5332
a	Mailing Address: 21 Waterway Avenue, Suite 300 The Woodlands, Texas 77380	E-mail: mike.harris@entechservice.com
6	Plant Operator Contact: Clint Cone	Phone/Fax: 575-361-3526
a	Address: PO Box 450, Loving, NM 88256	E-mail: clint.cone@energytransfer.com
7	Air Permit Contact: Alena Miro	Title: Manager, Environmental Compliance Western Division
a	E-mail: alena.miro@energytransfer.com	Phone/Fax: 713-865-6825
b	Mailing Address: 1025 Bounds Road, Loving, NM 88256	
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 submittal of this application? ☐ Yes ☒ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of 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: P-299
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: 5142-M8
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: 5.63 MMscf/hour	Daily: 135 MMscf/day	Annually: 49,275 MMscf/year
b	Proposed	Hourly: 5.63 MMscf/hour	Daily: 135 MMscf/day	Annually: 49,275 MMscf/year
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: 5.63 MMscf/hour	Daily: 135 MMscf/day	Annually: 49,275 MMscf/year
b	Proposed	Hourly: 5.63 MMscf/hour	Daily: 135 MMscf/day	Annually: 49,275 MMscf/year

Section 1-D: Facility Location Information

1	Section: 20 & 29	Range: 28E	Township: 24S	County: Eddy County	Elevation (ft): 3,018
2	UTM Zone: ☐ 12 or ☒ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 584,520 m E			UTM N (in meters, to nearest 10 meters): 3,562,400 m N	
b	AND Latitude (deg., min., sec.): 32°11'41.94"N			Longitude (deg., min., sec.): 104°6'11.91"W	
3	Name and zip code of nearest New Mexico town: Malaga, NM 88263				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Malaga, from the intersection of US 285 and Black River Village Rd., travel west for 1.7 miles. Turn left onto Higby Hole Rd. and continue for 0.7 miles. Turn right onto an access road, immediately turn left, and continue for 0.3 miles. Turn right and continue for 0.1 miles. Take a left at the fork and continue for 0.4 miles. Turn right and continue for 0.5 miles and arrive at the facility.				
5	The facility is 2.7 miles SW of Malaga, 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: Malaga, NM and Loving, NM; Indian Tribes: N/A; Counties: Eddy				
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: 21.6 km from Texas border, 25.6 km from Carlsbad Caverns National Park				
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): 25.6 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: 1750 m from occupied structure to the north.				
12	Method(s) used to delineate the Restricted Area: 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? N/A				

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:	Upon receipt of permit.		
4	Month and year of anticipated construction completion:	Pending		
5	Month and year of anticipated startup of new or modified facility:	Pending		
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		
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: N/A 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): Guy Modgling		Phone: 432-552-8629
a	R.O. Title: Director of Operations	R.O. e-mail: Guy.Modgling@energytransfer.com	
b	R. O. Address: 1706 Midkiff Road, Midland, Texas 79701		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Alena Miro		Phone: 713-865-6825
a	A. R.O. Title: Manager, Environmental Compliance Western Division	A. R.O. e-mail: alena.miro@energytransfer.com	
b	A. R. O. Address: 1025 Bounds Road, Loving, NM 88256		
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.): ETC Gathering and Processing, LLC		
a	Address of Parent Company: 1706 Midkiff Road, Midland, Texas 79701		
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: Alena Miro 713-865-6825; Heather Patterson 575-200-7264		

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: Texas – 21.7 km
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Section 1-I – Submittal Requirements

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

Hard Copy Submittal Requirements:

- One hard copy **original signed and notarized application package printed double sided ‘head-to-toe’ 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.**
- 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.
- 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: Micheal K. Harris, P.E.

Email: mike.harris@entechservice.com

Phone number: 936-443-5332

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.**

- 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.
- 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.
- 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,
 - one additional CD copy for US EPA,
 - one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

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

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The **electronic file names** shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the **core permit number** (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the **section #** (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the **header information** throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

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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 #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi- fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
C-1100	Engine	Caterpillar	G3608	BEN01021	2370 hp	2370 hp	7/3/2014	OxCat-1100	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							7/3/2014	C-1100		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1200	Engine	Waukesha	P9390GSI	WAU-1739852	1980 hp	1980 hp	3/1/2025	NSCR-1200	20200253	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SRB	N/A
							3/1/2025	C-1200		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-2300	Engine	Waukesha	VHP- L7044GSI	C-12910/3	1680 hp	1680 hp	11/30/2022	NSCR-2300	20200253	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SRB	N/A
							11/30/2022	C-2300		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-2400	Engine	Waukesha	VHP- L7044GSI	5283704347	1680 hp	1680 hp	12/1/2014	NSCR-2400	20200253	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SRB	N/A
							> 7/1/2010	C-2400		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1110	Engine	Caterpillar	G3606	JFE01238	1875 hp	1875 hp	>7/1/2010	OxCat-1110	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							>7/1/2010	C-1110		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1120	Engine	Caterpillar	G3606	JFE01236	1875 hp	1875 hp	>7/1/2010	OxCat-1120	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							>7/1/2010	C-1120		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1130	Engine	Caterpillar	G3606	JFE01241	1875 hp	1875 hp	>7/1/2010	OxCat-1130	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							>7/1/2010	C-1130		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1140	Engine	Caterpillar	G3606	JFE01260	1875 hp	1875 hp	>7/1/2010	OxCat-1140	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							>7/1/2010	C-1140		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1150	Engine	Caterpillar	G3606	JFE01259	1875 hp	1875 hp	>7/1/2010	OxCat-1150	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							>7/1/2010	C-1150		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1160	Engine	Caterpillar	G3606	JFE01244	1875 hp	1875 hp	1/11/2019	OxCat-1160	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							1/11/2019	C-1160		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1170	Engine	Caterpillar	G3606	JFE01231	1875 hp	1875 hp	1/5/2019	OxCat-1170	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							1/5/2019	C-1170		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
C-1180	Engine	Caterpillar	G3606	JFE01233	1875 hp	1875 hp	1/7/2019	OxCat-1180	20200254	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	4SLB	N/A
							1/7/2019	C-1180		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
WL2-FL & WL2-FL Blowdown	Process Flare and Blowdown Flaring	Zeeco	UFX-12-45	N/A	65 scf/hr Pilot	65 scf/hr Pilot	2015	N/A	31000205	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2016	WL2-FL		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
WL1-FL & WL1-FL Blowdown	Process Flare and Blowdown Flaring	Zeeco	AFDS- 10D/30-60	N/A	55 scf/hr Pilot	55 scf/hr Pilot	2020	N/A	31000205	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	WL1-FL		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
DEHY-803	TEG Dehydrator	KWI	N/A	1480588-C	25 MMSCFD	25 MMSCFD	2015	HTR-803	31000227	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	X To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-803		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
DEHY-804	TEG Dehydrator	KWI	N/A	280115-C	3.5 MMSCFD	3.5 MMSCFD	2014	HTR-804	31000227	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	X To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-804		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			
DEHY-EG	EG Dehydrator	Valerus	N/A	N/A	35 MMSCFD	35 MMSCFD	2015	WL2-FL	31000227	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	X To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2016	WL2-FL		☐ To be Removed ☐ Replacement Unit ☐ To be Replaced			

TABLE 2-A

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 #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi- fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
DEHY-805	TEG Dehydrator	KWI	N/A	100146-C	65 MMSCFD	65 MMSCFD	2018	HTR-805	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-805					
DEHY-1505	TEG Dehydrator	KWI	N/A	N/A	80 MMSCFD	80 MMSCFD	TBD	HTR-1505	31000227	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-1505					
HTR-803	DEHY 803 Reboiler	FLAMECO	SB18-12	1406-92M	0.5 MMBtu/hr	0.5 MMBtu/hr	2015	N/A	31000228	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☒ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-803					
HTR-804	DEHY-804 Reboiler	KWI	N/A	1580717-0	0.125 MMBtu/hr	0.125 MMBtu/hr	2015	N/A	31000228	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☒ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							2015	HTR-804					
HTR-802	Regen Gas Heater	Heat Recovery Corp.	N/A	N/A	2.0 MMBtu/hr	2.0 MMBtu/hr	2013	N/A	31000404	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☒ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	HTR-802					
HTR-805	DEHY-805 Reboiler	FLAMECO	SB36-18	1801-620	1.5 MMBtu/hr	1.5 MMBtu/hr	N/A	N/A	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-805					
HTR-1505	DEHY-1505 Reboiler	TBD	TBD	TBD	1.5 MMBtu/hr	1.5 MMBtu/hr	N/A	N/A	31000228	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2014	HTR-1505					
HTR-730	Hot Oil Heater	Heatec	HCI-5010-30	HI14-167	6.83 MMBtu/hr	6.83 MMBtu/hr	2/2015	N/A	31000404	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☒ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>1/2016	HTR-730					
WL1-TK601	Condensate Tank	N/A	N/A	N/A	210 bbl	210 bbl	>8/23/2011	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>8/23/2011	N/A					
WL1-TK602	Condensate Tank	N/A	N/A	N/A	210 bbl	210 bbl	>8/23/2011	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>8/23/2011	N/A					
WL1-TK603	Condensate Tank	N/A	N/A	N/A	210 bbl	210 bbl	>8/23/2011	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>8/23/2011	N/A					
WL2-TK8101	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL2-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					
WL2-TK8102	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL2-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					
WLCS-TK2301	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					
WLCS-TK2302	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					
WLCS-TK2303	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					
WLCS-TK2304	Condensate Tank	N/A	N/A	N/A	400 bbl	400 bbl	>9/18/2015	WL1-VRU / WLCS-VRU	40400311	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							>9/18/2015	N/A					

TABLE 2-A

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 #	Manufact-urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi- fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
							Date of Construction/ Reconstruction ²	Emissions vented to Stack #					
ATM LOAD	Atmospheric Loading	N/A	N/A	N/A	791400 bbl/yr	791400 bbl/yr	N/A	N/A	40600197	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					
NGL LOAD	NGL Loading	N/A	N/A	N/A	54,750,000 gal/yr	54,750,000 gal/yr	N/A	N/A	40600197	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	X ☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					
FUG-1	Willow Lake Plant 1 Fugitive emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000220	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					
FUG-2	Willow Lake Plant 2 and Willow Lake Compressor Station -	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000220	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					
PIGGING	Pig Receiver and Launcher	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000211	☐ Existing (unchanged) ☐ New/Additional ☒ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					
SSM/M	Startup, Shutdown, Maintenance, and Malfunction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31088811	☒ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced	N/A	N/A
							N/A	N/A					

¹ Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.

² Specify dates required to determine regulatory applicability.

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

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 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <https://www.env.nm.gov/air-quality/air-quality-title-v-operating-permits-guidance-page/>. 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	
NGL-1	NGL Pressurized Bullet Tank	TBD	TBD	90,000	20.2.72.202.B(5) NMAC	TBD	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gallons	N/A	TBD	
NGL-2	NGL Pressurized Bullet Tank	TBD	TBD	60,000	20.2.72.202.B(5) NMAC	TBD	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gallons	N/A	TBD	
NGL-3	NGL Pressurized Bullet Tank	TBD	TBD	60,000	20.2.72.202.B(5) NMAC	TBD	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gallons	N/A	TBD	
NGL-4	NGL Pressurized Bullet Tank	TBD	TBD	60,000	20.2.72.202.B(5) NMAC	TBD	☐ Existing (unchanged) X To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	gallons	N/A	TBD	
AST-4	Methanol	Unknown	N/A	500	20.2.72.202.B(5) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-5	Triethylene Glycol	Unknown	N/A	520	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-7	Lube Oil	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-8	Antifreeze	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-9	Lube Oil	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-10	Antifreeze	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-11	Used Oil	Unknown	N/A	540	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-12	Triethylene Glycol	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-13	Emulsion Breaker	Unknown	N/A	130	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	

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/air-quality/air-quality-title-v-operating-permits-guidance-page/>. 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	
AST-14	Soap	Unknown	N/A	300	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-15	Degreaser	Unknown	N/A	300	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-16	Compressor Oil	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-17	Compressor Oil	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-2-2	Engine Oil	Unknown	N/A	1000	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-3-2	Antifreeze	Unknown	N/A	1000	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-4-2	Ethylene Glycol	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-5-2	Methanol	Unknown	N/A	60	20.2.72.202.B(5) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	bbl	N/A	TBD	
AST-6-2	Waste Oil	Unknown	N/A	500	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
AST-8-2	Compressor Oil	Unknown	N/A	1000	20.2.72.202.B(2) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	gallons	N/A	TBD	
HAUL	Unpaved Haul Road Emissions	Unknown	N/A	N/A	20.2.72.202.B(5) NMAC	TBD	☒ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	N/A	N/A	TBD	

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

² Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. 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
OxCat-1100	Oxidation Catalyst	>6/12/2006	CO, VOC, HCHO	C-1100	64% CO, 75% VOC, 75% HCHO	Catalyst Data
NSCR-1200	Non-Selective Catalytic Reduction	>6/12/2006	NO _x , CO, VOC, HCHO	C-1200	85% NO _x , 85% CO, 60% VOC, 80% HCHO	Catalyst Data
NSCR-2300	Non-Selective Catalytic Reduction	>6/12/2006	NO _x , CO, VOC, HCHO	C-2300	92.5% NO _x , 91.3% CO, 71.4% VOC, 76% HCHO	Catalyst Data
NSCR-2400	Non-Selective Catalytic Reduction	>6/12/2006	NO _x , CO, VOC, HCHO	C-2400	92.5% NO _x , 91.3% CO, 71.4% VOC, 76% HCHO	Catalyst Data
OxCat-1110	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1110	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1120	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1120	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1130	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1130	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1140	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1140	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1150	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1150	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1160	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1160	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1170	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1170	90% CO, 50% VOC, 85% HCHO	Catalyst Data
OxCat-1180	Oxidation Catalyst	TBD	CO, VOC, HCHO	C-1180	90% CO, 50% VOC, 85% HCHO	Catalyst Data
WL2-FL	Process Flare	2016	VOC, HAP, H ₂ S	DEHY-EG (DELETED)	98%	Manufacturer Data
WL1-FL	Process Flare	TBD	VOC, HAP, H ₂ S	WL1-TK601 - WL1-TK603; WLCS-TK2301 - WLCS-TK2304, DEHY-805, DEHY-1505	98%	Manufacturer Data
WL2-VRU	Vapor Recovery Unit	TBD	VOC, HAP, H ₂ S	WL2-TK8101 & WL2-TK8102	95%	5% VRU Downtime
WL1-VRU	Vapor Recovery Unit	TBD	VOC, HAP, H ₂ S	WL1-TK601 - WL1-TK603; WLCS-TK2301 - WLCS-TK2304, DEHY-805, DEHY-1505	95%	5% VRU Downtime
WLCS-VRU	Vapor Recovery Unit	TBD	VOC, HAP, H ₂ S	WL1-TK601 - WL1-TK603; WLCS-TK2301 - WLCS-TK2304, DEHY-805, DEHY-1505	95%	5% VRU Downtime
HTR-803 ²	Dehydrator Reboiler (DELETED)					

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
HTR-804 ²	Dehydrator Reboiler (DELETED)					
HTR-805 ²	Dehydrator Reboiler	> 2014	VOC, HAP, H ₂ S	DEHY-805	98%	Engineering Estimate

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

² Dehydrator flash tank emissions are routed into the reboiler fuel lines (assumed 98% DRE).

The post-condenser regenerator emissions are routed to the firebox when the reboiler is firing and glow plug when the reboiler is not firing (assumed 98% DRE).

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
C-1100	2.612	11.443	14.369	62.935	4.121	18.051	0.230	1.008	0.157	0.687	0.157	0.687	0.157	0.687	0.000	0.000		
C-1200	56.747	248.552	39.286	172.074	2.139	9.368	0.226	0.990	0.299	1.312	0.299	1.312	0.299	1.312	0.000	0.000		
C-2300	49.260	215.759	42.593	186.559	0.778	3.407	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000		
C-2400	49.260	215.759	42.593	186.559	0.778	3.407	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000		
C-1110	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1120	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1130	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1140	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1150	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1160	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1170	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
C-1180	2.067	9.053	9.094	39.832	2.025	8.872	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000		
WL2-FL	0.009	0.040	0.018	0.080	-	-	0.001	0.004	-	-	-	-	-	-	0.000	0.000		
WL2-FL BLOWDOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WL1-FL	0.030	0.131	0.060	0.262	-	-	0.003	0.013	-	-	-	-	-	-	0.000	0.000		
WL1-FL BLOWDOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-EG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DEHY-805	-	-	-	-	176.640	773.681	-	-	-	-	-	-	-	-	0.021	0.090		
DEHY-1505	-	-	-	-	177.056	775.503	-	-	-	-	-	-	-	-	0.020	0.089		
HTR-803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HTR-804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HTR-802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HTR-730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HTR-805	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000		
HTR-1505	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000		
WL1-TK601	-	-	-	-	53.282	198.221	-	-	-	-	-	-	-	-	0.001	0.004		
WL1-TK602	-	-	-	-	53.282	198.221	-	-	-	-	-	-	-	-	0.001	0.004		
WL1-TK603	-	-	-	-	53.282	198.221	-	-	-	-	-	-	-	-	0.001	0.004		
WL2-TK8101	-	-	-	-	94.334	46.964	-	-	-	-	-	-	-	-	0.002	0.001		
WL2-TK8102	-	-	-	-	94.334	46.964	-	-	-	-	-	-	-	-	0.002	0.001		
WLCS-TK2301	-	-	-	-	488.807	371.476	-	-	-	-	-	-	-	-	0.016	0.011		

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
WLCS-TK2302	-	-	-	-	488.807	371.476	-	-	-	-	-	-	-	-	0.016	0.011		
WLCS-TK2303	-	-	-	-	488.807	371.476	-	-	-	-	-	-	-	-	0.016	0.011		
WLCS-TK2304	-	-	-	-	488.807	371.476	-	-	-	-	-	-	-	-	0.016	0.011		
ATM LOAD	-	-	-	-	93.952	84.331	-	-	-	-	-	-	-	-	0.002	0.002		
NGL LOAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FUG-1	-	-	-	-	4.572	20.024	-	-	-	-	-	-	-	-	0.000	0.000		
FUG-2	-	-	-	-	8.825	38.651	-	-	-	-	-	-	-	-	0.000	0.000		
PIGGING	-	-	-	-	1.571	6.881	-	-	-	-	-	-	-	-	0.000	0.000		
SSM/M	-	-	-	-	-	10.000	-	-	-	-	-	-	-	-	-	1.000		
Totals	174.748	765.395	211.920	928.207	2,790.392	3,988.843	2.555	11.193	2.128	9.319	2.128	9.319	2.128	9.319	0.117	1.244		

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
C-1100	2.612	11.443	5.225	22.885	1.030	4.513	0.230	1.008	0.157	0.687	0.157	0.687	0.157	0.687	0.000	0.000	-	-
C-1200	8.512	37.283	5.893	25.811	0.690	3.021	0.226	0.990	0.299	1.312	0.299	1.312	0.299	1.312	0.000	0.000	-	-
C-2300	3.704	16.223	3.704	16.223	0.267	1.168	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000	-	-
C-2400	3.704	16.223	3.704	16.223	0.267	1.168	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000	-	-
C-1110	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1120	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1130	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1140	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1150	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1160	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1170	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
C-1180	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	-	-
WL2-FL	0.009	0.040	0.018	0.080	-	-	0.001	0.004	-	-	-	-	-	-	0.000	0.000	-	-
WL1-FL	10.315	2.503	20.593	4.997	12.531	3.065	0.069	0.026	-	-	-	-	-	-	0.001	0.000	-	-
DEHY-803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-EG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-805	-	-	-	-	2.945	12.899	-	-	-	-	-	-	-	-	0.000	0.002	-	-
DEHY-1505	-	-	-	-	0.429	1.878	-	-	-	-	-	-	-	-	0.000	0.001	-	-
HTR-803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HTR-804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HTR-802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HTR-730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HTR-805	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000	-	-
HTR-1505	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000	-	-
WL1-TK601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WL1-TK602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WL1-TK603	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WL2-TK8101	-	-	-	-	94.334	2.348	-	-	-	-	-	-	-	-	0.002	0.000	-	-
WL2-TK8102	-	-	-	-	94.334	2.348	-	-	-	-	-	-	-	-	0.002	0.000	-	-
WLCS-TK2301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLCS-TK2302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLCS-TK2303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLCS-TK2304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATM LOAD	-	-	-	-	39.539	2.733	-	-	-	-	-	-	-	-	0.000	0.000	-	-

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
NGL LOAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG-1	-	-	-	-	4.572	20.024	-	-	-	-	-	-	-	-	0.000	0.000	-	-
FUG-2	-	-	-	-	8.825	38.651	-	-	-	-	-	-	-	-	0.000	0.000	-	-
Totals	45.685	157.424	46.659	119.166	265.565	119.235	2.621	11.206	2.128	9.319	2.128	9.319	2.128	9.319	0.008	0.010		

¹ Condensable Particulate
Matter: Include condensable

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
WL2-FL BLOWDOWN	110.228	2.866	220.056	5.721	159.393	4.144	0.414	0.011	-	-	-	-	-	-	0.004	0.000	-	-
WL1-FL BLOWDOWN	9.171	0.238	18.309	0.476	13.262	0.345	0.034	0.001	-	-	-	-	-	-	0.000	0.000	-	-
PIGGING	-	-	-	-	1.571	6.881	-	-	-	-	-	-	-	-	0.000	0.000	-	-
SSM/M	-	-	-	-	-	10.000	-	-	-	-	-	-	-	-	-	1.000	-	-
Totals	119.398	3.104	238.364	6.197	174.226	21.370	0.448	0.012	-	-	-	-	-	-	0.005	1.000	-	-

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. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

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)			
C-1100	C-1100	Vertical	No	40.000	857.000	269.067	N/A	N/A	123.331	3.333
C-1200	C-1200	Vertical	No	20.000	1,177.000	162.900	N/A	N/A	74.668	1.667
C-2300	C-2300	Vertical	No	23.000	1,152.000	123.252	N/A	N/A	115.295	1.917
C-2400	C-2400	Vertical	No	23.000	1,152.000	123.252	N/A	N/A	115.295	1.917
C-1110	C-1110	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1120	C-1120	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1130	C-1130	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1140	C-1140	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1150	C-1150	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1160	C-1160	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1170	C-1170	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
C-1180	C-1180	Vertical	No	28.750	835.000	203.553	N/A	N/A	93.302	2.396
WL2-FL*	WL2-FL	Vertical	No	45.000	1,832.000	N/A	N/A	N/A	65.600	21.650
WL1-FL*	WL1-FL	Vertical	No	60.000	1,832.000	N/A	N/A	N/A	65.600	0.000
HTR-803	HTR-803	Vertical	No	14.333	600.000	3.450	N/A	N/A	4.393	1.000
HTR-804	HTR-804	Vertical	No	11.250	600.000	0.867	N/A	N/A	4.414	0.500
HTR-802	HTR-802	Vertical	Yes	19.000	600.000	13.800	N/A	N/A	25.505	0.830
HTR-805	HTR-805	Vertical	Yes	22.667	600.000	10.350	N/A	N/A	9.682	1.167
HTR-1505	HTR-1505	Vertical	Yes	17.000	600.000	10.350	N/A	N/A	5.857	1.500
HTR-730	HTR-730	Vertical	Yes	15.667	600.000	47.150	N/A	N/A	15.008	2.000

* Flare diameters are effective diameters used in the air dispersion modeling. Supporting calculations are included in the Excel workbook submitted in conjunction with this application.

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

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP or ☐ TAP		Acetaldehyde ☑ HAP or ☐ TAP		Acrolein ☑ HAP or ☐ TAP		Methanol ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
C-1100	C-1100	0.434	1.899	0.207	0.908	0.101	0.443	0.062	0.272	0.030	0.133	0.013	0.059						
C-1200	C-1200	0.345	1.513	0.166	0.727	0.043	0.189	0.041	0.178	0.047	0.207	-	-						
C-2300	C-2300	0.199	0.873	0.044	0.195	0.037	0.163	0.035	0.153	0.041	0.178	-	-						
C-2400	C-2400	0.199	0.873	0.044	0.195	0.037	0.163	0.035	0.153	0.041	0.178	-	-						
C-1110	C-1110	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1120	C-1120	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1130	C-1130	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1140	C-1140	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1150	C-1150	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1160	C-1160	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1170	C-1170	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
C-1180	C-1180	0.289	1.265	0.124	0.543	0.074	0.323	0.045	0.198	0.022	0.097	0.010	0.043						
WL2-FL	WL2-FL	-	-	-	-	-	-	-	-	-	-	-	-						
WL2-FL	WL2-FL Blowdown	21.727	0.565	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WL1-FL	0.409	0.057	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WL1-FL Blowdown	1.808	0.047	-	-	-	-	-	-	-	-	-	-						
DEHY-803	DEHY-803	-	-	-	-	-	-	-	-	-	-	-	-						
DEHY-804	DEHY-804	-	-	-	-	-	-	-	-	-	-	-	-						
DEHY-EG	DEHY-EG	-	-	-	-	-	-	-	-	-	-	-	-						
DEHY-805	DEHY-805	0.198	0.865	-	-	-	-	-	-	-	-	0.112	0.488						
DEHY-1505	DEHY-1505	0.079	0.345	-	-	-	-	-	-	-	-	0.018	0.080						
HTR-803	HTR-803	-	-	-	-	-	-	-	-	-	-	-	-						
HTR-804	HTR-804	-	-	-	-	-	-	-	-	-	-	-	-						
HTR-802	HTR-802	-	-	-	-	-	-	-	-	-	-	-	-						
HTR-730	HTR-730	-	-	-	-	-	-	-	-	-	-	-	-						
HTR-805	HTR-805	0.003	0.012	0.000	0.000	-	-	-	-	-	-	0.003	0.012						
HTR-1505	HTR-1505	0.003	0.012	0.000	0.000	-	-	-	-	-	-	0.003	0.012						
WL1-FL	WL1-TK601	-	-	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WL1-TK602	-	-	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WL1-TK603	-	-	-	-	-	-	-	-	-	-	-	-						

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

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP or ☐ TAP		Acetaldehyde ☑ HAP or ☐ TAP		Acrolein ☑ HAP or ☐ TAP		Methanol ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
WL2-TK8101	WL2-TK8101	1.876	0.059	-	-	-	-	-	-	-	-	1.505	0.047						
WL2-TK8102	WL2-TK8102	1.876	0.059	-	-	-	-	-	-	-	-	1.505	0.047						
WL1-FL	WLCS-TK2301	-	-	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WLCS-TK2302	-	-	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WLCS-TK2303	-	-	-	-	-	-	-	-	-	-	-	-						
WL1-FL	WLCS-TK2304	-	-	-	-	-	-	-	-	-	-	-	-						
N/A	ATM LOAD	1.264	0.095	-	-	-	-	-	-	-	-	1.001	0.078						
N/A	NGL LOAD	-	-	-	-	-	-	-	-	-	-	-	-						
N/A	FUG-1	0.283	1.241	-	-	-	-	-	-	0.029	0.126	-	-						
N/A	FUG-2	0.879	3.849	-	-	-	-	-	-	0.355	1.554	-	-						
N/A	PIGGING	0.065	0.287	-	-	-	-	-	-	-	-	-	-						
N/A	SSM/M	-	1.000	-	-	-	-	-	-	-	-	-	-						
Totals:		33.958	23.773	1.454	6.370	0.808	3.539	0.535	2.344	0.719	3.147	4.238	1.165						

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

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)	BENZENE ☑ HAP or ☐ TAP		TOLUENE ☑ HAP or ☐ TAP		ETHYLBENZENE ☑ HAP or ☐ TAP		XYLENE ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
C-1100	C-1100	0.005	0.023	0.005	0.022	0.000	0.002	0.002	0.010										
C-1200	C-1200	0.024	0.107	0.009	0.038	0.000	0.002	0.003	0.013										
C-2300	C-2300	0.021	0.092	0.007	0.033	0.000	0.001	0.003	0.011										
C-2400	C-2400	0.021	0.092	0.007	0.033	0.000	0.001	0.003	0.011										
C-1110	C-1110	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1120	C-1120	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1130	C-1130	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1140	C-1140	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1150	C-1150	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1160	C-1160	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1170	C-1170	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
C-1180	C-1180	0.004	0.017	0.004	0.016	0.000	0.002	0.002	0.007										
WL2-FL	WL2-FL	-	-	-	-	-	-	-	-										
WL2-FL	WL2-FL Blowdown	-	-	-	-	-	-	-	-										
WL1-FL	WL1-FL	-	-	-	-	-	-	-	-										
WL1-FL	WL1-FL Blowdown	-	-	-	-	-	-	-	-										
DEHY-803	DEHY-803	-	-	-	-	-	-	-	-										
DEHY-804	DEHY-804	-	-	-	-	-	-	-	-										
DEHY-EG	DEHY-EG	-	-	-	-	-	-	-	-										
DEHY-805	DEHY-805	0.002	0.010	0.067	0.292	0.004	0.018	0.013	0.057										
DEHY-1505	DEHY-1505	0.002	0.008	0.048	0.209	0.002	0.010	0.009	0.038										
HTR-803	HTR-803	-	-	-	-	-	-	-	-										
HTR-804	HTR-804	-	-	-	-	-	-	-	-										
HTR-802	HTR-802	-	-	-	-	-	-	-	-										
HTR-730	HTR-730	-	-	-	-	-	-	-	-										
HTR-805	HTR-805	0.000	0.000	0.000	0.000	-	-	-	-										
HTR-1505	HTR-1505	0.000	0.000	0.000	0.000	-	-	-	-										
WL1-FL	WL1-TK601	-	-	-	-	-	-	-	-										
WL1-FL	WL1-TK602	-	-	-	-	-	-	-	-										
WL1-FL	WL1-TK603	-	-	-	-	-	-	-	-										

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

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)	BENZENE ☑ HAP or ☐ TAP		TOLUENE ☑ HAP or ☐ TAP		ETHYLBENZENE ☑ HAP or ☐ TAP		XYLENE ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP		Pollutant Name ☑ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
WL2-TK8101	WL2-TK8101	0.103	0.003	0.182	0.006	0.012	0.000	0.074	0.003										
WL2-TK8102	WL2-TK8102	0.103	0.003	0.182	0.006	0.012	0.000	0.074	0.003										
WL1-FL	WLCS-TK2301	-	-	-	-	-	-	-	-										
WL1-FL	WLCS-TK2302	-	-	-	-	-	-	-	-										
WL1-FL	WLCS-TK2303	-	-	-	-	-	-	-	-										
WL1-FL	WLCS-TK2304	-	-	-	-	-	-	-	-										
N/A	ATM LOAD	0.066	0.005	0.130	0.008	0.009	0.001	0.058	0.003										
N/A	NGL LOAD	-	-	-	-	-	-	-	-										
N/A	FUG-1	-	-	-	-	-	-	-	-										
N/A	FUG-2	-	-	-	-	-	-	-	-										
N/A	PIGGING	-	-	-	-	-	-	-	-										
N/A	SSM/M	-	-	-	-	-	-	-	-										
Totals:		0.378	0.479	0.667	0.772	0.044	0.048	0.252	0.206										

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	Hourly Usage (MScf/hr)	Annual Usage (MMScf/yr)	% Sulfur (gr/100 scf)	% Ash
C-1100	Natural Gas	Pipeline Quality Natural Gas	1,020.000	15.403	134.927	5.000	N/A
C-1200	Natural Gas	Pipeline Quality Natural Gas	1,020.000	15.126	132.501	5.000	N/A
C-2300	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.043	114.257	5.000	N/A
C-2400	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.043	114.257	5.000	N/A
C-1110	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1120	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1130	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1140	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1150	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1160	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1170	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
C-1180	Natural Gas	Pipeline Quality Natural Gas	1,020.000	13.897	121.738	5.000	N/A
WL2-FL	Natural Gas	Pipeline Quality Natural Gas, Process Gas	1,020.000	0.065	0.569	5.000	N/A
WL2-FL BLOWDOWN	Natural Gas	Pipeline Quality Natural Gas, Process Gas	-	-	-	-	-
WL1-FL	Natural Gas	Pipeline Quality Natural Gas, Process Gas	1,020.000	0.213	1.866	5.000	N/A
HTR-803	Natural Gas	Pipeline Quality Natural Gas, Process Gas	-	-	-	-	-
HTR-804	Natural Gas	Pipeline Quality Natural Gas, Process Gas	-	-	-	-	-
HTR-802	Natural Gas	Pipeline Quality Natural Gas, Process Gas	-	-	-	-	-
HTR-730	Natural Gas	Pipeline Quality Natural Gas, Process Gas	-	-	-	-	-

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	Hourly Usage (MScf/hr)	Annual Usage (MMScf/yr)	% Sulfur (gr/100 scf)	% Ash
HTR-805	Natural Gas	Pipeline Quality Natural Gas, Process Gas	1,020.000	1.471	12.882	5.000	N/A
HTR-1505	Natural Gas	Pipeline Quality Natural Gas, Process Gas	1,020.000	1.471	12.882	5.000	N/A

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.

[illegible]

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

[illegible]

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)
Inlet Gas	Natural Gas	Gas	135 MMSCFD	Residue Gas	Natural Gas	Gas	135 MMSCFD
				Condensate	Mixed Hydrocarbons	Liquid	395,700 bbl/yr
				Produced Water	Mixed Hydrocarbons and Water	Liquid	395,700 bbl/yr
				NGL	Natural Gas Liquids	Liquid	0 gal/yr

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
N/A - No CEM equipment is located at the facility.									

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.	GWP _s ¹	1	298	25	22,800	footnote 3									
C-1100	mass GHG	10,092.428	0.015	0.152	-	-								10,092.595	-
	CO ₂ e	10,092.428	4.521	3.793	-	-								-	10,100.742
C-1200	mass GHG	7,904.770	0.015	0.149	-	-								7,904.934	-
	CO ₂ e	7,904.770	4.440	3.724	-	-								-	7,912.934
C-2300	mass GHG	6,816.395	0.013	0.128	-	-								6,816.536	-
	CO ₂ e	6,816.395	3.828	3.212	-	-								-	6,823.435
C-2400	mass GHG	6,816.395	0.013	0.128	-	-								6,816.536	-
	CO ₂ e	6,816.395	3.828	3.212	-	-								-	6,823.435
C-1110	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1120	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1130	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1140	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1150	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1160	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1170	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
C-1180	mass GHG	7,268.176	0.014	0.137	-	-								7,268.327	-
	CO ₂ e	7,268.176	4.079	3.422	-	-								-	7,275.677
WL2-FL	mass GHG	33.969	0.000	0.001	-	-								33.970	-
	CO ₂ e	33.969	0.019	0.016	-	-								-	34.005
WL2-FL BLOWDOWN	mass GHG	2,429.323	0.005	0.046	-	-								2,429.373	-
	CO ₂ e	2,429.323	1.364	1.145	-	-								-	2,431.832
WL1-FL	mass GHG	2,421.229	0.005	0.046	-	-								2,421.279	-
	CO ₂ e	2,421.229	1.360	1.141	-	-								-	2,423.729
WL1-FL BLOWDOWN	mass GHG	202.120	0.000	0.004	-	-								202.124	-
	CO ₂ e	202.120	0.114	0.095	-	-								-	202.328
DEHY-803	mass GHG	-	-	-	-	-								-	-
	CO ₂ e	-	-	-	-	-								-	-
DEHY-804	mass GHG	-	-	-	-	-								-	-
	CO ₂ e	-	-	-	-	-								-	-
DEHY-EG	mass GHG	-	-	-	-	-								-	-
	CO ₂ e	-	-	-	-	-								-	-

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.	GWP_s¹	1	298	25	22,800	footnote 3									
DEHY-805	mass GHG	15.757		22.117	-	-								37.874	-
	CO₂e	15.757		552.914	-	-								-	568.672
DEHY-1505	mass GHG	2.265		1.295	-	-								3.560	-
	CO₂e	2.265		32.378	-	-								-	34.643
HTR-803	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
HTR-804	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
HTR-802	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
HTR-730	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
HTR-805	mass GHG	768.540	0.001	0.014	-	-								768.556	-
	CO₂e	768.540	0.432	0.362	-	-								-	769.334
HTR-1505	mass GHG	768.540	0.001	0.014	-	-								768.556	-
	CO₂e	768.540	0.432	0.362	-	-								-	769.334
WL1-TK601	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WL1-TK602	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WL1-TK603	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WL2-TK8101	mass GHG	0.004	-	0.254	-	-								0.258	-
	CO₂e	0.004	-	6.357	-	-								-	6.361
WL2-TK8102	mass GHG	0.004	-	0.254	-	-								0.258	-
	CO₂e	0.004	-	6.357	-	-								-	6.361
WLCS-TK2301	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WLCS-TK2302	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WLCS-TK2303	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
WLCS-TK2304	mass GHG	-	-	-	-	-								-	-
	CO₂e	-	-	-	-	-								-	-
ATM LOAD	mass GHG	0.169	-	1.803	-	-								1.972	-
	CO₂e	0.169	-	45.086	-	-								-	45.255
FUG-1	mass GHG	0.496	-	38.901	-	-								39.397	-
	CO₂e	0.496	-	972.519	-	-								-	973.016

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.	GWP _s ¹	1	298	25	22,800	footnote 3									
FUG-2	mass GHG	0.504	-	39.051	-	-								39.555	
	CO ₂ e	0.504	-	976.271	-	-								-	976.776
PIGGING	mass GHG	0.054	-	8.559	-	-								8.613	-
	CO ₂ e	0.054	-	213.964	-	-								-	214.019
SSM/M	mass GHG	-	-	-	-	-								-	-
	CO ₂ e	-	-	-	-	-								-	-
Total	mass GHG	73,842.542	0.135	73.390										96,532.561	-
	CO ₂ e	73,842.542	40.300	1,834.758										-	99,321.623

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.

Application Summary: Crestwood New Mexico Pipeline, LLC (Crestwood) owns and operates the Willow Lake Gas Processing Plant (Willow Lake), which is currently permitted under NSR-5142-M8. An initial NSR application (including full air dispersion modeling) was submitted on August 28, 2020 (and issued on December 24, 2020) to transition the facility from its GCP-4 permit, add new equipment, and make modifications to existing equipment and calculations as applicable. This application is being submitted pursuant to 20.2.72.219.D(1)(a) NMAC to authorize the following modifications:

- Crestwood is shutting down both natural gas processing units located at the facility. Willow Lake will be operated solely as a compressor station;
- The following equipment deletions/modifications are associated with this project:
 - o The following emission sources will be removed from service:
 - DEHY-803
 - DEHY-804
 - DEHY-EG
 - HTR-802
 - HTR-803
 - HTR-804
 - HTR-730
 - NGL-LOAD
 - o The following sources will be modified due to gas plant shut down:
 - WL2-FL (deleted DEHY-EG vapors)
 - WL2-FL BLOWDOWN (revised CO₂ greenhouse gas factor to 5.06 KG/MMBTU)
 - WL1-FL (deleted vapors associated with DEHY-803, DEHY-804)
 - FUG-1 (deleted/revised component counts associated with gas plant shutdown)
 - FUG-2 (deleted/revised component counts associated with gas plant shutdown)
 - PIGGING (frequency increased to 156 events/year)

Process Summary: The Willow Lake facility currently consists of two (2) gas processing plants to recover natural gas liquids (NGL): Willow Lake 1 consists of a turbo-expander cryogenic separation system that removes a significant fraction of the C₂+ compounds from the cooled gas stream. Willow Lake 2 consists of a refrigerated Joule-Thompson (RJT) plant that also removes C₂+ compounds using a combination of mechanical refrigeration and a Joule-Thompson effect. Both of these gas processing plants will be shut down; and, the site will be used solely as a compressor station.

Existing condensate/produced water tanks will maintain currently authorized throughputs Tank vapor are controlled by three (3) vapor recovery units (VRU: WL1-VRU, WL2-VRU, WLCS-VRU). Storage tank vapors are directed to a flare (WL1-FL) during VRU downtime. WL1-FL also controls emissions from WL1 and WLCS truck loading, compressor blowdowns and upset events. In addition to loading condensate into tank truck for offsite transport, condensate may also be pumped into the facility's discharge pipeline. There are also four pig traps (one launcher and three receivers) and piping/fugitive components as

additional sources of emissions. Pneumatic devices at the Willow Lake Facility are supplied by instrument air; there are no natural gas bleed pneumatic devices.

Startup, Shutdown, and Maintenance (SSM) routine or predictable emissions: Pursuant to the NMED's "Implementation Guidance for Permitting SSM Emissions and Excess Emissions" (June 2012): There is no limit on the quantity of SSM emissions that can be permitted, provided they are routine, and predictable, and included in applicable air dispersion modeling that demonstrates compliance with state and federal ambient air quality standards. Routine SSM emissions such as compressor blowdowns and pig receiving/launching emissions are quantified under separate emission units (Units PIGGING, WL1-FL BLOWDOWN, and WL2-FL BLOWDOWN). These sources of emissions are routine, un-modified in this proposed permit revision; and, were included in previously submitted air dispersion modeling for the currently authorized permit. Other SSM emissions are included under the SSM/M combined requested emission limit and are also un-modified in this permit revision request. Instead of permitting SSM and upset/malfunction emissions separately, Crestwood requests that emissions from both SSM and upset/malfunction be consolidated in the permit with a total limit of 10 tpy VOC, 1 tpy HAP and 1 tpy H₂S.

Section 4

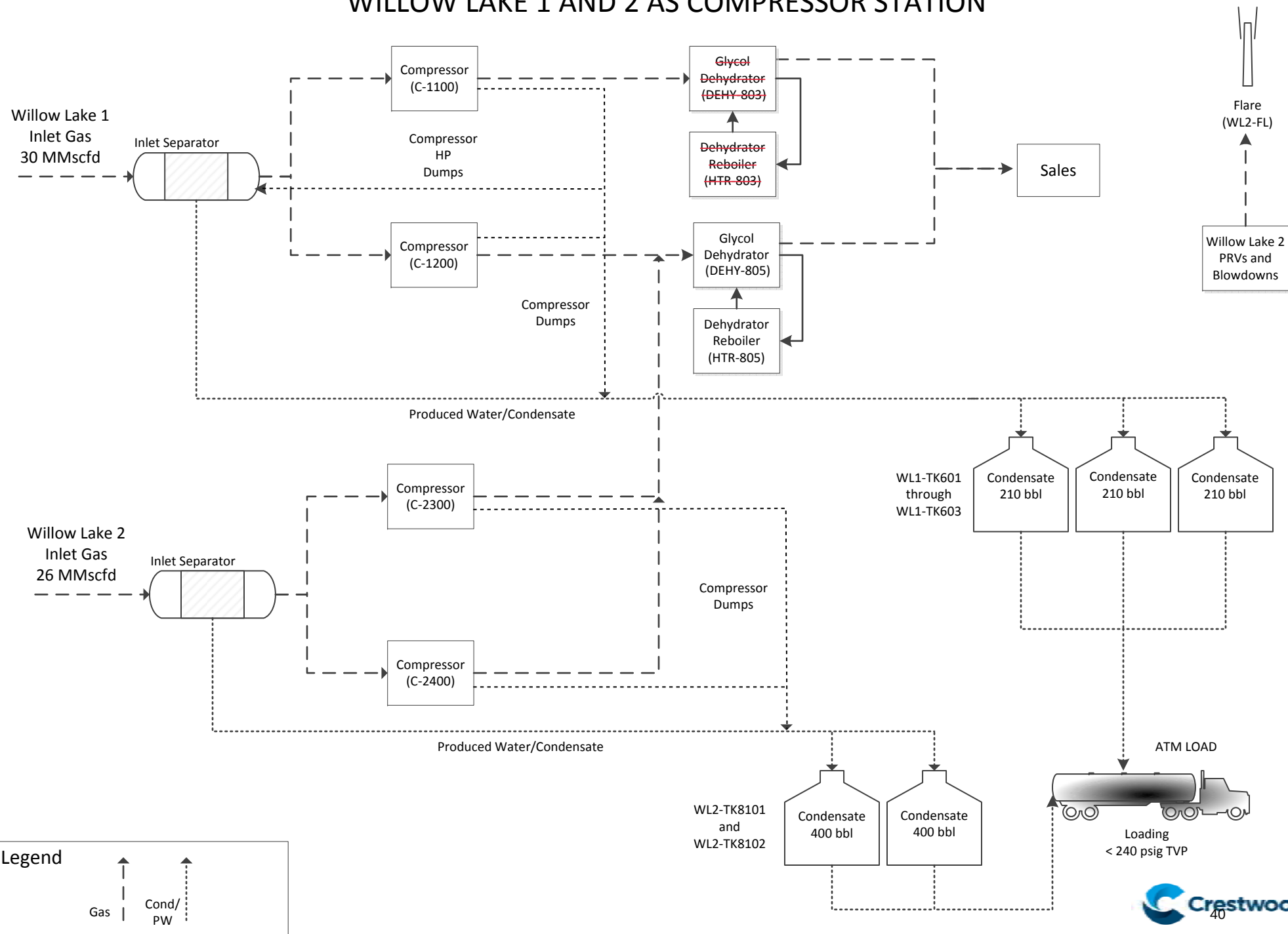
Process Flow Sheet

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 is attached.

CRESTWOOD NEW MEXICO PIPELINE LLC

WILLOW LAKE 1 AND 2 AS COMPRESSOR STATION

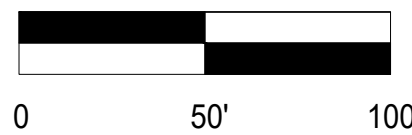


Section 5

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 facility plot plan is attached.



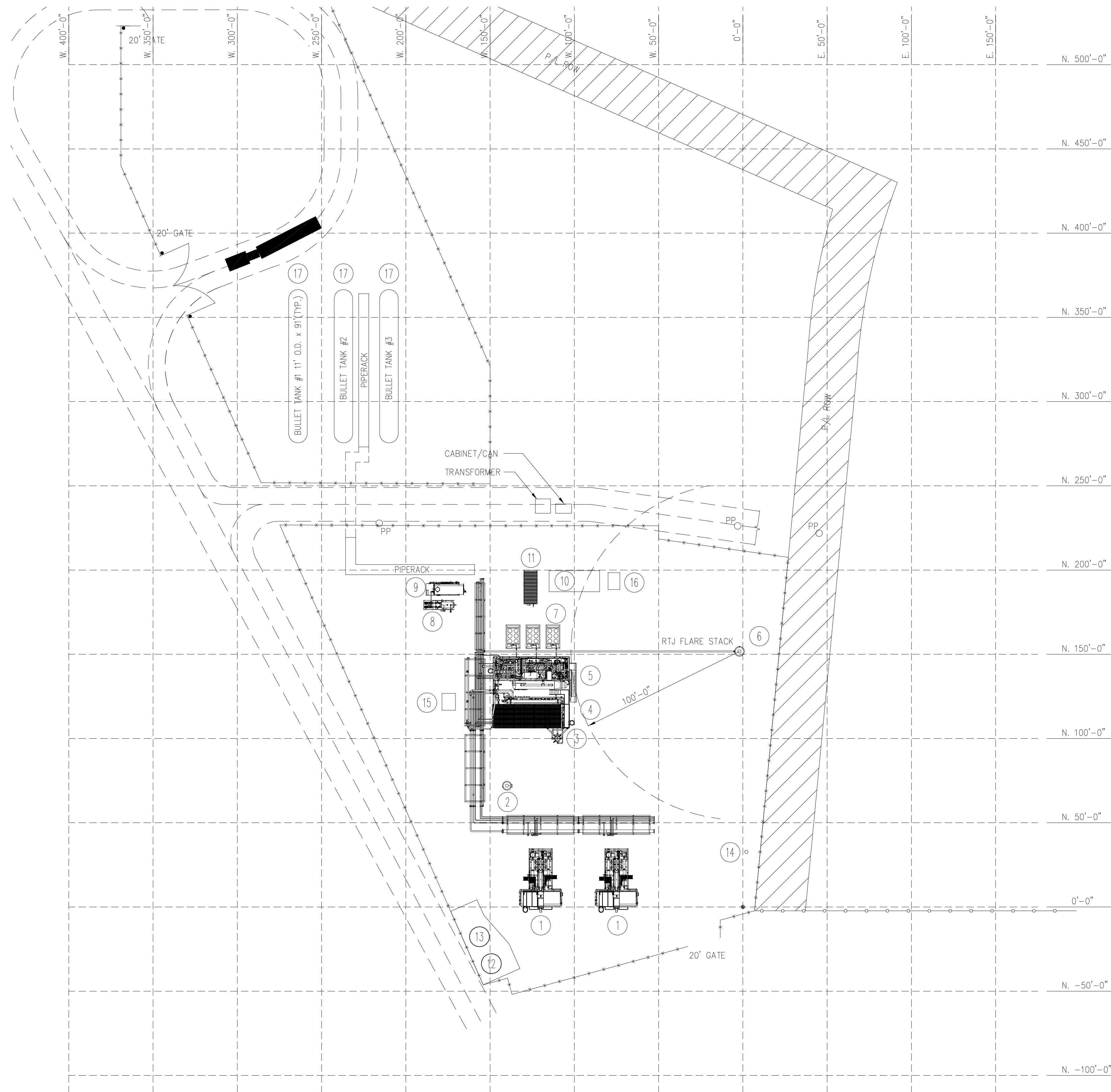
EQUIPMENT LEGEND

- ① PIG RECEIVERS
- ① SLUG CATCHER
- ② INLET COMPRESSOR
- ③ INLET COMPRESSOR
- ④ INLET COMPRESSOR
- ⑤ INLET COMPRESSOR
- ⑥ INLET COMPRESSOR
- ⑦ INLET COMPRESSOR
- ⑧ INLET COMPRESSOR
- ⑨ INLET COMPRESSOR
- ⑩ COALESCING VORTEX FILTER
- ⑪ TEG REGENERATION SKID
- ⑫ TEG CONTACTOR
- ⑬ TEG AFTER SCRUBBER
- ⑭ BTEX SKID
- ⑮ GAS DISCHARGE METER SKID
- ⑯ INSTRUMENT AIR COMPRESSOR
- ⑰ INSTRUMENT AIR RECEIVER
- ⑱ FUEL GAS SKID (SCRUBBER)
- ⑲ TRANSFORMER
- ⑳ LP FLARE DRUM PUMP
- ㉑ HP FLARE KO DRUM & PUMP
- ㉒ FL-5100 FLARE
- ㉓ LIQUID TANK
- ㉔ LIQUID TANK
- ㉕ LIQUID TANK
- ㉖ LIQUID TANK
- ㉗ VRU

						WILLOW LAKE 1 PLOT PLAN LEGEND CONCEPT LAYOUT MALAGA, NM				
B	REISSUED FOR REVIEW	JAL	EA	02/10/2021						
A	ISSUED FOR REVIEW	MT	SS	05/21/2020						
NO.	REVISION	BY	CHK.	DATE						
					DRAWN BY	MT	DATE		A.F.E. NO.	
					CHK. BY		SCALE	1"=100'	PRINT ISSUED	ISSUED FOR REVIEW
					DESIGNED BY		APPR. BY		DWG. NO.	0502

0501 OVERALL SITE PLAN_AS-BUILT.dwg Printed on: Sep 11, 2018 by NYANKOV

PLANT NORTH



ITEM	EQUIPMENT DESCRIPTION
1	Compressor
2	Inlet Separator
3	Process Skid #1
4	Process Skid #2
5	Process Skid #3
6	Flare
7	Hycon Oil Coolers
8	Hot Oil Pump Skid
9	Hot Oil Heater
10	MCC Building
11	Instrument Air
12	Slop Tank #1
13	Slop Tank #2
14	Coalescing Filter
15	Building
16	Switchboard
17	Bullet Tank

								WILLOW LAKE GAS PLANT 2 OVERALL SITE PLAN			
								MALAGA, NM			
1	AS-BUILT, MOC 000001091	RB	OGT	08/22/18	DRAWN BY	REB	DATE	12/03/15	A.F.E. NO.		
0	RECORD DRAWING	EFA	GJS	02/22/17	CHK. BY		SCALE	NTS	PRINT ISSUED	DWG. NO.	0501
NO.	REVISION	BY	CHK.	DATE	DESIGNED BY		APPR. BY				

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.

Emission calculations are attached.

Compressor Engines: C-1100, C-1200, C-2300, C-2400, and C-1110 through C-1180; these engines will not be modified under this permit revision request.

Manufacturer and catalyst data were used to calculate engine NO_x, CO, VOC, and HCHO emissions. Emission factors from AP-42 Tables 3.2-1 and 2 were used to calculate PM and all other HAP emissions. A fuel gas sulfur content of 5 gr/100 scf was assumed for the calculation of SO₂ emissions; and, a fuel gas H₂S content of 0.25 gr/100 scf was used to calculate H₂S emissions.

Glycol Dehydrators: DEHY-803, DEHY-804 and DEHY-EG are to be deleted/removed from service under this permit revision request; DEHY-805, DEHY-1505 will remain unmodified under this permit revision request.

GRI GlyCalc 4.0 was previously used to calculate emissions from TEG dehydrators. The representative gas analysis (dated 5/28/2020) used in support of the current permit authorization is included, along with design specifications from facility engineers. 40 CFR 98 Subpart A was used to calculate GHG emissions.

Heaters and Reboilers: HTR-802, HTR-803, HTR-804 and HTR-730 are to be deleted/removed from service under this permit revision request; HTR-805, HTR-1505 will remain unmodified under this permit revision request.

Heater and reboiler emissions were calculated using emission factors from AP-42 Tables 1.4-1, 1.4-2, and 1.4-3. GHG emissions were calculated using emission factors and global warming potentials (GWP) in 40 CFR 98 Subparts A and C.

Fugitive Components: FUG-1 and FUG-2 were modified with updated component counts due to the shutdown of both natural gas processing units.

Fugitive component emissions were calculated using emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates (1995). A previously submitted representative gas analysis (dated 5/28/2020) and liquid compositions calculated using BR&E ProMax were used in proposed fugitive emission calculations.

Storage Tanks: WL1-TK601 through WL1-TK603, WL2-TK8101 and WL2-TK8102, WLCS-TK2301 to WLCS-TK2304 will remain unmodified under this permit revision request.

Tanks emission calculations were previously performed using BR&E ProMax using a condensate liquid analysis (dated 5/28/2020).

Condensate Loading: ATM LOAD will remain unmodified under this permit revision request.

Condensate loading emission calculations were previously performed using BR&E ProMax using a condensate liquid analysis dated 5/28/2020.

Natural Gas Liquid Loading: NGL LOAD; NGL loading will cease with the shutdown of both natural gas processing plants.

Unpaved Haul Road: HAUL will remain unmodified under this permit revision request.

Haul road emissions were previously calculated in accordance with AP-42 Section 13.2.2.3, liquid density and production rates and truck volume capacities and weights. Haul roads are exempt pursuant to 20.2.72.202.B(5) NMAC.

Process Flares: WL1-FL has been modified under this permit revision request to reflect the removal of DEHY-803, DEHY-804. WL2-FL has been modified under this permit revision request to reflect the removal of DEHY-EG.

Process flare emissions are calculated with tank and dehydrator emissions and properties from BR&E ProMax, GRI-GlyCalc 4.0, and TNRCC RG-109 emission factors.

Miscellaneous Equipment: WL1-FL BLOWDOWN will remain unmodified under this permit revision request. WL2-FL BLOWDOWN has been modified to reflect a greenhouse gas CO₂ emission factor revised from 5.10 to 5.06 kg/mmbtu to maintain consistency throughout the permit; however, all other throughputs/operating parameters will remain unmodified. PIGGING will remain unmodified under this permit revision request.

Blowdown volumes/frequency/emissions/flaring emissions were calculated in the previously submitted permit revision, using the gas analyses dated 05/28/2020. Flaring emissions were calculated using TNRCC RG-109 factors. Pig receiver/launcher emissions were calculated using estimated component volumes and a facility inlet gas analysis (dated 2/17/2020).

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)

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE COMPRESSOR STATION
EMISSION CALCULATIONS

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE GAS PROCESSING PLANT
FACILITY-WIDE EMISSIONS

MAXIMUM UNCONTROLLED EMISSIONS

SOURCE ID	NO _x		CO		VOCs		SO ₂		TSP		PM ₁₀		PM _{2.5}		H ₂ S		CO ₂ e	STATUS	COMMENTS
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	TPY		
C-1100	2.6125	11.4427	14.3686	62.9346	4.1213	18.0511	0.2302	1.0082	0.1569	0.6872	0.1569	0.6872	0.1569	0.6872	0.0001	0.0005	10,100.7415	UN-MODIFIED	
C-1200	56.7470	248.5520	39.2864	172.0745	2.1389	9.3685	0.2260	0.9901	0.2995	1.3116	0.2995	1.3116	0.2995	1.3116	0.0001	0.0005	7,912.9339	UN-MODIFIED	
C-2300	49.2601	215.7594	42.5933	186.5588	0.7778	3.4067	0.1949	0.8538	0.2582	1.1310	0.2582	1.1310	0.2582	1.1310	0.0001	0.0004	6,823.4345	UN-MODIFIED	
C-2400	49.2601	215.7594	42.5933	186.5588	0.7778	3.4067	0.1949	0.8538	0.2582	1.1310	0.2582	1.1310	0.2582	1.1310	0.0001	0.0004	6,823.4345	UN-MODIFIED	
C-1110	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1120	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1130	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1140	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1150	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1160	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1170	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
C-1180	2.0668	9.0527	9.0941	39.8321	2.0255	8.8717	0.2077	0.9097	0.1416	0.6201	0.1416	0.6201	0.1416	0.6201	0.0001	0.0004	7,275.6770	UN-MODIFIED	
WL2-FL	0.0091	0.0401	0.0183	0.0800			0.0009	0.0041							0.0000	0.0001	34.0045	MODIFIED	DELETED E.G. DEHY; ONLY FLARE PILOT
WL2-FL BLOWDOWN																		MODIFIED	REVISED ME GWP TO 5.06
WL1-FL	0.0300	0.1313	0.0599	0.2622			0.0030	0.0133							0.0001	0.0003	2,423.7293	MODIFIED	DELETED DEHY 803, 804 VAPORS
WL1-FL BLOWDOWN																		UN-MODIFIED	
DEHY-803																		DELETED SOURCE	
DEHY-804																		DELETED SOURCE	
DEHY-EG																		DELETED SOURCE	
DEHY-805					176.6395	773.6810									0.0205	0.0898	23,051.9050	UN-MODIFIED	
DEHY-1505					177.0555	775.5031									0.0204	0.0894	23,117.4801	UN-MODIFIED	
HTR-803																		DELETED SOURCE	
HTR-804																		DELETED SOURCE	
HTR-802																		DELETED SOURCE	
HTR-730																		DELETED SOURCE	
HTR-805	0.1471	0.6441	0.1235	0.5411	0.0081	0.0354	0.0220	0.0963	0.0112	0.0490	0.0112	0.0490	0.0112	0.0490	0.0000	0.0000	769.3335	UN-MODIFIED	
HTR-1505	0.1471	0.6441	0.1235	0.5411	0.0081	0.0354	0.0220	0.0963	0.0112	0.0490	0.0112	0.0490	0.0112	0.0490	0.0000	0.0000	769.3335	UN-MODIFIED	
WL1-TK601					53.2824	198.2205									0.0014	0.0038	555.6867	UN-MODIFIED	
WL1-TK602					53.2824	198.2205									0.0014	0.0038	555.6867	UN-MODIFIED	
WL1-TK603					53.2824	198.2205									0.0014	0.0038	555.6867	UN-MODIFIED	
WL2-TK8101					94.3340	46.9641									0.0023	0.0009	127.2191	UN-MODIFIED	
WL2-TK8102					94.3340	46.9641									0.0023	0.0009	127.2191	UN-MODIFIED	
WLCS-TK2301					488.8068	371.4760									0.0160	0.0107	510.0567	UN-MODIFIED	
WLCS-TK2302					488.8068	371.4760									0.0160	0.0107	510.0567	UN-MODIFIED	
WLCS-TK2303					488.8068	371.4760									0.0160	0.0107	510.0567	UN-MODIFIED	
WLCS-TK2304					488.8068	371.4760									0.0160	0.0107	510.0567	UN-MODIFIED	
ATM LOAD					93.9517	84.3312									0.0019	0.0024	45.2550	UN-MODIFIED	
NGL LOAD																		DELETED SOURCE	
FUG-1					4.5717	20.0241									0.0001	0.0002	973.0157	MODIFIED	GAS PLANT SHUT-DOWN
FUG-2					8.8245	38.6513									0.0001	0.0003	976.7757	MODIFIED	GAS PLANT SHUT-DOWN
PIGGING					1.5709	6.8807									0.0000	0.0001	214.0188	MODIFIED	INCREASED REQUENCY
SSM/M						10.0000										1.0000		UN-MODIFIED	
PROPOSED TOTALS	174.7477	765.3949	211.9195	928.2075	2,790.3922	3,988.8427	2.5555	11.1930	2.1277	9.3194	2.1277	9.3194	2.1277	9.3194	0.1169	1.2441	146,202.5366	MODIFIED	

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE GAS PROCESSING PLANT
FACILITY-WIDE EMISSIONS

MAXIMUM CONTROLLED EMISSIONS

SOURCE ID	NO _x		CO		VOCs		SO ₂		TSP		PM ₁₀		PM _{2.5}		H ₂ S		CO ₂ e	STATUS	COMMENTS
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	TPY		
C-1100	2.612	11.443	5.225	22.885	1.030	4.513	0.230	1.008	0.157	0.687	0.157	0.687	0.157	0.687	0.000	0.000	10,100.742	UN-MODIFIED	
C-1200	8.512	37.283	5.893	25.811	0.690	3.021	0.226	0.990	0.299	1.312	0.299	1.312	0.299	1.312	0.000	0.000	7,912.934	UN-MODIFIED	
C-2300	3.704	16.223	3.704	16.223	0.267	1.168	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000	6,823.435	UN-MODIFIED	
C-2400	3.704	16.223	3.704	16.223	0.267	1.168	0.195	0.854	0.258	1.131	0.258	1.131	0.258	1.131	0.000	0.000	6,823.435	UN-MODIFIED	
C-1110	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1120	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1130	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1140	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1150	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1160	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1170	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
C-1180	2.067	9.053	0.909	3.983	0.723	3.168	0.208	0.910	0.142	0.620	0.142	0.620	0.142	0.620	0.000	0.000	7,275.677	UN-MODIFIED	
WL2-FL	0.009	0.040	0.018	0.080			0.001	0.004							0.000	0.000	34.005	MODIFIED	DELETED E.G. DEHY; ONLY FLARE PILOT
WL2-FL BLOWDOWN	110.228	2.866	220.056	5.721	159.393	4.144	0.414	0.011							0.004	0.000	2,431.832	MODIFIED	REVISED ME GWP TO 5.06
WL1-FL	10.315	2.503	20.593	4.997	12.531	3.065	0.069	0.026							0.001	0.000	2,423.729	MODIFIED	DELETED DEHY 803, 804 VAPORS
WL1-FL BLOWDOWN	9.171	0.238	18.309	0.476	13.262	0.345	0.034	0.001							0.000	0.000	202.328	UN-MODIFIED	
DEHY-803																		DELETED SOURCE	
DEHY-804																		DELETED SOURCE	
DEHY-EG																		DELETED SOURCE	
DEHY-805					2.945	12.899									0.000	0.002	568.672	UN-MODIFIED	
DEHY-1505					0.429	1.878									0.000	0.001	34.643	UN-MODIFIED	
HTR-803																		DELETED SOURCE	
HTR-804																		DELETED SOURCE	
HTR-802																		DELETED SOURCE	
HTR-730																		DELETED SOURCE	
HTR-805	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000	769.334	UN-MODIFIED	
HTR-1505	0.147	0.644	0.124	0.541	0.008	0.035	0.022	0.096	0.011	0.049	0.011	0.049	0.011	0.049	0.000	0.000	769.334	UN-MODIFIED	
WL1-TK601																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WL1-TK602																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WL1-TK603																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WL2-TK8101					94.334	2.348									0.002	0.000	6.361	UN-MODIFIED	VAPORS VENT TO AIR DURING WL2-VRU 5% DOWNTIME
WL2-TK8102					94.334	2.348									0.002	0.000	6.361	UN-MODIFIED	VAPORS VENT TO AIR DURING WL2-VRU 5% DOWNTIME
WLCS-TK2301																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WLCS-TK2302																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WLCS-TK2303																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
WLCS-TK2304																		UN-MODIFIED	VAPORS CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
ATM LOAD					39.539	2.733									0.000	0.000	45.255	UN-MODIFIED	
NGL LOAD																		DELETED SOURCE	
FUG-1					4.572	20.024									0.000	0.000	973.016	MODIFIED	GAS PLANT SHUT-DOWN
FUG-2					8.825	38.651									0.000	0.000	976.776	MODIFIED	GAS PLANT SHUT-DOWN
PIGGING					1.571	6.881									0.000	0.000	214.019	MODIFIED	INCREASED REQUENCY
SSM/M						10.000										1.000		UN-MODIFIED	
PROPOSED TOTALS	165.083	160.528	285.023	125.364	439.791	140.605	3.069	11.218	2.128	9.319	2.128	9.319	2.128	9.319	0.012	1.010	99,321.623	MODIFIED	
CURRENTLY AUTHORIZED	166.850	165.839	287.477	131.270	475.221	141.997	3.318	11.828	2.198	9.628	2.198	9.628	2.198	9.628	0.014	1.010	105,646.887		
INCREASE/DECREASE	(1.766)	(5.311)	(2.454)	(5.907)	(35.430)	(1.392)	(0.249)	(0.611)	(0.070)	(0.309)	(0.070)	(0.309)	(0.070)	(0.309)	(0.001)	(0.000)	(6,325.264)		

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE GAS PROCESSING PLANT
FACILITY-WIDE EMISSIONS

MAXIMUM UNCONTROLLED HAP EMISSIONS

SOURCE ID	HCHO		ACETALDEHYDE		ACROLEIN		METHANOL		TOLUENE		ETHYLBENZENE		XYLENES		BENZENE		N-HEXANE		TOTAL HAPS	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
C-1100	0.8295	3.6333	0.1313	0.5753	0.0808	0.3537	0.0393	0.1720	0.0064	0.0281	0.0006	0.0027	0.0029	0.0127	0.0069	0.0303	0.0174	0.0764	1.1233	4.9200
C-1200	0.8294	3.6327	0.0430	0.1885	0.0406	0.1777	0.0472	0.2068	0.0086	0.0377	0.0004	0.0017	0.0030	0.0132	0.0244	0.1068			1.0090	4.4194
C-2300	0.1852	0.8111	0.0371	0.1626	0.0350	0.1533	0.0407	0.1783	0.0074	0.0325	0.0003	0.0014	0.0026	0.0114	0.0210	0.0921			0.3401	1.4895
C-2400	0.1852	0.8111	0.0371	0.1626	0.0350	0.1533	0.0407	0.1783	0.0074	0.0325	0.0003	0.0014	0.0026	0.0114	0.0210	0.0921			0.3401	1.4895
C-1110	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1120	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1130	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1140	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1150	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1160	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1170	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
C-1180	0.8267	3.6211	0.1185	0.5190	0.0729	0.3191	0.0354	0.1552	0.0058	0.0253	0.0006	0.0025	0.0026	0.0114	0.0062	0.0273	0.0157	0.0689	1.0918	4.7820
WL2-FL																				
WL2-FL BLOWDOWN																				
WL1-FL																				
WL1-FL BLOWDOWN																				
DEHY-803																				
DEHY-804																				
DEHY-EG																				
DEHY-805									19.8156	86.7923	2.6960	11.8085	10.8073	47.3360	0.3258	1.4270	5.5326	24.2328	39.1773	171.5966
DEHY-1505									20.0855	87.9745	2.7423	12.0113	11.1326	48.7608	0.3290	1.4410	5.5167	24.1631	39.8061	174.3507
HTR-803																				
HTR-804																				
HTR-802																				
HTR-730																				
HTR-805	0.0001	0.0005					-	0.0000	0.0000	-	-	-	-	-	0.0000	0.0000	0.0026	0.0116	0.0028	0.0121
HTR-1505	0.0001	0.0005					-	0.0000	0.0000	-	-	-	-	-	0.0000	0.0000	0.0026	0.0116	0.0028	0.0121
WL1-TK601									0.0985	0.5000	0.0064	0.0342	0.0400	0.2149	0.0559	0.2648	0.8179	3.9491	1.0186	4.9631
WL1-TK602									0.0985	0.5000	0.0064	0.0342	0.0400	0.2149	0.0559	0.2648	0.8179	3.9491	1.0186	4.9631
WL1-TK603									0.0985	0.5000	0.0064	0.0342	0.0400	0.2149	0.0559	0.2648	0.8179	3.9491	1.0186	4.9631
WL2-TK8101									0.1824	0.1192	0.0119	0.0082	0.0745	0.0513	0.1025	0.0631	1.5051	0.9408	1.8764	1.1824
WL2-TK8102									0.1824	0.1192	0.0119	0.0082	0.0745	0.0513	0.1025	0.0631	1.5051	0.9408	1.8764	1.1824
WLCS-TK2301									1.0125	0.7768	0.0404	0.0309	0.1490	0.1143	1.0768	0.8233	19.5326	15.0157	21.8113	16.7610
WLCS-TK2302									1.0125	0.7768	0.0404	0.0309	0.1490	0.1143	1.0768	0.8233	19.5326	15.0157	21.8113	16.7610
WLCS-TK2303									1.0125	0.7768	0.0404	0.0309	0.1490	0.1143	1.0768	0.8233	19.5326	15.0157	21.8113	16.7610
WLCS-TK2304									1.0125	0.7768	0.0404	0.0309	0.1490	0.1143	1.0768	0.8233	19.5326	15.0157	21.8113	16.7610
ATM LOAD									0.2374	0.1859	0.0136	0.0088	0.0753	0.0421	0.1794	0.1729	3.0267	3.0606	3.5323	3.4703
NGL LOAD																				
FUG-1							0.0287	0.1255											0.2834	1.2413
FUG-2							0.3548	1.5539											0.8788	3.8490
PIGGING																			0.0655	0.2867
SSM/M																			-	1.0000
TOTALS	8.6434	37.8580	1.1966	5.2413	0.7742	3.3909	0.8348	3.6566	44.9249	180.1318	5.6624	24.0984	22.9122	97.4830	5.6371	7.7944	97.8191	125.8993	189.3495	490.6917

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE GAS PROCESSING PLANT
FACILITY-WIDE EMISSIONS

MAXIMUM CONTROLLED HAP EMISSIONS

SOURCE ID	HCHO		ACETALDEHYDE		ACROLEIN		METHANOL		TOLUENE		ETHYLBENZENE		XYLENES		BENZENE		N-HEXANE		TOTAL HAPS	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
C-1100	0.2074	0.9083	0.1012	0.4431	0.0622	0.2725	0.0303	0.1325	0.0049	0.0216	0.0005	0.0021	0.0022	0.0098	0.0053	0.0233	0.0134	0.0588	0.4337	1.8995
C-1200	0.1659	0.7265	0.0430	0.1885	0.0406	0.1777	0.0472	0.2068	0.0086	0.0377	0.0004	0.0017	0.0030	0.0132	0.0244	0.1068			0.3455	1.5132
C-2300	0.0444	0.1947	0.0371	0.1626	0.0350	0.1533	0.0407	0.1783	0.0074	0.0325	0.0003	0.0014	0.0026	0.0114	0.0210	0.0921			0.1993	0.8731
C-2400	0.0444	0.1947	0.0371	0.1626	0.0350	0.1533	0.0407	0.1783	0.0074	0.0325	0.0003	0.0014	0.0026	0.0114	0.0210	0.0921			0.1993	0.8731
C-1110	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1120	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1130	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1140	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1150	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1160	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1170	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
C-1180	0.1240	0.5432	0.0737	0.3228	0.0453	0.1984	0.0220	0.0965	0.0036	0.0158	0.0003	0.0015	0.0016	0.0071	0.0039	0.0170	0.0098	0.0429	0.2888	1.2651
WL2-FL																				
WL2-FL BLOWDOWN																			21.7266	0.5649
WL1-FL																			0.4090	0.0573
WL1-FL BLOWDOWN																			1.8077	0.0470
DEHY-803																				
DEHY-804																				
DEHY-EG																				
DEHY-805									0.0667	0.2922	0.0041	0.0179	0.0130	0.0571	0.0022	0.0097	0.1115	0.4884	0.1976	0.8654
DEHY-1505									0.0477	0.2090	0.0023	0.0100	0.0086	0.0377	0.0018	0.0081	0.0182	0.0798	0.0787	0.3446
HTR-803																				
HTR-804																				
HTR-802																				
HTR-730																				
HTR-805	0.0001	0.0005							0.0000	0.0000					0.0000	0.0000	0.0026	0.0116	0.0028	0.0121
HTR-1505	0.0001	0.0005							0.0000	0.0000					0.0000	0.0000	0.0026	0.0116	0.0028	0.0121
WL1-TK601																				
WL1-TK602																				
WL1-TK603																				
WL2-TK8101									0.1824	0.0060	0.0119	0.0004	0.0745	0.0026	0.1025	0.0032	1.5051	0.0470	1.8764	0.0591
WL2-TK8102									0.1824	0.0060	0.0119	0.0004	0.0745	0.0026	0.1025	0.0032	1.5051	0.0470	1.8764	0.0591
WLCS-TK2301																				
WLCS-TK2302																				
WLCS-TK2303																				
WLCS-TK2304																				
ATM LOAD									0.1302	0.0081	0.0092	0.0005	0.0576	0.0032	0.0665	0.0049	1.0007	0.0781	1.2640	0.0948
NGL LOAD																				
FUG-1							0.0287	0.1255											0.2834	1.2413
FUG-2							0.3548	1.5539											0.8788	3.8490
PIGGING																			0.0655	0.2867
SSM/M																			-	1.0000
TOTALS	1.4544	6.3705	0.8080	3.5389	0.5352	2.3442	0.7186	3.1475	0.6665	0.7716	0.0436	0.0482	0.2516	0.2056	0.3783	0.4792	4.2377	1.1653	33.9580	23.7728

PUBLIC NOTICE

ITEM	NO _x		CO		VOCs		SO ₂		TSP		PM ₁₀		PM _{2.5}		H ₂ S		CO ₂ e	Total HAPs	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	TPY	PPH	TPY
TOTAL	165.0834	160.5280	285.0228	125.3636	439.7907	140.6049	3.0692	11.2176	2.1277	9.3194	2.1277	9.3194	2.1277	9.3194	0.0124	1.0098	99,321.6231	33.9580	23.7728
TOTAL W/OUT FUG	165.0834	160.5280	285.0228	125.3636	426.3945	81.9294	3.0692	11.2176	2.1277	9.3194	2.1277	9.3194	2.1277	9.3194	0.0123	1.0093	97,371.8318	32.7958	18.6825
SAFETY FACTOR	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	0.1500	
TOTAL + SF	189.8459	184.6072	327.7762	144.1682	505.7593	161.6956	3.5296	12.9003	2.4469	10.7173	2.4469	10.7173	2.4469	10.7173	0.0143	1.1613	114,219.8666	39.0517	23.7728
PSD OR MAJOR SOURCE LEVEL	250.000			250.000		250.000		250.000		250.000		250.000		250.000		250.000			25.000
BELOW THRESHOLD?		YES		YES		YES		YES		YES		YES		YES		YES			YES
PUBLIC NOTICE EMISSION	190.000	185.000	328.000	145.000	506.000	162.000	4.000	13.000	3.000	11.000	3.000	11.000	3.000	11.000	1.000	2.000	120,000.000	40.000	24.000

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	C-1100		
SOURCE DESCRIPTION:	CAT G3608 4SLB INLET GAS COMPRESSOR ENGINE WITH OXIDATION CATALYST		
SOURCE DESCRIPTION:	CAT G3608 4SLB INLET GAS COMPRESSOR ENGINE WITH OXIDATION CATALYST		
POWER ¹	2,370.00	HP	MFG. DATA - 100% LOAD (DM8606-02)
FUEL CONSUMPTION	6,629.00	BTU/HP-HR	MFG. DATA - 100% LOAD (DM8606-02)
FUEL TYPE	NG		MFG. DATA
FUEL HEATING VALUE	1,020.00	BTU/SCF	FUEL GAS ANALYSIS
OPERATING HOURS	8,760.00	HOURS	CONTINUOUS
FUEL USAGE	15,402.68	SCF/HR	CALCULATED
ANNUAL FUEL USAGE	134.93	MMSCF/YR	CALCULATED

UNCONTROLLED EMISSION CALCULATIONS

UNITS	NOx2	CO2	VOC2	SO23	PM4,5	H2S6	HCHO2	Acetaldehyde7	Acrolein7	Methanol7	Toluene7	Ethylbenzene7	Xylenes7	Benzene7	n-Hexane7	1,3-Butadiene7	PAH7	HAPs7
G/HP-HR	0.500	2.750	0.630															
GR/100 SCF				5.000		0.250												
LB/MMBTU				0.014	0.010	0.000	0.053	0.008	0.005	0.003	0.000	0.000	0.000	0.000	0.00111	0.000267	0.00025	
PPH ⁸	2.612	14.369	4.121	0.230	0.157	0.000	0.830	0.131	0.081	0.039	0.006	0.001	0.003	0.007	0.017	0.004	0.004	1.123
TPY ⁹	11.443	62.935	18.051	1.008	0.687	0.000	3.633	0.575	0.354	0.172	0.028	0.003	0.013	0.030	0.076	0.018	0.017	4.920

CONTROLLED EMISSION CALCULATIONS

UNITS	NOx	CO	VOC	SO2	PM	H2S	HCHO	Acetaldehyde	Acrolein	Methanol	Toluene	Ethylbenzene	Xylenes	Benzene	n-Hexane	1,3-Butadiene	PAH7	HAPs ¹⁰
CONTROL EFFICIENCY ¹¹		0.636	0.750				0.750											
G/HP-HR ¹⁶	0.500	1.000	0.158					0.019	0.012	0.006	0.001	0.000	0.000	0.001	0.003	0.001	0.001	
PPH ¹²	2.612	5.225	1.030	0.230	0.157	0.000	0.207	0.101	0.062	0.030	0.005	0.000	0.002	0.005	0.013	0.003	0.003	0.434
TPY ⁹	11.443	22.885	4.513	1.008	0.687	0.000	0.908	0.443	0.272	0.133	0.022	0.002	0.010	0.023	0.059	0.014	0.013	1.899

GREENHOUSE GAS CALCULATIONS¹³

UNITS	CO2	N2O	CH4	CO2e
G/HP-HR	441.000			
KG/MMBTU		0.000	0.001	
GWP ¹⁴	1.000	298.000	25.000	
PPH ¹⁵	2,304.207	0.003	0.035	2,306.105
TPY ⁹	10,092.428	0.015	0.152	10,100.742

NOTES

¹ No derate being requested

² For uncontrolled and controlled emissions, emission factors are taken from catalyst data. VOC emissions factors do not include HCHO. HCHO emissions are added to VOC calculated emissions; therefore, VOC emissions represent Total VOC.

³ Assumes natural gas sulfur content of 5 gr/100 scf

$SO_2 \text{ EF (lb/MMBtu)} = [(5 \text{ gr } SO_2/100 \text{ scf} * 1 \text{ lb}/7000 \text{ gr} * 64 \text{ lb/lbmol } SO_2/32 \text{ lb/lbmol S}) / \text{HHV (Btu/scf)}] * 10^6 \text{ Btu/MMBtu}$

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

$SO_2 \text{ (lb/hr)} \text{ from } H_2S = 98\% * [(0.25 \text{ gr } H_2S/100 \text{ scf} * 1 \text{ lb}/7000 \text{ gr} * 64 \text{ lb/lbmol } SO_2/34 \text{ lb/lbmol } H_2S) / \text{HHV (Btu/scf)}] * (\text{Btu/hp-hr} * \text{hp})$

⁴ Emission Factors from AP-42 Table 3.2-2 (4SLB)

⁵ PM includes Condensable + Filterable; assume PM₁₀ = PM_{2.5}

⁶ Assumes a conservative natural gas H₂S content of 0.25 gr/100 scf and 98% conversion to SO₂.

$H_2S \text{ EF (lb/MMBtu)} = 2\% * [(0.25 \text{ gr } H_2S/100 \text{ scf} * 1 \text{ lb}/7000 \text{ gr}) / \text{HHV (Btu/scf)}] * 10^6 \text{ Btu/MMBtu}$

⁷ Uncontrolled HAP emissions based on AP-42 Table 3.2-2 (4SLB)

⁸ NO_x, CO, and VOC lb/hr Emission Rate = EF * 1 lb/453.592 g * hp

PM & HAP lb/hr Emission Rate = EF * Fuel Consumption (Btu/hp-hr) * hp * 1 MMBtu/10⁶ Btu

⁹ tpy = lb/hr * hours of operation * 1 ton/2000 lb

¹⁰ Controlled HAP emissions (lb/hr) = Controlled individual HAPs (lb/hr) + Controlled HCHO (lb/hr)

¹¹ Catalysts are guaranteed by manufacturer to be at least as efficient as claimed.

¹² lb/hr (controlled) = lb/hr (uncontrolled) * (1 - Control Efficiency)

¹³ CO₂ emission factor from manufacturer's data. All other greenhouse gas emission factors are from 40 CFR 98 Subpart C

¹⁴ 40 CFR 98 Subpart A, Table A-1

¹⁵ CO₂, N₂O, and CH₄ lb/hr = EF (kg/MMBtu) * 2.20462 lb/kg * Fuel consumption (Btu/hp-hr) * Engine hp * 1 MMBtu/10⁶ Btu

CO₂e lb/hr = CO₂ lb/hr + (CH₄ lb/hr * GWP) + (N₂O lb/hr * GWP)

¹⁶ Non-HCHO HAP uncontrolled emission are based on AP-42 emission factors for individual HAPs. AP-42 emission factors are converted into catalyst vendor specific emission factors in g/hp-hr by normalizing speciated emission with respect to the non-HCHO v

Example calculation for individual HAP component:

Acrolein EF (g/hp-hr) = Acrolein AP-42 EF (lb/mmbtu) * VOC excl. HCHO vendor EF (g/hp-hr) / [VOC AP-42 EF (lb/mmbtu) - HCHO AP-42 EF (lb/mmbtu)]

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
C-1200

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	C-1200		
SOURCE DESCRIPTION:	WAUKESHA P9390GSI 4SRB RESIDUE GAS COMPRESSOR ENGINE WITH NSCR		
SOURCE DESCRIPTION:			
POWER ¹	1,980.00	HP	MFG. DATA - 100% LOAD (DM8606-02)
FUEL CONSUMPTION	7,792.00	BTU/HP-HR	MFG. DATA - 100% LOAD (DM8606-02)
FUEL TYPE	NG		MFG. DATA
FUEL HEATING VALUE	1,020.00	BTU/SCF	FUEL GAS ANALYSIS
OPERATING HOURS	8,760.00	HOURS	CONTINUOUS
FUEL USAGE	15,125.65	SCF/HR	CALCULATED
ANNUAL FUEL USAGE	132.50	MMSCF/YR	CALCULATED

UNCONTROLLED EMISSION CALCULATIONS

UNITS	NO _x ²	CO ²	VOC ²	SO ₂ ³	PM ^{4,5}	H ₂ S ⁶	HCHO ⁷	Acetaldehyde ⁷	Acrolein ⁷	Methanol ⁷	Toluene ⁷	Ethylbenzene ⁷	Xylenes ⁷	Benzene ⁷	1,3-Butadiene ⁷	2,2,4-TMP ⁷	HAPs ⁸
G/HP-HR	13.000	9.000	0.300				0.190										
GR/100 SCF				5.000		0.250											
LB/MMBTU				0.014	0.019	0.000		0.003	0.003	0.003	0.001	0.000	0.000	0.002	0.001	0.000	
PPH ⁸	56.747	39.286	2.139	0.226	0.299	0.000	0.829	0.043	0.041	0.047	0.009	0.000	0.003	0.024	0.010	0.002	1.009
TPY ⁹	248.552	172.074	9.368	0.990	1.312	0.000	3.633	0.189	0.178	0.207	0.038	0.002	0.013	0.107	0.045	0.010	4.419

CONTROLLED EMISSION CALCULATIONS

UNITS	NO _x	CO	VOC	SO ₂	PM	H ₂ S	HCHO	Acetaldehyde	Acrolein	Methanol	Toluene	Ethylbenzene	Xylenes	Benzene	1,3-Butadiene	2,2,4-TMP	HAPs ¹⁰
CONTROL EFFICIENCY ¹¹	0.850	0.850	0.600				0.800										
G/HP-HR ¹⁶	1.950	1.350	0.120				0.038										
PPH ¹²	8.512	5.893	0.690	0.226	0.299	0.000	0.166	0.043	0.041	0.047	0.009	0.000	0.003	0.024	0.010	0.002	0.345
TPY ⁹	37.283	25.811	3.021	0.990	1.312	0.000	0.727	0.189	0.178	0.207	0.038	0.002	0.013	0.107	0.045	0.010	1.513

GREENHOUSE GAS CALCULATIONS¹³

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
G/HP-HR	441.00			
KG/MMBTU	53.06	0.0001	0.0010	
GWp ¹⁴	1.00	298.00	25.00	
PPH ¹⁵	1,804.74	0.0034	0.0340	1,806.61
TPY ⁹	7,904.77	0.0149	0.1490	7,912.93

NOTES

¹ No derate being requested

² For uncontrolled and controlled emissions, emission factors are taken from catalyst data. VOC emissions factors do not include HCHO. HCHO emissions are added to VOC calculated emissions; therefore, VOC emissions represent Total VOC.

³ Assumes natural gas sulfur content of 5 gr/100 scf

SO₂ EF (lb/MMBtu) = [(5 gr S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/32 lb/lbmol S) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S) / HHV (Btu/scf)] * (Btu/hp-hr * hp)

⁴ Emission Factors from AP-42 Table 3.2-2 (4SLB)

⁵ PM includes Condensable + Filterable; assume PM₁₀ = PM_{2.5}

⁶ Assumes a conservative natural gas H₂S content of 0.25 gr/100 scf and 98% conversion to SO₂.

H₂S EF (lb/MMBtu) = 2% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

⁷ Uncontrolled HAP emissions based on AP-42 Table 3.2-2 (4SLB)

⁸ NO_x, CO, and VOC lb/hr Emission Rate = EF * 1 lb/453.592 g * hp

PM & HAP lb/hr Emission Rate = EF * Fuel Consumption (Btu/hp-hr) * hp * 1 MMBtu/10⁶ Btu

⁹ tpy = lb/hr * hours of operation * 1 ton/2000 lb

¹⁰ Controlled HAP emissions (lb/hr) = Controlled individual HAPs (lb/hr) + Controlled HCHO (lb/hr)

¹¹ Catalysts are guaranteed by manufacturer to be at least as efficient as claimed.

¹² lb/hr (controlled) = lb/hr (uncontrolled) * (1 - Control Efficiency)

¹³ CO₂ emission factor from manufacturer's data. All other greenhouse gas emission factors are from 40 CFR 98 Subpart C

¹⁴ 40 CFR 98 Subpart A, Table A-1

¹⁵ CO₂, N₂O, and CH₄ lb/hr = EF (kg/MMBtu) * 2.20462 lb/kg * Fuel consumption (Btu/hp-hr) * Engine hp * 1 MMBtu/10⁶ Btu

CO₂e lb/hr = CO₂ lb/hr + (CH₄ lb/hr * GWP) + (N₂O lb/hr * GWP)

¹⁶ Non-HCHO HAP uncontrolled emission are based on AP-42 emission factors for individual HAPs. AP-42 emission factors are converted into catalyst vendor specific emission factors in g/hp-hr by normalizing speciated emission with respect to the non-HCHO v

Example calculation for individual HAP component:

Acrolein EF (g/hp-hr) = Acrolein AP-42 EF (lb/mmbtu) * VOC excl. HCHO vendor EF (g/hp-hr) / [VOC AP-42 EF (lb/mmbtu) - HCHO AP-42 EF (lb/mmbtu)]

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
C-2300, C-2400

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	C-2300, C-2400		
SOURCE DESCRIPTION:	WAUKESHA VHP-L7044GSI		
SOURCE DESCRIPTION:	45RB		
POWER ¹	1,680.00	HP	MFG. DATA - 100% LOAD (DM8606-02)
FUEL CONSUMPTION	7,919.00	BTU/HP-HR	MFG. DATA - 100% LOAD (DM8606-02)
FUEL TYPE	NG		MFG. DATA
FUEL HEATING VALUE	1,020.00	BTU/SCF	FUEL GAS ANALYSIS
OPERATING HOURS	8,760.00	HOURS	CONTINUOUS
FUEL USAGE	13,043.06	SCF/HR	CALCULATED
ANNUAL FUEL USAGE	114.26	MMSCF/YR	CALCULATED

UNCONTROLLED EMISSION CALCULATIONS

UNITS	NOx2	CO2	VOC2	SO23	PM4,5	H2S6	HCHO2	Acetaldehyde7	Acrolein7	Methanol7	Toluene7	Ethylbenzene7	Xylenes7	Benzene7	1,3-Butadiene7	PAH7	HAPs7
G/HP-HR	13.3000	11.5000	0.1600				0.0500										
GR/100 SCF				5.0000		0.2500											
LB/MMBTU				0.0140	0.0194	0.0000	0.0028	0.0026	0.0031	0.0006	0.0000	0.0002	0.0016	0.0007	0.0001		
PPH ⁸	49.2601	42.5933	0.7778	0.1949	0.2582	0.0001	0.1852	0.0371	0.0350	0.0407	0.0074	0.0003	0.0026	0.0210	0.0088	0.0019	0.3401
TPY ⁹	215.7594	186.5588	3.4067	0.8538	1.1310	0.0004	0.8111	0.1626	0.1533	0.1783	0.0325	0.0014	0.0114	0.0921	0.0386	0.0082	1.4895

CONTROLLED EMISSION CALCULATIONS

UNITS	NOx	CO	VOC	SO ₂	PM	H ₂ S	HCHO	Acetaldehyde	Acrolein	Methanol	Toluene	Ethylbenzene	Xylenes	Benzene	1,3-Butadiene	PAH7	HAPs ¹⁰
CONTROL EFFICIENCY ¹¹	92.5%	91.3%	71.4%				76.0%										
G/HP-HR ¹⁶	1.00	1.00	0.060				0.012										
PPH ¹²	3.7038	3.7038	0.2667	0.1949	0.2582	0.0001	0.0444	0.0371	0.0350	0.0407	0.0074	0.0003	0.0026	0.0210	0.0088	0.0019	0.1993
TPY ⁹	16.2225	16.2225	1.1680	0.8538	1.1310	0.0004	0.1947	0.1626	0.1533	0.1783	0.0325	0.0014	0.0114	0.0921	0.0386	0.0082	0.8731

GREENHOUSE GAS CALCULATIONS¹³

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
G/HP-HR				
KG/MMBTU	53.060	0.000	0.001	
GWP ¹⁴	1.000	298.000	25.000	
PPH ¹⁵	1,556.254	0.003	0.029	1,557.862
TPY ⁹	6,816.395	0.013	0.128	6,823.435

NOTES

¹ No derate being requested

² For uncontrolled and controlled emissions, emission factors are taken from catalyst data. VOC emissions factors do not include HCHO. HCHO emissions are added to VOC calculated emissions; therefore, VOC emissions represent Total VOC.

³ Assumes natural gas sulfur content of 5 gr/100 scf

SO₂ EF (lb/MMBtu) = [(5 gr S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/32 lb/lbmol S) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S) / HHV (Btu/scf)] * (Btu/hp-hr * hp)

⁴ Emission Factors from AP-42 Table 3.2-2 (4SLB)

⁵ PM includes Condensable + Filterable; assume PM₁₀ = PM_{2.5}

⁶ Assumes a conservative natural gas H₂S content of 0.25 gr/100 scf and 98% conversion to SO₂.

H₂S EF (lb/MMBtu) = 2% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

⁷ Uncontrolled HAP emissions based on AP-42 Table 3.2-2 (4SLB)

⁸ NO_x, CO, and VOC lb/hr Emission Rate = EF * 1 lb/453.592 g * hp

PM & HAP lb/hr Emission Rate = EF * Fuel Consumption (Btu/hp-hr) * hp * 1 MMBtu/10⁶ Btu

⁹ tpy = lb/hr * hours of operation * 1 ton/2000 lb

¹⁰ Controlled HAP emissions (lb/hr) = Controlled individual HAPs (lb/hr) + Controlled HCHO (lb/hr)

¹¹ Catalysts are guaranteed by manufacturer to be at least as efficient as claimed.

¹² lb/hr (controlled) = lb/hr (uncontrolled) * (1 - Control Efficiency)

¹³ CO₂ emission factor from manufacturer's data. All other greenhouse gas emission factors are from 40 CFR 98 Subpart C

¹⁴ 40 CFR 98 Subpart A, Table A-1

¹⁵ CO₂, N₂O, and CH₄ lb/hr = EF (kg/MMBtu) * 2.20462 lb/kg * Fuel consumption (Btu/hp-hr) * Engine hp * 1 MMBtu/10⁶ Btu

CO₂e lb/hr = CO₂ lb/hr + (CH₄ lb/hr * GWP) + (N₂O lb/hr * GWP)

¹⁶ Non-HCHO HAP uncontrolled emission are based on AP-42 emission factors for individual HAPs. AP-42 emission factors are converted into catalyst vendor specific emission factors in g/hp-hr by normalizing speciated emission with respect to the non-HCHO VOC factor.

Example calculation for individual HAP component:

Acrolein EF (g/hp-hr) = Acrolein AP-42 EF (lb/mmbtu) * VOC excl. HCHO vendor EF (g/hp-hr) / [VOC AP-42 EF (lb/mmbtu) - HCHO AP-42 EF (lb/mmbtu)]

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	C-1110, C-1180		
SOURCE DESCRIPTION	EIGHT (8) CAT G3606 4SLB INLET GAS COMPRESSOR ENGINE WITH OXIDATION CATALYST		
SOURCE DESCRIPTION	4SLB		
POWER ¹	1,875.00	HP	MFG. DATA - 100% LOAD (DM8606-02)
FUEL CONSUMPTION	7,560.00	BTU/HP-HR	MFG. DATA - 100% LOAD (DM8606-02)
FUEL TYPE	NG		MFG. DATA
FUEL HEATING VALUE	1,020.00	BTU/SCF	FUEL GAS ANALYSIS
OPERATING HOURS	8,760.00	HOURS	CONTINUOUS
FUEL USAGE	13,897.06	SCF/HR	CALCULATED
ANNUAL FUEL USAGE	121.74	MMSCF/YR	CALCULATED

UNCONTROLLED EMISSION CALCULATIONS

UNITS	NO _x ²	CO ²	VOC ²	SO ₂ ³	PM ^{4,5}	H ₂ S ⁶	HCHO ⁷	Acetaldehyde ⁷	Acrolein ⁷	Methanol ⁷	Toluene ⁷	Ethylbenzene ⁷	Xylenes ⁷	Benzene ⁷	n-Hexane ⁷	1,3-Butadiene ⁷	2,2,4-TMP ⁷	HAPs ⁷
G/HP-HR	0.5000	2.2000	0.2900				0.2000											
GR/100 SCF				5.0000		0.2500												
LB/MMBTU				0.0140	0.0100	0.0000		0.0084	0.0051	0.0025	0.0004	0.0000	0.0002	0.0004	0.0011	0.0003	0.0003	
PPH ⁸	2.0668	9.0941	2.0255	0.2077	0.1416	0.0001	0.8267	0.1185	0.0729	0.0354	0.0058	0.0006	0.0026	0.0062	0.0157	0.0038	0.0035	1.0918
TPY ⁹	9.0527	39.8321	8.8717	0.9097	0.6201	0.0004	3.6211	0.5190	0.3191	0.1552	0.0253	0.0025	0.0114	0.0273	0.0689	0.0166	0.0155	4.7820

CONTROLLED EMISSION CALCULATIONS

UNITS	NO _x	CO	VOC	SO ₂	PM	H ₂ S	HCHO	Acetaldehyde	Acrolein	Methanol	Toluene	Ethylbenzene	Xylenes	Benzene	n-Hexane	1,3-Butadiene	2,2,4-TMP	HAPs ¹⁰
CONTROL EFFICIENCY ¹¹		90.0%	50.0%				85.0%											
G/HP-HR ¹⁶	0.50	0.22	0.145				0.030	0.017826471	0.010960294	0.00533088	0.00087	8.46544E-05	0.000392	0.0009382	0.00236691	0.000569338	0.00053309	
PPH ¹²	2.0668	0.9094	0.7234	0.2077	0.1416	0.0001	0.1240	0.0737	0.0453	0.0220	0.0036	0.0003	0.0016	0.0039	0.0098	0.0024	0.0022	0.2888
TPY ⁹	9.0527	3.9832	3.1685	0.9097	0.6201	0.0004	0.5432	0.3228	0.1984	0.0965	0.0158	0.0015	0.0071	0.0170	0.0429	0.0103	0.0097	1.2651

GREENHOUSE GAS CALCULATIONS¹³

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
G/HP-HR				
KG/MMBTU	53.100	0.000	0.001	
GWP ¹⁴	1.000	298.000	25.000	
PPH ¹⁵	1,659.401	0.003	0.031	1,661.113
TPY ⁹	7,268.176	0.014	0.137	7,275.677

NOTES

¹ No derate being requested

² For uncontrolled and controlled emissions, emission factors are taken from catalyst data. VOC emissions factors do not include HCHO. HCHO emissions are added to VOC calculated emissions; therefore, VOC emissions represent Total VOC.

³ Assumes natural gas sulfur content of 5 gr/100 scf

SO₂ EF (lb/MMBtu) = [(5 gr S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/32 lb/lbmol S) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S) / HHV (Btu/scf)] * (Btu/hp-hr * hp)

⁴ Emission Factors from AP-42 Table 3.2-2 (4SLB)

⁵ PM includes Condensable + Filterable; assume PM₁₀ = PM_{2.5}

⁶ Assumes a conservative natural gas H₂S content of 0.25 gr/100 scf and 98% conversion to SO₂.

H₂S EF (lb/MMBtu) = 2% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr) / HHV (Btu/scf)] * 10⁶ Btu/MMBtu

⁷ Uncontrolled HAP emissions based on AP-42 Table 3.2-2 (4SLB)

⁸ NO_x, CO, and VOC lb/hr Emission Rate = EF * 1 lb/453.592 g * hp

PM & HAP lb/hr Emission Rate = EF * Fuel Consumption (Btu/hp-hr) * hp * 1 MMBtu/10⁶ Btu

⁹ tpy = lb/hr * hours of operation * 1 ton/2000 lb

¹⁰ Controlled HAP emissions (lb/hr) = Controlled individual HAPs (lb/hr) + Controlled HCHO (lb/hr)

¹¹ Catalysts are guaranteed by manufacturer to be at least as efficient as claimed.

¹² lb/hr (controlled) = lb/hr (uncontrolled) * (1 - Control Efficiency)

¹³ CO₂ emission factor from manufacturer's data. All other greenhouse gas emission factors are from 40 CFR 98 Subpart C

¹⁴ 40 CFR 98 Subpart A, Table A-1

¹⁵ CO₂, N₂O, and CH₄ lb/hr = EF (kg/MMBtu) * 2.20462 lb/kg * Fuel consumption (Btu/hp-hr) * Engine hp * 1 MMBtu/10⁶ Btu

CO₂e lb/hr = CO₂ lb/hr + (CH₄ lb/hr * GWP) + (N₂O lb/hr * GWP)

¹⁶ Non-HCHO HAP uncontrolled emission are based on AP-42 emission factors for individual HAPs. AP-42 emission factors are converted into catalyst vendor specific emission factors in g/hp-hr by normalizing speciated emission with respect to the non-HCHO VOC factor. Example calculation for individual HAP component:

Acrolein EF (g/hp-hr) = Acrolein AP-42 EF (lb/mmbtu) * VOC excl. HCHO vendor EF (g/hp-hr) / [VOC AP-42 EF (lb/mmbtu) - HCHO AP-42 EF (lb/mmbtu)]

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	WL1-FL		CONTROLS DEHY 805/1505 FLASH TANK VAPORS AND FLARE PILOT EMISSIONS
SOURCE DESCRIPTION	WL1 PROCESS FLARE		CONTROLS TANKS TK601-TK603, TK2301-TK2304; DELETED DEHY 803, 804 VAPORS

FUEL AND GAS STREAM DATA

ITEM	VALUE	UNITS	COMMENTS
FLARE PILOT + PURGE	213.00	SCF/HR	DESIGN
FLARE PILOT + PURGE	1.87	MMSCF/YR	DESIGN
FLARE PILOT + PURGE	1,020.00	BTU/SCF	FUEL GAS
FLARE PILOT + PURGE	0.2173	MMBTU/HR	CALCULATED
FLARE DRE	98%	%	

CONDENSATE TANK DATA

ITEM	VALUE	UNITS	COMMENTS
CONDENSATE TANK FLASH (MAX)	0.4912	MMSCFD	FROM PROMAX SIMULATION
CONDENSATE TANK FLASH	20,466.4564	SCF/HR	CALCULATED
CONDENSATE TANK FLASH	8.9643	MMSCF/YR	CALCULATED (ANNUAL BASED ON 5% VRU DOWNTIME)
CONDENSATE TANK FLASH	2,785.5683	BTU/SCF	FROM PROMAX SIMULATION

TRUCK LOADING DATA

ITEM	VALUE	UNITS	COMMENTS
TRUCK LOADING (MAX)	0.0120	MMSCFD	FROM PROMAX SIMULATION
TRUCK LOADING (MAX)	500.8090	SCF/HR	CALCULATED
TRUCK LOADING (ANNUAL)	0.0040	MMSCFD	PROMAX
TRUCK LOADING (ANNUAL)	1.4529	MMSCF/YR	CALCULATED
TRUCK LOADING	2,833.2980	BTU/SCF	FROM PROMAX SIMULATION

DEHYDRATION UNIT VAPORS

ITEM	VALUE	UNITS	COMMENTS
DEHY-803 FLASH TANK	0.00	SCF/HR	GLYCALC
DEHY-804 FLASH TANK	0.00	SCF/HR	GLYCALC
DEHY-805 FLASH TANK	6,640.00	SCF/HR	GLYCALC
DEHY-1505 FLASH TANK	6,610.00	SCF/HR	GLYCALC
TOTAL DEHY FLASH TANK *	13,250.0000	SCF/HR	CALCULATED
TOTAL DEHY FLASH TANK *	4.3493	MMSCF/YR	CALCULATED
DEHY FLASH TANK	1,215.0214	BTU/SCF	GLYCALC/CALCULATED

* TOTAL HOURLY DEHY FLASH TANK FLOWRATE ASSUMES ALL DEHYDRATION UNIT FLASH TANK EMISSIONS ARE ROUTED TO FLARE. TOTAL ANNUAL DEHY FLASH TANK FLOWRATE IS CALCULATED BASED ON 5% ANNUAL VRU DOWNTIME. THEREFORE, AN ADDITIONAL 50% REDUCTION IN FLASH TANK GASES TO FLARE IS ACCOUNTED FOR. DURING VRU DOWNTIME, DEHYDRATION UNIT FLASH TANK VAPROS ARE ASSUMED ROUTED TO THE REBOILER FUEL LINE FOR APPROXIMATELY HALF OF THE VRU DOWNTIME, AND TO FLARE FOR HALF OF THE VRU DOWNTIME.

FLARE OPERTING DATA

ITEM	VALUE	UNITS	COMMENTS
TOTAL FLARE FLOWRATE (MAX HOURLY)	33,929.4564	SCF/HR	CALCULATED
TOTAL FLARE FLOWRATE (MAX HOURLY)	0.0339	MMSCF/HR	CALCULATED
TOTAL FLARE FLOWRATE (ANNUAL)	15.1795	MMSCF/YR	
TOTAL FLARE HEAT CONTENT (MAX)	2,785.5683	BTU/SCF1	
TOTAL FLARE HEAT FLOW (MAX)	94.5128	MMBTU/HR	

EMISSIONS

PILOT GAS + TANKS VAPORS

UNITS	NOx	CO	VOC ³	H ₂ S ³	SO ₂ ⁴	HAPs	COMMENTS
EMISSION FACTORS							
LB/MMBTU ²	0.1380	0.2755					TNRCC RG-109
GR/100 SCF				0.2500	5.00		ASSUMED FOR FUEL GAS
UN-CONTROLLED EMISSIONS							
PPH			348.5152	0.0087		6.8088	UNCONTROLLED TANK VAPORS
TPY			688.5898	0.0133		17.2541	UNCONTROLLED TANK VAPORS
PPH			54.9622	0.0019		2.2912	UNCONTROLLED TRUCK LOADING (WL1+WLCS)
TPY			82.4226	0.0023		3.4096	UNCONTROLLED TRUCK LOADING (WL1+WLCS)
PPH			223.0851	0.0250		11.3488	UNCONTROLLED DEHY FLASH TANK VAPORS
TPY			36.4186	0.0040		1.8301	UNCONTROLLED DEHY FLASH TANK VAPORS 9
PPH	0.0300	0.0599		0.0001	0.0030		PILOT EMISSIONS
TPY	0.1313	0.2622		0.0003	0.0133		PILOT EMISSIONS
PPH	7.8675	15.7065	6.9703	0.0002	0.0161	0.1362	POST-CONTROL TANK EMISSIONS
TPY ⁵	1.7230	3.4397	0.6886	0.0000	0.0012	0.0173	POST-CONTROL TANK EMISSIONS
PPH	0.1958	0.3909	1.0992	0.0000	0.0035	0.0458	POST-CONTROL TRUCK LOADING EMISSIONS (WL1+WLCS)
TPY ⁵	0.2840	0.5671	1.6485	0.0000	0.0043	0.0034	POST-CONTROL TRUCK LOADING EMISSIONS (WL1+WLCS)
PPH	2.2217	4.4353	4.4617	0.0005	0.0461	0.2270	POST-CONTROL FLASH TANK EMISSIONS
TPY ⁹	0.3646	0.7279	0.7284	0.0001	0.0074	0.0366	POST-CONTROL FLASH TANK EMISSIONS

CONTROLLED EMISSIONS

UNITS	NOx	CO	VOC ³	H ₂ S ³	SO ₂ ⁴	HAPs	COMMENTS
PPH	10.3149	20.5925	12.5313	0.0008	0.0688	0.4090	PILOT GAS + TANK VAPORS + LOADING + DEHY FLASH GAS
TPY	2.5030	4.9969	3.0654	0.0005	0.0263	0.0573	

GREENHOUSE GAS EMISSIONS

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU	53.06	0.0001	0.0010	
GWP ⁷	1.00	298.0000	25.0000	
EMISSION TOTALS				
PPH ⁸	11,055.8388	0.0208	0.2084	11,067.2572
TPY ⁵	2,421.2287	0.0046	0.0456	2,423.7293

¹ Based on maximum heating value from ProMax simulation for WL1 or WLCS.

² To be conservative the TNRCC RG-109 emission factors for high-Btu flares were used.

³ Assumed 98% combustion for H₂S, HAP and VOC.

⁴ Assumed 100% conversion H₂S to SO₂, SO₂=(64/34)*uncontrolled H₂S.

⁵ ton/yr emissions based on assumed 5% annual VRU downtime. MMScf/yr * 5% = Annual Flowrate

⁶ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁷ 40 CFR 98 Subpart A, Table A-1

⁸ CO₂, N₂O and CH₄ lb/hr = EF (kg/MMBtu) * 2.20462lb/kg * Fuel consumption (MMBtu/hr)

CO₂e lb/hr = CO₂ lb/hr + (CH₄ lb/hr * GWP) + (N₂O lb/hr * GWP)

⁹ Uncontrolled Annual Dehy Flash Tank Vapors routed to flare are based on 5% of the annual uncontrolled emissions rates.

Emissions from DEHY-803, DEHY-804, and DEHY-805 are further reduced by routing flash tank emissions to reboiler fuel line at least 50% of the time.

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	WL1-FL BLOWDOWNS		FLARE - COMPRESSOR BLOWDOWNS
SOURCE DESCRIPTION	WL1 PROCESS FLARE		

BLOWDOWN DATA; FLARE EMISSIONS - RESIDUE COMPRESSOR BLOWDOWNS - NOX AND CO¹

ITEM	VALUE	UNITS	COMMENTS
TOTAL NUMBER OF EVENTS	416.0000	BLOWDOWNS/YEAR	
TOTAL NUMBER OF COMPRESSORS	8.0000	COMPRESSORS	
BLOWDOWN VOLUME PER COMPRESSOR	6,500.0000	SCF/BLOWDOWN	
ESTIMATED EVENT DURATION ²	1.0000	HR/EVENT	
MAXIMUM FLOWRATE	0.0520	MMSCF/EVENT	
ANNUAL EVENT HOURS	416.0000	HRS/YR	
GAS STREAM HEAT VALUE	1,278.0000	BTU/SCF	
MAXIMUM HOURLY FLOWRATE ³	0.0520	MMSCF/HR	
ANNUAL FLOWRATE ⁴	2.7040	MMSCF/YR	
HOURLY GAS STREAM HEAT INPUT ⁵	66.4560	MMBTU/HR	
ANNUAL GAS STREAM HEAT INPUT ⁶	3,455.7120	MMBTU/YR	

CONTROLLED EMISSIONS

POLLUTANT	FLARE EMISSION FACTORS ⁷ LB/MMBTU	FLARE EMISSIONS ^{8,9}	
		PPH	TPY
NO _x	0.1380	9.1709	0.2384
CO	0.2755	18.3086	0.4760

CONTROLLED EMISSIONS

POLLUTANT	COMPOSITION ^{5A} MOLE%	MOL. WT. LB/LB-MOL	DRE ^{6A} %	GAS VENTED TO FLARE ^{7A, 8A}		CONTROLLED EMISSIONS ^{9A,10A}	
				PPH	TPY	PPH	TPY
PROPANE	5.1180	44.00	98%	308.5635	8.0227	6.1713	0.1605
I-BUTANE	0.7310	58.00	98%	58.0948	1.5105	1.1619	0.0302
N-BUTANE	1.6230	58.00	98%	128.9847	3.3536	2.5797	0.0671
I-PENTANE	0.3830	72.00	98%	37.7853	0.9824	0.7557	0.0196
N-PENTANE	0.3980	72.00	98%	39.2651	1.0209	0.7853	0.0204
HEXANES PLUS	0.7670	86.00	98%	90.3827	2.3500	1.8077	0.0470
H2S	0.0004	34.08	98%	0.0187	4.86E-04	3.74E-04	0.0000
VOC ¹¹	9.02			663.0760	17.2400	13.2615	0.3448
SO ₂		64.06				0.0344	8.95E-04

GREENHOUSE GAS EMISSIONS; FLARE EMISSIONS - COMPRESSOR EMERGENCY BLOWDOWNS

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ^{1B}	53.06	0.0001	0.0010	
GWP ^{2B}	1.00	298.0000	25.0000	
EMISSION TOTALS				
TPY ^{3B}	202.1196	0.0004	0.0038	202.3284

NOTES

- ¹ Blowdown of compressors is routed to WL1- FL. Maximum of five blowdowns per event @ 6,500 scf/blowdown
- ² For events lasting less than 1 hour, it is assumed that no more than 1 event occurs per hour.
- ³ Maximum hourly flowrate is not steady-state, but represents the maximum hourly flowrate at the time that a blowdown is routed to the flare.
Hourly Flowrate (MMscf/hr) = Event Flowrate (MMscf/event) / Event Duration (hrs/event)

Hourly Flowrate (MMscf/hr)	$\frac{0.052 \text{ MMscf}}{\text{event}}$	$\frac{\text{event}}{1 \text{ hr}}$	=	$\frac{0.052 \text{ MMscf}}{\text{hr}}$
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- ⁴ Annual Flowrate (MMscf/yr) = Event Flowrate (MMscf/event) x Total Number of Event (events/yr)

Annual Flowrate (MMscf/yr)	$\frac{0.052 \text{ MMscf}}{\text{event}}$	$\frac{416 \text{ events}}{\text{yr}}$	=	$\frac{2.7 \text{ MMscf}}{\text{yr}}$
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- ⁵ Hourly Gas Stream Heat Input (MMBtu/hr) = Hourly Flowrate (MMscf/hr) x Gas Stream Heat Value (Btu/scf)

Hourly Gas Stream Heat Input (MMBtu/hr)	$\frac{0.052 \text{ MMscf}}{\text{hr}}$	$\frac{1,278 \text{ Btu}}{\text{scf}}$	=	$\frac{66 \text{ MMBtu}}{\text{hr}}$
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- ⁶ Annual Gas Stream Heat Input (MMBtu/yr) = Annual Flowrate (MMscf/yr) x Gas Stream Heat Value (Btu/scf)

Annual Gas Stream Heat Input (MMBtu/yr)	$\frac{2.7 \text{ MMscf}}{\text{yr}}$	$\frac{1,278 \text{ Btu}}{\text{scf}}$	=	$\frac{3,456 \text{ MMBtu}}{\text{yr}}$
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- ⁷ From TCEQ "Air Permit Guidance For Chemical Sources, Flare And Vapor Oxidizers" (Draft Oct. 2000) Table 4, emission factors for industrial flares combusting high-Btu vapors.

- ⁸ Maximum Potential Hourly Emission Rate (lb/hr) = Flare Emission Factor (lb/MMBtu) x Hourly Gas Stream Heat Input (MMBtu/hr)

Example NO _x Hourly Emission Rate (lb/hr)	$\frac{0.138 \text{ lb}}{\text{MMBtu}}$	$\frac{66 \text{ MMBtu}}{\text{hr}}$	=	$\frac{9.17 \text{ lb}}{\text{hr}}$
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- ⁹ Maximum Potential Annual Emission Rate (tpy) = Flare Emission Factor (lb/MMBtu) x Annual Gas Stream Heat Input (MMBtu/yr) x (1 ton / 2,000 lb)

Example NO _x Annual Emission Rate (tpy)	$\frac{0.138 \text{ lb}}{\text{MMBtu}}$	$\frac{3,456 \text{ MMBtu}}{\text{yr}}$	$\frac{1 \text{ ton}}{2,000 \text{ lb}}$	=	$\frac{0.24 \text{ ton}}{\text{yr}}$
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- ^{5A} Composition of the gas stream is obtained from the Dehy Upstream Gas Analysis (05/28/2020). H₂S is conservatively assumed to be 4 ppm.

- ^{6A} Per TCEQ "Air Permit Guidance For Chemical Sources, Flare And Vapor Oxidizers" (Draft Oct. 2000), 98% of the H₂S is assumed to be oxidized to SO₂ while the remaining 2% is emitted as H₂S.

- ^{7A} Gas Vented to Flare (lb/hr) = Hourly Flowrate (MMscf/hr) x Mole Percent (%) / 100 x MW (lb/lb-mole) / 379.5 (scf/lb-mole) x (10⁶ scf/1 MMscf)

Example Propane Hourly Gas Vented to Flare (lb/hr)	$\frac{5.12 \%}{100}$	$\frac{44 \text{ lb}}{\text{lb-mole}}$	$\frac{10^6 \text{ scf}}{1 \text{ MMscf}}$	=	$\frac{308.56 \text{ lb}}{\text{hr}}$
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- ^{8A} Gas Vented to Flare (tpy) = Annual Flowrate (MMscf/yr) x Mole Percent (%) / 100 x MW (lb/lb-mole) / 379.5 (scf/lb-mole) x (10⁶ scf/1MMscf) x (1ton/ 2,000 lb)

Example Propane Annual Gas Vented to Flare (tpy)	$\frac{2.7 \text{ MMscf}}{\text{yr}}$	$\frac{5.12 \%}{100}$	$\frac{44 \text{ lb}}{\text{lb-mole}}$	$\frac{10^6 \text{ scf}}{1 \text{ MMscf}}$	$\frac{1 \text{ ton}}{2,000 \text{ lb}}$	=	$\frac{8.02 \text{ ton}}{\text{yr}}$
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- ^{9A} Controlled Maximum Potential Hourly Emission Rate (lb/hr) = Gas Vented to Flare (lb/hr) x (1 - DRE)

Controlled Maximum Potential Annual Emission Rate (tpy) = Gas Vented to Flare (tpy) x (1 - DRE)

Example Controlled Propane Hourly Emission Rate (lb/hr)	$\frac{308.56 \text{ lb}}{\text{hr}}$	$(1 - 0.98)$	=	$\frac{6.17 \text{ lb}}{\text{hr}}$
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- ^{10A} Controlled flare SO₂ Emission Rate (lb/hr) = [H₂S Inlet (lb/hr) - H₂S Outlet (lb/hr)] x SO₂ MW (lb/lb-mol) / H₂S MW (lb/lb-mol)

Controlled SO ₂ Hourh [0.02 - 0.00] lb	64.06 lb/lb-mol	=	0.03 lb
hr	34.08 lb/lb-mol		hr

^{11A} Total VOC taken as the sum of NMNEHC.

^{1B} Greenhouse gas emission factors are from 40 CFR 98 Subpart C.

^{2B} 40 CFR 98 Subpart A, Table A-1.

^{3B} GHG Emissions (tpy) = Emission Factor (kg/MMBtu) x Fuel Consumption (MMBtu/yr) x 2.20426 (lb/kg) / 2,000 (lb/ton)

$$\text{CO}_2\text{e (tpy)} = \text{CO}_2 \text{ tpy} + (\text{CH}_4 \text{ tpy} \times \text{CH}_4 \text{ GWP}) + (\text{N}_2\text{O tpy} \times \text{N}_2\text{O GWP})$$

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
WL2-FL

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	WL2-FL		
FLARE DATA			
FLARE PILOT	65.00	SCF/HR	DESIGN
FLARE PILOT	0.5694	MMSCF/YR	DESIGN
FLARE PILOT	0.066	MMBTU/HR	
OPERATING HOURS	8,760.00	SCF/HR	GLYCALC
	1,020.00	BTU/SCF1	RESIDUE GAS, HHV
ETHYLENE GLYCOL DEHYDRATOR DATA			
ETHYLENE GLYCOL DEHYDRATOR OPERATION	0.000	HRS/YR	
ETHYLENE GLYCOL DEHYDRATOR FLASH TANK FLOW	0.000	SCF/HR	
ETHYLENE GLYCOL DEHYDRATOR REGEN./FLASH FLOW	0.000	SCF/HR	
ETHYLENE GLYCOL DEHYDRATOR VAPOR HEAT CONTENT	0.000	BTU/SCF	
	0.000	MMSCF/HR	
	0.000	MMBTU/HR	
	0.000	MMSCF/YR	
COMBINED FLARE, ETHYLENE GLYCOL DEHYDRATOR DATA			
FLARE PILOT & E.G. DEHY VAPORS	65.000	SCF/HR	
FLARE PILOT & E.G. DEHY VAPORS	0.569	MMSCF/YR	

UN-CONTROLLED EMISSIONS

PILOT GAS + ETHYLENE GLYCOL DEHYDRATOR REGEN./FLASH

UNITS	NO _x ²	CO ²	VOC ²	H ₂ S ³	SO ₂ ³	HAPs	COMMENTS
LB/MMBTU ²	0.1380	0.2755					EMISSION FACTORS; TNRCC RG-109
GR/100 SCF				0.2500	5.0000		Assumed for Fuel Gas
EMISSIONS							
PPH			0.0000	0.0000		0.0000	FROM ETHYLENE GLYCOL DEHYDRATOR
PPH, UN-CONTROLLED	0.0091	0.0183		0.0000	0.0009		FROM FLARE PILOT
TPY, UN-CONTROLLED	0.0401	0.0800		0.0001	0.0041		FROM FLARE PILOT
PPH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	FROM ETHYLENE GLYCOL DEHYDRATOR
TPY	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	FROM ETHYLENE GLYCOL DEHYDRATOR

CONTROLLED EMISSIONS SUMMARY

PILOT GAS + ETHYLENE GLYCOL DEHYDRATOR REGEN./FLASH

UNITS	NO _x ²	CO ²	VOC ²	H ₂ S ³	SO ₂ ³	HAPs	COMMENTS
PPH	0.0091	0.0183	0.0000	0.0000	0.0009	0.0000	
TPY	0.0401	0.0800	0.0000	0.0001	0.0041	0.0000	

GREENHOUSE GAS EMISSIONS⁶

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e	COMMENTS
kg/MMBtu	53.0600	0.0001	0.0010		
GWP ⁷	1.0000	298.0000	25.0000		
EMISSIONS					
PPH ⁸	7.7556	0.0000	0.0001	7.7636	FROM FLARE CONTRIBUTION
PPH ⁸	0.0000	0.0000	0.0000	0.0000	FROM ETHYLENE GLYCOL DEHYDRATOR (DELETED SOURCE)
PPH	7.7556	0.0000	0.0001	7.7636	TOTAL FROM FLARXE PILOT AND EG DEHYDRATOR
TPY ⁵	33.9695	0.0001	0.0006	34.0045	FROM FLARE CONTRIBUTION
TPY ⁵	0.0000	0.0000	0.0000	0.0000	FROM ETHYLENE GLYCOL DEHYDRATOR (DELETED SOURCE)
TPY ⁵	33.9695	0.0001	0.0006	34.0045	TOTAL FROM FLARXE PILOT AND EG DEHYDRATOR

NOTES

¹ BASED ON PIPELINE QUALITY GAS

² TO BE CONSERVATIVE THE TNRCC RG-109 EMISSION FACTORS FOR HIGH-BTU FLARES WERE USED.

³ ASSUMED 98% COMBUSTION FOR H₂S, HAP, AND VOC. PILOT H₂S EMISSIONS CALCULATED BASED ON 0.25 GR H₂S/100 SCF.

⁴ ASSUMED 100% CONVERSION OF COMBUSTED H₂S TO SO₂, SO₂ (LB/HR)= 98% * (64 LB/LBMOL SO₂/34 LB/LBMOL H₂S)*UNCONTROLLED H₂S (LB/HR).

PILOT SO₂ EMISSIONS BASED ON ASSUMPTION OF 5 GR S/100 SCF.

⁵ TON/YR = LB/HR * HOURS OF OPERATION (HR/YR) * 1TON/2000LB

⁶ GREENHOUSE GAS EMISSION FACTORS ARE FROM 40 CFR 98 SUBPART C

⁷ 40 CFR 98 SUBPART A, TABLE A-1

⁸ CO₂, N₂O AND CH₄ LB/HR = EF (KG/MMBTU) * 2.20462LB/KG * FUEL CONSUMPTION (MMBTU/HR)

CO₂E LB/HR = CO₂ LB/HR + (CH₄ LB/HR * GWP) + (N₂O LB/HR * GWP)

FLARE EMISSIONS; COMPRESSOR BLOWDOWNS¹

ITEM	VALUE	UNITS	COMMENTS
EMISSION UNIT:	WL2-FL BLOWDOWN		FLARE - COMPRESSOR DOWNTIME FLARING
SOURCE DESCRIPTION	FLARE; COMPRESSOR DOWNTIME FLARING		
BLOWDOWN DATA			
TOTAL NUMBER OF EVENTS	52.00	EVENTS/YEAR	
ESTIMATED EVENT DURATION ²	1.00	HR/EVENT	
ESTIMATED EVENT DURATION ²	0.625	MMSCF/EVENT	COMPRESSOR DOWNTIME VOLUME
MOLAR VOLUME	379.500	SCF/MOLE	
ANNUAL BLOWDOWN DATA			
ANNUAL EVENT HOURS	52.00	HRS/YR	
GAS STREAM HEAT VALUE	1,278.00	BTU/SCF	RESIDUE GAS ANALYSIS
MAXIMUM HOURLY FLOWRATE ³	0.625	MMSCF/HR	
ANNUAL FLOWRATE ⁴	32.50	MMSCF/YR	
HOURLY GAS STREAM HEAT INPUT ⁵	798.75	MMBTU/HR	
ANNUAL GAS STREAM HEAT INPUT ⁶	41,535.00	MMBTU/YR	

FLARE EMISSIONS

POLLUTANT	FLARE EMISSION FACTORS ⁷	FLARE EMISSIONS ^{8,9}	
	LBS/MMBTU	PPH	TPY
NO _x	0.138	110.228	2.866
CO	0.2755	220.056	5.721

POLLUTANT	COMPOSITION ^{5A}	MOL. WT.	DRE ^{6A}	GAS VENTED TO FLARE ^{7A,8A}		CONTROLLED EMISSIONS ^{9A,10A}	
	MOLE%	LB/LB-MOL	%	PPH	TPY	PPH	TPY
PROPANE	5.118	44.000	98%	3,708.6957	96.4261	74.1739	1.9285
I-BUTANE	0.731	58.000	98%	698.2543	18.1546	13.9651	0.3631
N-BUTANE	1.623	58.000	98%	1,550.2964	40.3077	31.0059	0.8062
I-PENTANE	0.383	72.000	98%	454.1502	11.8079	9.0830	0.2362
N-PENTANE	0.398	72.000	98%	471.9368	12.2704	9.4387	0.2454
HEXANES PLUS	0.767	86.000	98%	1,086.3307	28.2446	21.7266	0.5649
H2S	0.0004	34.080	98%	0.2245	5.84E-03	4.49E-03	0.0001
EMISSION TOTALS							
VOC ^{11A}	9.0200			7,969.6640	207.2113	159.3933	4.1442
SO ₂		64.06				0.4136	0.0108

GREENHOUSE GAS EMISSIONS

UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ^{1B}	53.06	0.0001	0.0010	
GWP ^{2B}	1.00	298.00	25.00	
EMISSION TOTALS				
TPY ^{3B}	2,429.3227	0.0046	0.0458	2,431.8317

FLARE PARAMETERS

UNITS	VALUE	COMMENTS
G/MOL	21.23	FUEL GAS MOLECULAR WEIGHT; MOL. WT. OF ACID GAS/ASSIST GAS
CAL/SEC	55,912,500	HEAT RELEASE (q); MMBTU/HR * 106 * 252 CAL/BTU ÷ 3600 SEC/HR
	43,546,617	q _n ; qn = q(1-0.048(MW) ^{1/2})
M	6.60	EFFECTIVE STACK DIAMETER (D); D = (10-6qn) ^{1/2}

¹ Emergency blowdown of residue gas header is routed to flare.
² For events lasting less than 1 hour, it is assumed that no more than 1 event occurs per hour.
³ Maximum hourly flowrate is not steady-state, but represents the maximum hourly flowrate at the time that a blowdown is routed to the flare.
Hourly Flowrate (MMscf/hr) = Event Flowrate (MMscf/event) / Event Duration (hrs/event)

Hourly Flowrate (MMscf/hr)	0.625 MMscf	event	=	0.625 MMscf
	event	1 hr		hr

⁴ Annual Flowrate (MMscf/yr) = Event Flowrate (MMscf/event) x Total Number of Event (events/yr)

Annual Flowrate (MMscf/yr)	0.625 MMscf	52 events	=	32.5 MMscf
	event	yr		yr

⁵ Hourly Gas Stream Heat Input (MMBtu/hr) = Hourly Flowrate (MMscf/hr) x Gas Stream Heat Value (Btu/scf)

Hourly Gas Stream Heat	0.625 MMscf	1,278 Btu		799 MMBtu
	hr	scf		hr

⁶ Annual Gas Stream Heat Input (MMBtu/yr) = Annual Flowrate (MMscf/yr) x Gas Stream Heat Value (Btu/scf)

Annual Gas Stream Heat	32.5 MMscf	1,278 Btu	=	41,535 MMBtu
	yr	scf		yr

⁷ From TCEQ "Air Permit Guidance For Chemical Sources, Flare And Vapor Oxidizers" (Draft Oct. 2000) Table 4, emission factors for industrial flares combusting high-Btu vapors.

⁸ Maximum Potential Hourly Emission Rate (lb/hr) = Flare Emission Factor (lb/MMBtu) x Hourly Gas Stream Heat Input (MMBtu/hr)

Example NO _x Hourly Emi	0.138 lb	799 MMBtu	=	110.23 lb
	MMBtu	hr		hr

⁹ Maximum Potential Annual Emission Rate (tpy) = Flare Emission Factor (lb/MMBtu) x Annual Gas Stream Heat Input (MMBtu/yr) x (1 ton / 2,000 lb)

Example NO _x Annual Emi	0.138 lb	41,535 MMBtu	1 ton	=	2.87 ton
	MMBtu	yr	2,000 lb		yr

^{5A} Composition of the gas stream is obtained from the Dehy Upstream Gas Analysis (05/28/2020). H₂S is conservatively assumed to be 4 ppm.
^{6A} Per TCEQ "Air Permit Guidance For Chemical Sources, Flare And Vapor Oxidizers" (Draft Oct. 2000), 98% of the H₂S is assumed to be oxidized to SO₂ while the remaining 2% is emitted as H₂S.

^{7A} Gas Vented to Flare (lb/hr) = Hourly Flowrate (MMscf/hr) x Mole Percent (%) / 100 x MW (lb/lb-mole) / 379.5 (scf/lb-mole) x (10⁶ scf/1 MMscf)

Example Propane Hourly	0.625 MMscf	5.12 %	44 lb	lb-mole	10 ⁶ scf	=	3,708.70 lb
	hr	100	lb-mole	379.5 scf	1 MMscf		hr

^{8A} Gas Vented to Flare (tpy) = Annual Flowrate (MMscf/yr) x Mole Percent (%) / 100 x MW (lb/lb-mole) / 379.5 (scf/lb-mole) x (10⁶ scf/1MMscf) x (1ton/ 2,000 lb)

Example Propane Annua	32.5 MMscf	5.12 %	44 lb	lb-mole	10 ⁶ scf	1 ton	=	96.43 ton
	yr	100	lb-mole	379.5 scf	1 MMscf	2,000 lb		yr

^{9A} Controlled Maximum Potential Hourly Emission Rate (lb/hr) = Gas Vented to Flare (lb/hr) x (1 - DRE)
Controlled Maximum Potential Annual Emission Rate (tpy) = Gas Vented to Flare (tpy) x (1 - DRE)

Example Controlled	3,708.70 lb	(1 - 0.98)	=	74.17 lb
	hr			hr

^{10A} Controlled flare SO₂ Emission Rate (lb/hr) = [H₂S Inlet (lb/hr) - H₂S Outlet (lb/hr)] x SO₂ MW (lb/lb-mol) / H₂S MW (lb/lb-mol)

Controlled SO ₂ Hourly Er	[0.22 - 0.00] lb	64.06 lb/lb-mol	=	0.41 lb
	hr	34.08 lb/lb-mol		hr

^{11A} Total VOC taken as the sum of NMNEHC.
^{1B} Greenhouse gas emission factors are from 40 CFR 98 Subpart C.
^{2B} 40 CFR 98 Subpart A, Table A-1.
^{3B} GHG Emissions (tpy) = Emission Factor (kg/MMBtu) x Fuel Consumption (MMBtu/yr) x 2.20426 (lb/kg) / 2,000 (lb/ton)
CO₂e (tpy) = CO₂ tpy + (CH₄ tpy x CH₄ GWP) + (N₂O tpy x N₂O GWP)

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
DEHY803-DELETED

EMISSION UNIT:	DEHY-803 (REMOVED)		
SOURCE DESCRIPTION:	GLYCOL DEHYDRATOR; REMOVED FROM SERVICE		
OPERATION	0.00	HRS/YR	
GAS FLOW RATE	0.00	MMSCF/D	
SAFETY FACTOR	0%	%	

POLLUTANT	DRE (%)	UNCONTROLLED FLASH TANK EMISSIONS ¹		UNCONTROLLED REGENERATOR EMISSIONS ²		TOTAL UNCONTROLLED EMISSIONS ³		CONTROLLED REGENERATOR EMISSIONS ⁴		TOTAL CONTROLLED EMISSIONS ⁵	
		PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Carbon Dioxide ⁵	0%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Hydrogen Sulfide	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Methane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Ethane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Propane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Isobutane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Butane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Isopentane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Pentane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Hexane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Other Hexanes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Heptanes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Benzene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Toluene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Ethylbenzene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Xylenes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
C8+ Heavies	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
VOC	98%	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.0000
HAP	98%	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.0000

GHG EMISSIONS			
UNITS	CO ₂	CH ₄	CO ₂ e
TPY ⁶	0.00	0.00	
GWP ⁷	1	25	
TPY CO ₂ e ⁸	0.00	0.00	0.00

¹ From "Flash Tank Off Gas" stream in GLYCalc Report.

² From "Uncontrolled Regenerator Emissions" stream in GLYCalc Report.

³ Summation of the Uncontrolled Flash Tank and Regenerator Emissions.

⁴ From "Controlled Regenerator Emissions" stream in GLYCalc Report. The control provided in the GLYCalc report is by a condenser.

⁵ Controlled maximum potential hourly emission rate = (Uncontrolled Flash Tank Emissions + Condenser Controlled Regenerator Emissions) * (1-DRE). A Safety Factor has been added.

Flash tank emissions are routed into the reboiler fuel line for reboiler firing and continuous pilot fuel, vapors may be routed to the VRU in the event of low fuel demand.

Flash tank emissions are routed to the flare in the event the VRU is not in service with an assumed 98% DRE.

The post-condenser regenerator emissions are routed to the firebox when the reboiler is firing and glow plug when the reboiler is not firing (assumed 98% DRE).

⁶ Carbon Dioxide emissions from "Condenser Vent Gas Stream" and "Flash Tank Off Gas Stream" in the GLYCalc report. A DRE of 0% is assumed for CO₂.

⁷ 40 CFR 98 Subpart A, Table A-1

⁸ CO₂e tons/yr = tons/yr * GWP

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
DEHY804-DELETED

EMISSION UNIT:	DEHY-804 (REMOVED)		
SOURCE DESCRIPTION:	GLYCOL DEHYDRATOR; REMOVED FROM SERVICE		
OPERATION	0.00	HRS/YR	
GAS FLOW RATE	0.00	MMSCF/D	
SAFETY FACTOR	0%	%	

POLLUTANT	DRE (%)	UNCONTROLLED FLASH TANK EMISSIONS ¹		UNCONTROLLED REGENERATOR EMISSIONS ²		TOTAL UNCONTROLLED EMISSIONS ³		CONTROLLED REGENERATOR EMISSIONS ⁴		TOTAL CONTROLLED EMISSIONS ⁵	
		PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Carbon Dioxide ⁵	0%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Hydrogen Sulfide	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Methane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Ethane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Propane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Isobutane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Butane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Isopentane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Pentane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
n-Hexane	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Other Hexanes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Heptanes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Benzene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Toluene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Ethylbenzene	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
Xylenes	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
C8+ Heavies	98%		0.0000		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
VOC	98%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HAP	98%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.000

GHG EMISSIONS			
UNITS	CO ₂	CH ₄	CO ₂ e
TPY ⁵	0.00	0.00	
GWP ⁶	1.00	25.00	
TPY CO ₂ e ⁷	0.00	0.00	0.00

¹ From "Flash Tank Off Gas" stream in GLYCalc Report.

² From "Uncontrolled Regenerator Emissions" stream in GLYCalc Report.

³ Summation of the Uncontrolled Flash Tank and Regenerator Emissions.

⁴ From "Controlled Regenerator Emissions" stream in GLYCalc Report. The control provided in the GLYCalc report is by a condenser.

⁵ Controlled maximum potential hourly emission rate = (Uncontrolled Flash Tank Emissions + Condenser Controlled Regenerator Emissions) * (1-DRE). A Safety Factor has been added.

Flash tank emissions are routed into the reboiler fuel line for reboiler firing and continuous pilot fuel, vapors may be routed to the VRU in the event of low fuel demand.

Flash tank emissions are routed to the flare in the event the VRU is not in service with an assumed 98% DRE.

The post-condenser regenerator emissions are routed to the firebox when the reboiler is firing and glow plug when the reboiler is not firing (assumed 98% DRE).

⁶ Carbon Dioxide emissions from "Condenser Vent Gas Stream" and "Flash Tank Off Gas Stream" in the GLYCalc report. A DRE of 0% is assumed for CO₂.

⁷ 40 CFR 98 Subpart A, Table A-1

⁸ CO₂e tons/yr = tons/yr * GWP

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
DEHYEG-DELETED

EMISSION UNIT:	DEHY-EG (REMOVED)		
SOURCE DESCRIPTION:	ETHYLENE GLYCOL DEHYDRATOR		
OPERATION	0.00	HRS/YR	
GAS FLOW RATE	0.00	MMSCF/D	
SAFETY FACTOR	0%	%	

POLLUTANT	UNCONTROLLED FLASH TANK EMISSIONS ¹		UNCONTROLLED REGENERATOR EMISSIONS ²		TOTAL UNCONTROLLED EMISSIONS ³		TOTAL CONTROLLED EMISSIONS ⁴	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Carbon Dioxide ⁵		0.0000		0.0000	0.0000	0.0000		
Hydrogen Sulfide		0.0000		0.0000	0.0000	0.0000		
Methane		0.0000		0.0000	0.0000	0.0000		
Ethane		0.0000		0.0000	0.0000	0.0000		
Propane		0.0000		0.0000	0.0000	0.0000		
Isobutane		0.0000		0.0000	0.0000	0.0000		
n-Butane		0.0000		0.0000	0.0000	0.0000		
Isopentane		0.0000		0.0000	0.0000	0.0000		
n-Pentane		0.0000		0.0000	0.0000	0.0000		
n-Hexane		0.0000		0.0000	0.0000	0.0000		
Other Hexanes		0.0000		0.0000	0.0000	0.0000		
Heptanes		0.0000		0.0000	0.0000	0.0000		
Benzene		0.0000		0.0000	0.0000	0.0000		
Toluene		0.0000		0.0000	0.0000	0.0000		
Ethylbenzene		0.0000		0.0000	0.0000	0.0000		
Xylenes		0.0000		0.0000	0.0000	0.0000		
C8+ Heavies		0.0000		0.0000	0.0000	0.0000		
VOC	0.00	0.00	0.00	0.00	0.00	0.00		
HAP	0.0000	0.000	0.000	0.00	0.000	0.00		

GHG EMISSIONS			
UNITS	CO ₂	CH ₄	CO ₂ e
TPY ⁶	0.00	0.00	
GWP ⁷	1.00	25.00	
TPY CO ₂ e ⁸	0.00	0.00	0.00

¹ From "Flash Tank Off Gas" Stream in GlyCalc Report.

² From "Uncontrolled Regenerator" Stream in GlyCalc Report.

³ Summation of the Uncontrolled Flash Tank Emissions and Uncontrolled Regenerator Emissions

⁴ Flash tank emissions and regenerator emissions are routed to the flare. Controlled emissions are represented under that unit (WL2-FL)

⁵ Carbon Dioxide emissions from "Flash Tank off Gas" and "Regenerator Overheads" streams in the GLYCalc report.

⁶ From "Uncontrolled Emissions", calculated above

⁷ 40 CFR 98 Subpart A, Table A-1

$$^8 \text{CO}_2\text{e tons/yr} = \text{tons/yr} * \text{GWP}$$

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
DEHY805

EMISSION UNIT:	DEHY-805		
SOURCE DESCRIPTION:	TRIETHYLENE GLYCOL DEHYDRATOR		
OPERATION	8,760.00	HRS/YR	
GAS FLOW RATE	65.00	MMSCF/D	
SAFETY FACTOR	20%	%	

POLLUTANT	DRE (%)	UNCONTROLLED FLASH TANK EMISSIONS ¹		UNCONTROLLED REGENERATOR EMISSIONS ²		TOTAL UNCONTROLLED EMISSIONS ³		CONTROLLED REGENERATOR EMISSIONS ⁴		TOTAL CONTROLLED EMISSIONS ⁵	
		PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Carbon Dioxide ⁵	0%	2.7700	12.1326	0.2320	1.0162	3.0020	13.1488	0.2280	0.9986	3.5976	15.7575
Hydrogen Sulfide	98%	0.0132	0.0578	0.0073	0.0320	0.0205	0.0898	0.0068	0.0298	0.0005	0.0021
Methane	98%	208.9957	915.4012	1.4039	6.1491	210.3996	921.5502	1.3979	6.1228	5.0494	22.1166
Ethane	98%	65.9011	288.6468	1.6159	7.0776	67.5170	295.7245	1.5788	6.9151	1.6195	7.0935
Propane	98%	47.5613	208.3185	2.5594	11.2102	50.1207	219.5287	2.2892	10.0267	1.1964	5.2403
Isobutane	98%	9.5035	41.6253	0.7913	3.4659	10.2948	45.0912	0.6413	2.8089	0.2435	1.0664
n-Butane	98%	22.9093	100.3427	2.5220	11.0464	25.4313	111.3891	1.9162	8.3930	0.5958	2.6097
Isopentane	98%	6.3946	28.0083	0.8215	3.5982	7.2161	31.6065	0.4313	1.8891	0.1638	0.7175
n-Pentane	98%	7.2055	31.5601	1.1584	5.0738	8.3639	36.6339	0.5788	2.5351	0.1868	0.8183
n-Hexane	98%	4.2568	18.6448	1.2758	5.5880	5.5326	24.2328	0.3897	1.7069	0.1115	0.4884
Other Hexanes	98%	4.7382	20.7533	1.0618	4.6507	5.8000	25.4040	0.3860	1.6907	0.1230	0.5387
Heptanes	98%	7.1305	31.2316	4.5189	19.7928	11.6494	51.0244	0.6258	2.7410	0.1862	0.8153
Benzene	98%	0.0331	0.1450	0.2927	1.2820	0.3258	1.4270	0.0595	0.2606	0.0022	0.0097
Toluene	98%	1.3065	5.7225	18.5091	81.0699	19.8156	86.7923	1.4731	6.4522	0.0667	0.2922
Ethylbenzene	98%	0.1025	0.4490	2.5935	11.3595	2.6960	11.8085	0.0678	0.2970	0.0041	0.0179
Xylenes	98%	0.2857	1.2514	10.5216	46.0846	10.8073	47.3360	0.2574	1.1274	0.0130	0.0571
C8+ Heavies	98%	2.1529	9.4297	16.4331	71.9770	18.5860	81.4067	0.0078	0.0342	0.0519	0.2271
VOC	98%	113.580	497.482	63.059	276.199	176.640	773.681	9.124	39.963	2.945	12.899
HAP	98%	5.985	26.213	33.193	145.384	39.177	171.597	2.248	9.844	0.198	0.865

GHG EMISSIONS			
UNITS	CO ₂	CH ₄	CO ₂ e
TPY ⁵	15.76	22.12	
GWP ⁶	1.00	25.00	
TPY CO ₂ e ⁷	15.76	552.91	568.67

¹ From "Flash Tank Off Gas" stream in GLYCalc Report.

² From "Uncontrolled Regenerator Emissions" stream in GLYCalc Report.

³ Summation of the Uncontrolled Flash Tank and Regenerator Emissions.

⁴ From "Controlled Regenerator Emissions" stream in GLYCalc Report. The control provided in the GLYCalc report is by a condenser.

⁵ Controlled maximum potential hourly emission rate = (Uncontrolled Flash Tank Emissions + Condenser Controlled Regenerator Emissions) * (1-DRE). A Safety Factor has been added.

Flash tank emissions are routed into the reboiler fuel line for reboiler firing and continuous pilot fuel, vapors may be routed to the VRU in the event of low fuel demand.

Flash tank emissions are routed to the flare in the event the VRU is not in service with an assumed 98% DRE.

The post-condenser regenerator emissions are routed to the firebox when the reboiler is firing and glow plug when the reboiler is not firing (assumed 98% DRE).

⁶ Carbon Dioxide emissions from "Condenser Vent Gas Stream" and "Flash Tank Off Gas Stream" in the GLYCalc report. A DRE of 0% is assumed for CO₂.

⁷ 40 CFR 98 Subpart A, Table A-1

⁸ CO₂e tons/yr = tons/yr * GWP

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
DEHY-1505

EMISSION UNIT:	DEHY-1505		
SOURCE DESCRIPTION:	TRIETHYLENE GLYCOL DEHYDRATOR		
OPERATION	8,760.00	HRS/YR	
GAS FLOW RATE	80.00	MMSCF/D	
SAFETY FACTOR	20%	%	

POLLUTANT	DRE (%)	UNCONTROLLED FLASH TANK EMISSIONS ¹		UNCONTROLLED REGENERATOR EMISSIONS ²		TOTAL UNCONTROLLED EMISSIONS ³		CONTROLLED REGENERATOR EMISSIONS ⁴		TOTAL CONTROLLED EMISSIONS ⁵	
		PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Carbon Dioxide ⁵	0%	2.7000	11.8260	0.2960	1.2965	2.9960	13.1225	0.2960	1.2965	0.5172	2.2653
Hydrogen Sulfide	98%	0.0118	0.0517	0.0086	0.0377	0.0204	0.0894	0.0081	0.0355	0.0002	0.0009
Methane	98%	209.1286	915.9833	1.8701	8.1910	210.9987	924.1743	1.8638	8.1634	0.2957	1.2951
Ethane	98%	65.4390	286.6228	2.1037	9.2142	67.5427	295.8370	2.0662	9.0500	0.1281	0.5611
Propane	98%	46.8732	205.3046	3.3304	14.5872	50.2036	219.8918	3.0541	13.3770	0.1295	0.5674
Isobutane	98%	9.2882	40.6823	1.0133	4.4383	10.3015	45.1206	0.8593	3.7637	0.0318	0.1391
n-Butane	98%	22.2317	97.3748	3.2040	14.0335	25.4357	111.4084	2.5787	11.2947	0.0886	0.3879
Isopentane	98%	6.1784	27.0614	1.0360	4.5377	7.2144	31.5991	0.6127	2.6836	0.0221	0.0969
n-Pentane	98%	6.9083	30.2584	1.4482	6.3431	8.3565	36.6015	0.8160	3.5741	0.0279	0.1221
n-Hexane	98%	3.9783	17.4250	1.5384	6.7382	5.5167	24.1631	0.5606	2.4554	0.0182	0.0798
Other Hexanes	98%	4.4851	19.6447	1.3023	5.7041	5.7874	25.3488	0.5560	2.4353	0.0187	0.0820
Heptanes	98%	6.4042	28.0504	5.1747	22.6652	11.5789	50.7156	0.8949	3.9197	0.0292	0.1277
Benzene	98%	0.0264	0.1156	0.3026	1.3254	0.3290	1.4410	0.0757	0.3316	0.0018	0.0081
Toluene	98%	1.0450	4.5771	19.0405	83.3974	20.0855	87.9745	1.9355	8.4775	0.0477	0.2090
Ethylbenzene	98%	0.0827	0.3622	2.6596	11.6490	2.7423	12.0113	0.0908	0.3977	0.0023	0.0100
Xylenes	98%	0.2318	1.0153	10.9008	47.7455	11.1326	48.7608	0.3473	1.5212	0.0086	0.0377
C8+ Heavies	98%	1.7714	7.7587	16.6000	72.7080	18.3714	80.4667	0.0102	0.0447	0.0024	0.0104
VOC	98%	109.505	479.631	67.551	295.873	177.056	775.503	12.392	54.276	0.429	1.878
HAP	98%	5.36	23.50	34.44	150.86	39.81	174.35	3.01	13.18	0.08	0.34

GHG EMISSIONS			
UNITS	CO ₂	CH ₄	CO ₂ e
TPY ⁵	2.27	1.30	
GWP ⁶	1.00	25.00	
TPY CO ₂ e ⁷	2.27	32.38	34.64

¹ From "Flash Tank Off Gas" stream in GLYCalc Report.

² From "Uncontrolled Regenerator Emissions" stream in GLYCalc Report.

³ Summation of the Uncontrolled Flash Tank and Regenerator Emissions.

⁴ From "Controlled Regenerator Emissions" stream in GLYCalc Report. The control provided in the GLYCalc report is by a condenser.

⁵ Controlled maximum potential hourly emission rate = (Condenser Controlled Regenerator Emissions) * (1-DRE). A Safety Factor has been added.

Flash tank emissions are recycled and directed back into the suction side of the compressor station. Flash tank emissions may also be routed to VRU, and to flare during VRU downtime.

Worst-case emissions assume flash tank emissions are routed to flare with 98% DRE during VRU downtime (VRU downtime estimated at 5% annually).

The post-condenser regenerator emissions are routed to the firebox when the reboiler is firing and glow plug when the reboiler is not firing (assumed 98% DRE).

⁶ Carbon Dioxide emissions from "Condenser Vent Gas Stream" and "Flash Tank Off Gas Stream" in the GLYCalc report. A DRE of 0% is assumed for CO₂.

⁷ 40 CFR 98 Subpart A, Table A-1

⁸ CO₂e tons/yr = tons/yr * GWP

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HTR-802-DELETED

EMISSION UNIT: HTR-802 (REMOVED)
SOURCE DESCRIPTION: REGEN GAS HEATER (REMOVED FROM SERVICE)

OPERATING DATA			
ITEM	VALUE	UNITS	COMMENTS
INPUT HEAT RATE		MMBTU/HR	
FUEL HEAT VALUE		BTU/SCF	FUEL GAS ANALYSIS
FUEL RATE		SCF/HR	INPUT HEAT RATE / FUEL HEAT VALUE
FUEL RATE		MMSCF/HR	CONVERTED TO MMSCF
OPERATION		HRS/YR	
ANNUAL FUEL USAGE		MMSCF/YR	
PRESSURE AT ELEVATION		IN Hg	

EMISSION RATES											
UNITS	NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ^{1,3}	H ₂ S ⁴	HCHO ⁵	Toluene ⁵	Benzene ⁵	n-Hexane ⁵	HAPs ⁵
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
LB/MMSCF	0.000	0.000	0.000		0.000		0.000	0.000	0.000	0.000	
PPH ⁶	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TONS/YR ⁷	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

GHG EMISSIONS				
UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ⁸	53.0600	0.0001	0.0010	
GWP ⁹	1.00	298.00	25.00	
PPH ¹⁰	0.0000	0.0000	0.0000	
TPY ¹¹	0.0000	0.0000	0.0000	0.0000

¹ Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

² SO₂ emissions based on fuel content of 5 grains of sulfur per 100 scf

SO₂ lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO₂/ 32lb S

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98%*[(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S*scf/hr)]

³ Assumes PM (Total) = PM-10 = PM-2.5

⁴ H₂S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%

H₂S lb/hr = (1-0.98) * 0.25 gr H₂S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr

⁵ HAP emission factors from AP-42 Table 1.4-3

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

⁶ Hourly emission rates calculated as follows:

NO_x, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)

⁷ Annual emissions calculated as follows:

tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb

⁸ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁹ 40 CFR 98 Subpart A, Table A-1

¹⁰ GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HTR-803-DELETED

EMISSION UNIT: HTR-803 (REMOVED)
SOURCE DESCRIPTION: DEHY 803 REBOILER (REMOVED FROM SERVICE)

OPERATING DATA			
ITEM	VALUE	UNITS	COMMENTS
INPUT HEAT RATE		MMBTU/HR	
FUEL HEAT VALUE		BTU/SCF	FUEL GAS ANALYSIS
FUEL RATE		SCF/HR	INPUT HEAT RATE / FUEL HEAT VALUE
FUEL RATE		MMSCF/HR	CONVERTED TO MMSCF
OPERATION		HRS/YR	
ANNUAL FUEL USAGE		MMSCF/YR	
PRESSURE AT ELEVATION		IN Hg	

EMISSION RATES											
UNITS	NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ^{1,3}	H ₂ S ⁴	HCHO ⁵	Toluene ⁵	Benzene ⁵	n-Hexane ⁵	HAPs ⁵
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
LB/MMSCF	0.000	0.000	0.000		0.000		0.000	0.000	0.000	0.000	
PPH ⁶	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TONS/YR ⁷	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

GHG EMISSIONS				
UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ⁸	53.0600	0.0001	0.0010	
GWP ⁹	1.00	298.00	25.00	
PPH ¹⁰	0.0000	0.0000	0.0000	
TPY ¹¹	0.0000	0.0000	0.0000	0.0000

¹ Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

² SO₂ emissions based on fuel content of 5 grains of sulfur per 100 scf

SO₂ lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO₂/ 32lb S

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98% * [(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S*scf/hr)]

³ Assumes PM (Total) = PM-10 = PM-2.5

⁴ H₂S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%

H₂S lb/hr = (1-0.98) * 0.25 gr H₂S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr

⁵ HAP emission factors from AP-42 Table 1.4-3

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

⁶ Hourly emission rates calculated as follows:

NO_x, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)

⁷ Annual emissions calculated as follows:

tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb

⁸ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁹ 40 CFR 98 Subpart A, Table A-1

¹⁰ GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HTR-804-DELETED

EMISSION UNIT: HTR-804 (REMOVED)
SOURCE DESCRIPTION: DEHY 804 REBOILER (REMOVED FROM SERVICE)

OPERATING DATA			
ITEM	VALUE	UNITS	COMMENTS
INPUT HEAT RATE		MMBTU/HR	
FUEL HEAT VALUE		BTU/SCF	FUEL GAS ANALYSIS
FUEL RATE		SCF/HR	INPUT HEAT RATE / FUEL HEAT VALUE
FUEL RATE		MMSCF/HR	CONVERTED TO MMSCF
OPERATION		HRS/YR	
ANNUAL FUEL USAGE		MMSCF/YR	
PRESSURE AT ELEVATION		IN Hg	

EMISSION RATES											
UNITS	NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ^{1,3}	H ₂ S ⁴	HCHO ⁵	Toluene ⁵	Benzene ⁵	n-Hexane ⁵	HAPs ⁵
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
LB/MMSCF	0.000	0.000	0.000		0.000		0.000	0.000	0.000	0.000	
LB/HR ⁶	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TONS/YR ⁷	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

GHG EMISSIONS				
UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ⁸	53.0600	0.0001	0.0010	
GWP ⁹	1.00	298.00	25.00	
PPH ¹⁰	0.0000	0.0000	0.0000	
TPY ¹¹	0.0000	0.0000	0.0000	0.0000

¹ Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

² SO₂ emissions based on fuel content of 5 grains of sulfur per 100 scf

SO₂ lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO₂/ 32lb S

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98%*[(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S*scf/hr)]

³ Assumes PM (Total) = PM-10 = PM-2.5

⁴ H₂S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%

H₂S lb/hr = (1-0.98) * 0.25 gr H₂S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr

⁵ HAP emission factors from AP-42 Table 1.4-3

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

⁶ Hourly emission rates calculated as follows:

NO_x, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)

⁷ Annual emissions calculated as follows:

tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb

⁸ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁹ 40 CFR 98 Subpart A, Table A-1

¹⁰ GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HTR-730-DELETED

EMISSION UNIT: HTR-730 (REMOVED)
SOURCE DESCRIPTION: HOT OIL HEATER

OPERATING DATA			
ITEM	VALUE	UNITS	COMMENTS
INPUT HEAT RATE		MMBTU/HR	
FUEL HEAT VALUE		BTU/SCF	FUEL GAS ANALYSIS
FUEL RATE		SCF/HR	INPUT HEAT RATE / FUEL HEAT VALUE
FUEL RATE		MMSCF/HR	CONVERTED TO MMSCF
OPERATION		HRS/YR	
ANNUAL FUEL USAGE		MMSCF/YR	
PRESSURE AT ELEVATION		IN Hg	

EMISSION RATES											
UNITS	NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ^{1,3}	H ₂ S ⁴	HCHO ⁵	Toluene ⁵	Benzene ⁵	n-Hexane ⁵	HAPs ⁵
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
PPH ⁶	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TONS/YR ⁷	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

GHG EMISSIONS				
UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ⁸	53.0600	0.0001	0.0010	
GWP ⁹	1.00	298.00	25.00	
PPH ¹⁰	0.0000	0.0000	0.0000	
TPY ¹¹	0.0000	0.0000	0.0000	0.0000

¹ Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

² SO₂ emissions based on fuel content of 5 grains of sulfur per 100 scf

SO₂ lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO₂/ 32lb S

Assume 100% conversion of SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98%*[(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S*scf/hr)]

³ Assumes PM (Total) = PM-10 = PM-2.5

⁴ H₂S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%

H₂S lb/hr = (1-0.98) * 0.25 gr H₂S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr

⁵ HAP emission factors from AP-42 Table 1.4-3

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

⁶ Hourly emission rates calculated as follows:

NO_x, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)

⁷ Annual emissions calculated as follows:

tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb

⁸ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁹ 40 CFR 98 Subpart A, Table A-1

¹⁰ GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HTR-805 & HTR-1505

EMISSION UNIT: HTR-805, HTR-1505
SOURCE DESCRIPTION: DEHY 805 REBOILER, DEHY 1505 REBOILER

OPERATING DATA			
ITEM	VALUE	UNITS	COMMENTS
INPUT HEAT RATE	1.500	MMBTU/HR	
FUEL HEAT VALUE	1,020.000	BTU/SCF	FUEL GAS ANALYSIS
FUEL RATE	1,470.588	SCF/HR	INPUT HEAT RATE / FUEL HEAT VALUE
FUEL RATE	0.001	MMSCF/HR	CONVERTED TO MMSCF
OPERATION	8,760.000	HRS/YR	
ANNUAL FUEL USAGE	12.882	MMSCF/YR	
PRESSURE AT ELEVATION		IN Hg	

EMISSION RATES											
UNITS	NO _x ¹	CO ¹	VOC ¹	SO ₂ ²	PM ^{1,3}	H ₂ S ⁴	HCHO ⁵	Toluene ⁵	Benzene ⁵	n-Hexane ⁵	HAPs ⁵
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
LB/MMSCF	100.000	84.000	5.500		7.600		0.075	0.003	0.002	1.800	
PPH ⁶	0.147	0.124	0.008	0.022	0.011	0.000	0.000	0.000	0.000	0.003	0.003
TONS/YR ⁷	0.644	0.541	0.035	0.096	0.049	0.000	0.000	0.000	0.000	0.012	0.012

GHG EMISSIONS				
UNITS	CO ₂	N ₂ O	CH ₄	CO ₂ e
KG/MMBTU ⁸	53.0600	0.0001	0.0010	
GWP ⁹	1.00	298.00	25.00	
PPH ¹⁰	175.4657	0.0003	0.0033	
TPY ¹¹	768.5398	0.0014	0.0145	769.3335

¹ Emission factors from AP-42 Tables 1.4-1 and 1.4-2 (7/98)

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

² SO₂ emissions based on fuel content of 5 grains of sulfur per 100 scf

SO₂ lb/hr = 5gr S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr * 64lb SO₂/ 32lb S

Assume 100% conversion of combusted H₂S into SO₂ and 98% Combustion Efficiency. Additional SO₂ emissions from the combustion of H₂S:

SO₂ (lb/hr) from H₂S = 98%*[(0.25 gr H₂S/100 scf * 1 lb/7000 gr * 64 lb/lbmol SO₂/34 lb/lbmol H₂S*scf/hr)]

³ Assumes PM (Total) = PM-10 = PM-2.5

⁴ H₂S emissions fuel content of 0.25 grains of hydrogen sulfide per 100 scf and combustion efficiency of 98%

H₂S lb/hr = (1-0.98) * 0.25 gr H₂S/100 scf * Fuel usage (scf/hr) * 1 lb/7000 gr

⁵ HAP emission factors from AP-42 Table 1.4-3

Emission factors have been adjusted according to AP-42: EF (at fuel heating value) = Fuel Heat Value / EF Heat Value (1020 Btu/scf) * EF (at 1020 Btu/scf)

⁶ Hourly emission rates calculated as follows:

NO_x, CO, VOC, PM, HAP lb/hr = EF (lb/MMscf) * Fuel usage (MMscf/hr)

⁷ Annual emissions calculated as follows:

tons/yr = Hourly emissions (lb/hr) * Hours of operation * 1 ton/2000 lb

⁸ Greenhouse gas emission factors are from 40 CFR 98 Subpart C

⁹ 40 CFR 98 Subpart A, Table A-1

¹⁰ GHG lb/hr = EF (kg/MMBtu) * Heat input (MMBtu/hr) * 2.20462lb/kg

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
WL1-TK601-TK603

EMISSION UNIT: WL1-TK601 THROUGH WL1-TK603
SOURCE DESCRIPTION: WL1 210 BBL CONDENSATE TANKS

ITEM	VALUE	COMMENTS
NO. OF TANKS	3.00	TANK EMISSIONS ^{1,2}
VRU DOWNTIME	5.00%	CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
FLARE DRE	98.00%	

UNITS	VOC	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	N-HEXANE	TOTAL HAPS	H2S	COMMENTS
PPH	159.85	0.17	0.30	0.019	0.12	2.45	3.056	0.0041	PROMAX REPORTX
TPY	594.66	0.79	1.50	0.10	0.645	11.85	14.89	0.011	PROMAX REPORTX
PPH	53.2824	0.056	0.099	0.0064	0.040	0.82	1.0186	0.0014	PER TANK; UNCONTROLLED
TPY	198.22	0.26	0.50	0.034	0.21	3.95	4.96	0.0038	PER TANK; UNCONTROLLED
PPH	1.0656	0.0011	0.0020	0.00013	0.00080	0.016	0.02037	2.74E-05	PER TANK; CONTROLLED ³
TPY	0.1982	0.00026	0.00050	0.000034	0.00021	0.0039	0.0050	3.82E-06	PER TANK; CONTROLLED ³

GHG EMISSIONS				COMMENTS
UNITS	CO ₂	Methane	CO ₂ e ⁴	
PPH	0.4022	24.8270	621.0772	PROMAX REPORT; UNCONTROLLED; ALL TANKS
TPY	1.0986	66.6385	1,667.0601	PROMAX REPORT; UNCONTROLLED; ALL TANKS
PPH	0.1341	8.2757	207.0257	PER TANK; UNCONTROLLED
TPY	0.3662	22.2128	555.6867	PER TANK; UNCONTROLLED
PPH	0.0067	0.4138	10.3513	PER TANK; CONTROLLED
TPY	0.0183	1.1106	27.7843	PER TANK; CONTROLLED

EMISSION UNIT: WL1-TK601 THROUGH WL1-TK603

POLLUTANT	MAX HOURLY			ANNUAL		
	WORKING PPH	BREATHING PPH	FLASH PPH	WORKING TPY	BREATHING TPY	FLASH TPY
HYDROGEN SULFIDE	0.0001	0.0000	0.0040	0.0004	0.0001	0.0110
WATER	0.0000	0.0000	0.0000	0.3603	0.0585	5.5086
NITROGEN	0.0012	0.0002	0.4715	0.0033	0.0005	1.2599
CARBON DIOXIDE	0.0066	0.0013	0.3943	0.0338	0.0055	1.0593
METHANE	0.2253	0.0453	24.5564	0.6026	0.0978	65.9380
ETHANE	0.7995	0.1607	45.2194	4.1551	0.6741	127.5316
PROPANE	1.5096	0.3033	69.2944	7.9269	1.2860	220.8397
ISOBUTANE	0.4519	0.0908	15.9221	2.4026	0.3898	57.9046
N-BUTANE	1.1832	0.2378	37.0964	6.3276	1.0265	142.1978
ISOPENTANE	0.4018	0.0807	9.9125	2.1745	0.3528	42.1532
N-PENTANE	0.4317	0.0867	9.9906	2.3426	0.3801	43.7186
2,2-DIMETHYLBUTANE	0.0059	0.0012	0.1254	0.0319	0.0052	0.5669
2-METHYLPENTANE	0.0915	0.0184	1.8487	0.4994	0.0810	8.5844
3-METHYLPENTANE	0.0492	0.0099	0.9767	0.2687	0.0436	4.5744
BENZENE	0.0081	0.0016	0.1578	0.0441	0.0072	0.7432
CYCLOHEXANE	0.0791	0.0159	1.5037	0.4324	0.0701	7.1789
N-HEXANE	0.1219	0.0245	2.3072	0.6663	0.1081	11.0730
3,3-DIMETHYLPENTANE	0.0007	0.0001	0.0127	0.0038	0.0006	0.0617
2,2-DIMETHYLPENTANE	0.0023	0.0005	0.0425	0.0124	0.0020	0.2047
2,4-DIMETHYLPENTANE	0.0125	0.0025	0.2291	0.0685	0.0111	1.1173
2-METHYLHEXANE	0.0189	0.0038	0.3339	0.1034	0.0168	1.6554
TOLUENE	0.0163	0.0033	0.2761	0.0889	0.0144	1.3967
METHYLCYCLOHEXANE	0.1012	0.0203	1.7305	0.5541	0.0899	8.7233
HEPTANE	0.0626	0.0126	1.0559	0.3425	0.0556	5.3676
2,4-DIMETHYLHEXANE	0.0039	0.0008	0.0639	0.0216	0.0035	0.3319
2-METHYLHEPTANE	0.0204	0.0041	0.3206	0.1118	0.0181	1.6937
3-METHYLHEPTANE	0.0090	0.0018	0.1408	0.0493	0.0080	0.7460
CYCLOHEXANE, 1,3-DIMETHYL-, CIS-	0.0014	0.0003	0.0234	0.0079	0.0013	0.1216
CYCLOHEXANE, 1,3-DIMETHYL-, TRANS-	0.0063	0.0013	0.0999	0.0344	0.0056	0.5240
CYCLOHEXANE, 1,2-DIMETHYL-, CIS-	0.0096	0.0019	0.1510	0.0526	0.0085	0.7964
ETHYLCYCLOHEXANE	0.0065	0.0013	0.1000	0.0353	0.0057	0.5319
ETHYLBENZENE	0.0012	0.0002	0.0178	0.0064	0.0010	0.0953
M-XYLENE	0.0062	0.0012	0.0941	0.0338	0.0055	0.5056
N-OCTANE	0.0230	0.0046	0.3492	0.1258	0.0204	1.8791
O-XYLENE	0.0011	0.0002	0.0171	0.0062	0.0010	0.0924
NONANE	0.0047	0.0010	0.0640	0.0260	0.0042	0.3677
DECANE	0.0011	0.0002	0.0136	0.0060	0.0010	0.0819

NOTES

¹ ProMax simulation utilized the following conservative throughputs:

14 bbl/hr of condensate for lb/hr calculations and 65,700 bbl/yr of condensate for tpy calculations.

65,700 bbl/yr of produced water for tpy calculations.

² Emissions include working, breathing and flash and are per tank.

³ Emissions from the tanks are controlled by a VRU with an assumed annual 5% downtime. VRU control only applied to annual emissions.

During VRU downtime, the emissions will be routed to a flare (WL1-FL) with an assumed additional 98% DRE

⁴ CO₂e tpy Emission Rate = CO₂ Emission Rate + CH₄ Emission Rate *GWP Factor

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
WL2-TK8101-TK8102

EMISSION UNIT: WL2-TK8101, WL2-TK8102
SOURCE DESCRIPTION: WL 2 400 bbl CONDENSATE TANKS

ITEM	VALUE	COMMENTS
NO. OF TANKS	2.00	TANK EMISSIONS ^{1,2}
VRU DOWNTIME	5.00%	VAPORS VENT TO ATMOSPHERE DURING WL2-VRU 5%DOWNTIME
FLARE DRE		NO FLARE CONTROL

UNITS	VOC	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	N-HEXANE	TOTAL HAPS	H2S	COMMENTS
PPH	188.6680	0.2050	0.3647	0.0238	0.1490	3.0103	3.7529	0.0046	PROMAX REPORTX
TPY	93.9283	0.1261	0.2384	0.0163	0.1025	1.8815	2.3649	0.0018	PROMAX REPORTX
PPH	94.3340	0.1025	0.1824	0.0119	0.0745	1.5051	1.8764	0.0023	PER TANK; UNCONTROLLED
TPY	46.9641	0.0631	0.1192	0.0082	0.0513	0.9408	1.1824	0.0009	PER TANK; UNCONTROLLED
PPH	94.3340	0.1025	0.1824	0.0119	0.0745	1.5051	1.8764	0.0023	PER TANK; CONTROLLED ³
TPY	2.3482	0.0032	0.0060	0.0004	0.0026	0.0470	0.0591	0.0000	PER TANK; CONTROLLED ³

GHG EMISSIONS				COMMENTS
UNITS	CO ₂	Methane	CO ₂ e ⁴	
PPH	0.4505	27.7191	693.4274	PROMAX REPORT; UNCONTROLLED; ALL TANKS
TPY	0.1689	10.1708	254.4382	PROMAX REPORT; UNCONTROLLED; ALL TANKS
PPH	0.2252	13.8595	346.7137	PER TANK; UNCONTROLLED
TPY	0.0845	5.0854	127.2191	PER TANK; UNCONTROLLED
PPH	0.0113	0.6930	17.3357	PER TANK; CONTROLLED
TPY	0.0042	0.2543	6.3610	PER TANK; CONTROLLED

EMISSION UNIT:

WL2-TK8101, WL2-TK8102

POLLUTANT	MAX HOURLY			ANNUAL		
	WORKING PPH	BREATHING PPH	FLASH PPH	WORKING TPY	BREATHING TPY	FLASH TPY
Hydrogen Sulfide	0.0001	0.0000	0.0045	0.0001	0.0001	0.0017
Water	0.0733	0.0121	1.2860	0.0508	0.0530	0.8386
Nitrogen	0.0014	0.0002	0.5257	0.0004	0.0004	0.1918
Carbon Dioxide	0.0081	0.0013	0.4410	0.0038	0.0039	0.1613
Methane	0.2629	0.0434	27.4127	0.0650	0.0679	10.0379
Ethane	0.9774	0.1615	51.0071	0.6769	0.7073	19.4145
Propane	1.8349	0.3032	80.0569	1.2712	1.3283	33.6188
Isobutane	0.5415	0.0895	18.8314	0.3752	0.3920	8.8148
n-Butane	1.4063	0.2324	44.2566	0.9743	1.0180	21.6468
Isopentane	0.4679	0.0773	12.0196	0.3242	0.3387	6.4169
n-Pentane	0.4997	0.0826	12.1669	0.3462	0.3618	6.6552
2,2-Dimethylbutane	0.0067	0.0011	0.1534	0.0047	0.0049	0.0863
2-Methylpentane	0.1045	0.0173	2.2716	0.0724	0.0756	1.3068
3-Methylpentane	0.0561	0.0093	1.2017	0.0389	0.0406	0.6963
Benzene	0.0092	0.0015	0.1943	0.0064	0.0066	0.1131
Cyclohexane	0.0897	0.0148	1.8551	0.0621	0.0649	1.0928
n-Hexane	0.1383	0.0228	2.8492	0.0958	0.1001	1.6856
3,3-Dimethylpentane	0.0008	0.0001	0.0157	0.0005	0.0006	0.0094
2,2-Dimethylpentane	0.0026	0.0004	0.0525	0.0018	0.0019	0.0312
2,4-Dimethylpentane	0.0142	0.0023	0.2836	0.0098	0.0102	0.1701
2-Methylhexane	0.0213	0.0035	0.4143	0.0147	0.0154	0.2520
Toluene	0.0182	0.0030	0.3435	0.0126	0.0132	0.2126
Methylcyclohexane	0.1135	0.0188	2.1523	0.0786	0.0821	1.3279
Heptane	0.0701	0.0116	1.3149	0.0485	0.0507	0.8171
2,4-Dimethylhexane	0.0044	0.0007	0.0799	0.0030	0.0032	0.0505
2-Methylheptane	0.0227	0.0038	0.4016	0.0157	0.0164	0.2578
3-Methylheptane	0.0100	0.0017	0.1764	0.0069	0.0072	0.1136
Cyclohexane, 1,3-Dimethyl-, cis-	0.0016	0.0003	0.0293	0.0011	0.0012	0.0185
Cyclohexane, 1,3-Dimethyl-, trans-	0.0070	0.0012	0.1250	0.0048	0.0051	0.0798
Cyclohexane, 1,2-Dimethyl-, cis-	0.0107	0.0018	0.1891	0.0074	0.0077	0.1212
Ethylcyclohexane	0.0072	0.0012	0.1254	0.0050	0.0052	0.0810
Ethylbenzene	0.0013	0.0002	0.0223	0.0009	0.0009	0.0145
m-Xylene	0.0068	0.0011	0.1181	0.0047	0.0050	0.0770
n-Octane	0.0254	0.0042	0.4386	0.0176	0.0184	0.2861
o-Xylene	0.0013	0.0002	0.0215	0.0009	0.0009	0.0141
Nonane	0.0052	0.0009	0.0812	0.0036	0.0038	0.0560
Decane	0.0012	0.0002	0.0173	0.0008	0.0009	0.0125

NOTES

- ¹ ProMax simulation utilized the following conservative throughputs:
250 bbl/hr of condensate for lb/hr calculations and 320,000 bbl/yr of condensate for tpy calculations.
320,000 bbl/yr of produced water for tpy calculations.
- ² Emissions include working, breathing and flash and are per tank.
- ³ Emissions from the tanks are controlled by a VRU with an assumed annual 5% downtime. VRU control only applied to lb/hr and tpy emissions.
During VRU downtime, the emissions will be routed to a flare (WL1-FL) with an assumed additional 98% DRE
- ⁴ CO₂e tpy Emission Rate = CO₂ Emission Rate + CH₄ Emission Rate *GWP Factor

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
WLCS-TK2301-TK2304

EMISSION UNIT: WLCS-TK2301, WLCS-TK2302, WLCS-TK2303, WLCS-TK2304
SOURCE DESCRIPTION: WLCS 400 BBL CONDENSATE TANKS

ITEM	VALUE	COMMENTS
NO. OF TANKS	4.00	TANK EMISSIONS ^{1,2}
VRU DOWNTIME	5.00%	CONTROLLED BY WL1-FL DURING 5% VRU DOWNTIME
FLARE DRE	98.00%	

UNITS	VOC	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	N-HEXANE	TOTAL HAPS	H2S	COMMENTS
PPH	1,955.2272	4.3071	4.0500	0.1614	0.5961	78.1306	87.2451	0.0638	PROMAX REPORTX
TPY	1,485.9041	3.2931	3.1071	0.1238	0.4571	60.0630	67.0441	0.0429	PROMAX REPORTX
PPH	488.8068	1.0768	1.0125	0.0404	0.1490	19.5326	21.8113	0.0160	PER TANK; UNCONTROLLED
TPY	371.4760	0.8233	0.7768	0.0309	0.1143	15.0157	16.7610	0.0107	PER TANK; UNCONTROLLED
PPH	9.7761	0.0215	0.0202	0.0008	0.0030	0.3907	0.4362	0.0003	PER TANK; CONTROLLED ³
TPY	0.3715	0.0008	0.0008	0.0000	0.0001	0.0150	0.0168	0.0000	PER TANK; CONTROLLED ³

GHG EMISSIONS				COMMENTS
UNITS	CO ₂	Methane	CO ₂ e ⁴	
PPH	4.2182	120.8027	3,024.2853	PROMAX REPORT; UNCONTROLLED; ALL TANKS
TPY	2.9311	81.4918	2,040.2269	PROMAX REPORT; UNCONTROLLED; ALL TANKS
PPH	1.0545	30.2007	756.0713	PER TANK; UNCONTROLLED
TPY	0.7328	20.3730	510.0567	PER TANK; UNCONTROLLED
PPH	0.0527	1.5100	37.8036	PER TANK; CONTROLLED
TPY	0.0366	1.0186	25.5028	PER TANK; CONTROLLED

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
WLCS-TK2301-TK2304

EMISSION UNIT:

WLCS-TK2301, WLCS-TK2302, WLCS-TK2303, WLCS-TK2304

[illegible]

NOTES

- 1 ProMax simulation utilized the following conservative throughputs:
14 bbl/hr of condensate for lb/hr calculations and 10,000 bbl/yr of condensate for tpy calculations.
1 bbl/hr of produced water for lb/hr calculations and 10,000 bbl/yr of produced water for tpy calculations.
- 2 Emissions include working, breathing and flash and are per tank.
- 3 Emissions from the tanks are controlled by a VRU with an assumed annual 5% downtime. VRU control only applied to annual emissions.
- 4 $\text{CO}_2\text{e tpy Emission Rate} = \text{CO}_2\text{ Emission Rate} + \text{CH}_4\text{ Emission Rate} * \text{GWP Factor}$

ITEM	VALUE
SOURCE ID	ATM LOAD
DESCRIPTION	Atmospheric Tank Loadout from All Tanks
FLARE DRE	98.00%
NO. OF TANKS	9

POLLUTANT	PROMAX REPORT WL1+WL2+WLCS PPH	UN-CONTROLLED WL2 PPH	UN-CONTROLLED WL1+WLCS PPH	CONTROLLED WL1+WLCS PPH	TOTAL LOADING PPH	PROMAX REPORT WL1+WL2+WLCS TPY	UN-CONTROLLED WL2 TPY	UN-CONTROLLED WL1+WLCS TPY	CONTROLLED WL1+WLCS TPY	TOTAL LOADING TPY
VOC	93.9517	38.9895	54.9622	1.0992	39.5391	84.3312	1.9086	82.4226	1.6485	2.7329
BENZENE	0.1794	0.0653	0.1141	0.0023	0.0665	0.1729	0.0032	0.1697	0.0034	0.0049
TOLUENE	0.2374	0.1291	0.1083	0.0022	0.1302	0.1859	0.0063	0.1796	0.0036	0.0081
ETHYLBENZENE	0.0136	0.0091	0.0044	0.0001	0.0092	0.0088	0.0004	0.0084	0.0002	0.0005
XYLENES	0.0753	0.0574	0.0179	0.0004	0.0576	0.0421	0.0028	0.0393	0.0008	0.0032
N-HEXANE	3.0267	0.9802	2.0465	0.0409	1.0007	3.0606	0.0480	3.0126	0.0603	0.0781
TOTAL HAPS	3.5323	1.2411	2.2912	0.0458	1.2640	3.4703	0.0607	3.4096	0.0682	0.0948
H2S	0.0019	0.0000	0.0019	0.0000	0.0001	0.0024	0.0000	0.0023	0.0000	0.0001
CO2	0.1324					0.1690				
METHANE	2.6124					1.8034				
CO2e						45.2550				

POLLUTANT	MAX. HOURLY		ANNUAL	
	WL1 LOADING	WL2 LOADING	WL1 LOADING	WL2 LOADING
	PPH	PPH	TPY	TPY
HYDROGEN SULFIDE	0.000037	0.000045	0.000185	0.000030
WATER	0.000000	0.036706	0.180887	0.025428
NITROGEN	0.000607	0.000700	0.001667	0.000177
CARBON DIOXIDE	0.003338	0.004065	0.016987	0.001881
METHANE	0.113109	0.131707	0.302548	0.032536
ETHANE	0.401397	0.489592	2.085988	0.339048
PROPANE	0.757883	13.010000	3.979557	0.636748
ISOBUTANE	0.226864	3.838000	1.206204	0.187925
N-BUTANE	0.594009	9.968000	3.176648	0.488011
ISOPENTANE	0.201710	3.317000	1.091674	0.162387
N-PENTANE	0.216721	3.542000	1.176083	0.173417
2,2-DIMETHYLBUTANE	0.002941	0.047680	0.016017	0.002334
2-METHYLPENTANE	0.045939	0.740500	0.250702	0.036251
3-METHYLPENTANE	0.024709	0.397500	0.134906	0.019462
BENZENE	0.004073	0.065310	0.022137	0.003185
CYCLOHEXANE	0.039707	0.635700	0.217063	0.031120
N-HEXANE	0.061210	0.980200	0.334499	0.047986
3,3-DIMETHYLPENTANE	0.000348	0.005543	0.001902	0.000271
2,2-DIMETHYLPENTANE	0.001141	0.018240	0.006241	0.000893
2,4-DIMETHYLPENTANE	0.006292	0.100400	0.034413	0.004913
2-METHYLHEXANE	0.009482	0.150700	0.051889	0.007376
TOLUENE	0.008164	0.129100	0.044639	0.006315
METHYLCYCLOHEXANE	0.050798	0.804400	0.278162	0.039378
HEPTANE	0.031408	0.496700	0.171960	0.024317
2,4-DIMETHYLHEXANE	0.001977	0.031150	0.010831	0.001525
2-METHYLHEPTANE	0.010245	0.160900	0.056134	0.007876
3-METHYLHEPTANE	0.004520	0.070930	0.024761	0.003472
CYCLOHEXANE, 1,3-DIMETHYL-, CIS-	0.000725	0.011430	0.003975	0.000559
CYCLOHEXANE, 1,3-DIMETHYL-, TRANS-	0.003154	0.049580	0.017282	0.002427
CYCLOHEXANE, 1,2-DIMETHYL-, CIS-	0.004816	0.075620	0.026389	0.003702
ETHYLCYCLOHEXANE	0.003238	0.050770	0.017743	0.002485
ETHYLBENZENE	0.000583	0.009128	0.003194	0.000447
M-XYLENE	0.003101	0.048500	0.016977	0.002374
N-OCTANE	0.011526	0.180400	0.063150	0.008831
O-XYLENE	0.000570	0.008900	0.003119	0.000436
NONANE	0.002377	0.036780	0.013030	0.001801
DECANE	0.000548	0.008402	0.003000	0.000411

POLLUTANT	MAX. HOURLY		ANNUAL	
	WLCS LOADING	WLCS LOADING	WLCS LOADING	WLCS LOADING
	PPH	PPH	TPY	TPY
WATER	0.000000		0.899437	
HYDROGEN SULFIDE	0.001849		0.002160	
NITROGEN	0.009015		0.005693	
CARBON DIOXIDE	0.124957		0.150117	
METHANE	2.367568		1.468357	
ETHANE	7.052664		8.927388	
PROPANE	13.555325		17.640903	
ISOBUTANE	4.109770		5.443133	
N-BUTANE	12.644994		16.838668	
ISOPENTANE	5.353781		7.186947	
N-PENTANE	6.662296		8.956973	
I-HEXANE	2.825036		3.808664	
N-HEXANE	1.985265		2.678079	
BENZENE	0.110001		0.147572	
CYCLOHEXANE	1.160263		1.565275	
I-HEPTANE	1.765184		2.382186	
N-HEPTANE	0.503382		0.679457	
TOLUENE	0.100099		0.134941	
I-OCTANE	1.705892		2.302790	
N-OCTANE	0.070261		0.094859	
ETHYLBENZENE	0.003859		0.005205	
M-XYLENE	0.014243		0.019218	
ISONONANE	0.049660		0.067073	
N-NONANE	0.007208		0.009736	
DECANE	0.004912		0.006633	

NOTES

- ¹ Loading emissions from tanks at WL1, WL2 and WLCS portions of the facility.
lb/hr emissions based on maximum bbl/hr flowrate; tpy emissions based on annual bbl/yr throughput.
- ² WL1 and WLCS condensate tank truck loading vapors will be routed to a flare (WL1-FL) with 98% DRE
- ³ Total loading includes uncontrolled WL2 condensate and produced water loading emissions and produced water loading from WL1 and WLCS (assumed 1% of uncontrolled emission rate).
Controlled loading of condensate at WL1 and WLCS is not included in ATM LOAD, these emissions are included at the emission point WL-FL1.
- ⁴ CO₂e tpy Emission Rate = CO₂ Emission Rate + CH₄ Emission Rate *GWP Factor

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
NGL LOAD-DELETED

SOURCE ID	NGL LOAD (REMOVED)	
HOSE PARAMETERS	VALUE	UNITS
VAPOR HOSE DIAMETER		INCHES
VAPOR HOSE LENGTH		FT
HOSE VOLUME	0.000	FT ³
NUMBER OF HOSES		
TOTAL HOSE VOLUME	0.000	FT ³
NGL DATA1	VALUE	UNITS
Willow Lake 1 NGL		gal/day
Willow Lake 2 NGL		gal/day
TOTAL NGL	0.000	gal/yr
NGL TANK PRESSURE		PSIA
NGL THROUGHPUT	0.000	BBL/DAY
NGL THROUGHPUT	0.000	GAL/MONTH
CAPACITY OF TANK		GAL/LOAD
NGL THROUGHPUT	0.000	LOADS/MONTH
PHYSICAL DATA	VALUE	UNITS
LOADOUT TEMPERATURE (T)		R
MOLECULAR WEIGHT		LB/LBMOL
MOLES IN THE VAPOR PHASE (N)	0.000	LBMOL/FT3
VAPOR DENSITY2	0.000	LB/FT3

NOTES

VALUES OBTAINED FROM A SIMILAR CRESTWOOD FACILITY.

CALCULATED USING PV = NRT, WHERE R = UNIVERSAL GAS CONSTANT 10.73 CUBIC FEET *PSI/LBMOLE * DEG R

VOC EMISSIONS FROM PRESSURIZED NGL LOADOUT

SOURCE	DENSITY (LB/FT3)	HOSE VOLUME (FT3/LOAD)	LOADS PER MONTH	MONTHLY EMISSIONS (LB/MONTH) ³	ANNUAL EMISSIONS (TPY) ⁴
VAPOR HOSES	0.000	0.000	0.00	0.00	0.000
TOTAL				0.00	0.000
MONTHLY EMISSIONS (LB/MONTH) = DENSITY (LB/FT3) X HOSE VOLUME (FT3/LOAD) X LOADS PER MONTH (LOAD/MONTH)					
MONTHLY EMISSION RATE (LB/MONTH) =	0.00 lb	0.0000	0	=	0.00 lb
	FT ³	LOAD	MONTH		MONTH
ANNUAL EMISSION RATE (TPY) = UNCONTROLLED EMISSION RATE (LB/HR) X (8,760 HR/YR) / (2,000 LB/TON).					
ANNUAL EMISSION RATE (TPY) =	0	12 months	1 ton	=	0
	MOHTN	YR	2,000 LB		YR

SOURCE ID	FUG-1
SOURCE DESCRIPTION	WILLOW LAKE PLANT 1 - FUGITIVE EMISSIONS

FACILITY-WIDE FUGITIVE EMISSIONS PER PIECE OF EQUIPMENT

COMPONENT		EMIS. FACTOR ¹ KG/HR/COMP	EMIS. FACTOR ¹ LB/HR/COMP	COUNT ³	VOC CONTENT ² WT%	VOC ⁴ PPH	HAP CONTENT ² WT%	HAP ⁴ PPH	H ₂ S CONTENT ² WT%	H ₂ S ⁴ PPH	CO ₂ CONTENT ² WT%	CO ₂ ⁴ PPH	CH ₄ CONTENT ² WT%	CH ₄ ⁴ PPH	CO ₂ e ⁷ PPH
VALVES	GAS	4.50E-03	9.92E-03	931	23.15%	2.14E+00	0.85%	7.89E-02	0.0004%	3.69E-05	1.00%	9.24E-02	79.00%	7.2966	182.5068
	HEAVY OIL	8.40E-06	1.85E-05	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	2.50E-03	5.51E-03	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	2.50E-03	5.51E-03	87	100.00%	4.80E-01	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
FLANGES	LIGHT OIL - COND/PW	2.50E-03	5.51E-03	193	100.00%	1.06E+00	11.69%	1.24E-01	0.0004%	4.25E-06	0.074%	7.90E-04	0.78%	0.0082	0.2069
	GAS	3.90E-04	8.60E-04	261	23.15%	5.20E-02	0.85%	1.92E-03	0.0004%	8.98E-07	1.00%	2.24E-03	79.00%	0.1773	4.4343
	HEAVY OIL	3.90E-07	8.60E-07	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.10E-04	2.43E-04	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
CONNECTORS	LIGHT OIL- PROPANE	1.10E-04	2.43E-04	18	100.00%	4.37E-03	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	1.10E-04	2.43E-04	87	100.00%	2.11E-02	11.69%	2.47E-03	0.0004%	8.44E-08	0.074%	1.57E-05	0.78%	0.0002	0.0041
	GAS	2.00E-04	4.41E-04	3,290	23.15%	3.36E-01	0.85%	1.24E-02	0.0004%	5.80E-06	1.00%	1.45E-02	79.00%	1.1460	28.6644
	HEAVY OIL	7.50E-06	1.65E-05	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
OTHER	LIGHT OIL - MEOH	2.10E-04	4.63E-04	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	2.10E-04	4.63E-04	198	100.00%	9.17E-02	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	2.10E-04	4.63E-04	585	100.00%	2.71E-01	11.69%	3.17E-02	0.0004%	1.08E-06	0.074%	2.01E-04	0.78%	0.0021	0.0527
	GAS	8.80E-03	1.94E-02	9	23.15%	4.04E-02	0.85%	1.49E-03	0.0004%	6.98E-07	1.00%	1.75E-03	79.00%	0.1379	3.4502
PUMP SEALS	HEAVY OIL	3.20E-05	7.05E-05	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	7.50E-03	1.65E-02	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	7.50E-03	1.65E-02	0	100.00%	0.00E+00	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	7.50E-03	1.65E-02	0	100.00%	0.00E+00	11.69%	0.00E+00	0.0004%	0.00E+00	0.074%	0.00E+00	0.78%	0.0000	0.0000
OPEN ENDED-LINES	GAS	2.40E-03	5.29E-03	0	23.15%	0.00E+00	0.85%	0.00E+00	0.0004%	0.00E+00	1.00%	0.00E+00	79.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.30E-02	2.87E-02	1	100.00%	2.87E-02	100.00%	2.87E-02	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	1.30E-02	2.87E-02	0	100.00%	0.00E+00	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	1.30E-02	2.87E-02	0	100.00%	0.00E+00	11.69%	0.00E+00	0.0004%	0.00E+00	0.07%	0.00E+00	0.78%	0.0000	0.0000
PUMP SEALS	GAS	2.03E-03	4.48E-03	32	23.15%	3.32E-02	0.85%	1.22E-03	0.0004%	5.73E-07	1.00%	1.43E-03	79.00%	0.1131	2.8298
	HEAVY OIL	1.40E-04	3.09E-04	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.40E-03	3.09E-03	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	1.40E-03	3.09E-03	3	100.00%	9.26E-03	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
PUMP SEALS	LIGHT OIL - COND/PW	1.40E-03	3.09E-03	1	100.00%	3.09E-03	11.69%	3.61E-04	0.0004%	1.23E-08	0.074%	2.29E-06	0.78%	0.0000	0.0006
	HOURLY EMISSION RATE (LB/HR) ⁴					4.5717		0.2834		0.0001		0.1133		8.8815	222.1497
	ANNUAL EMISSION RATE (TPY) ⁵					20.0241		1.2413		0.0002		0.4963		38.9008	973.0157

NOTES

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

² Weight percent of gas and light liquid - Cond/PW components from facility gas analysis and liquid stream from ProMax report. H₂S is conservatively assumed to be 4 ppm.

Weight percent of heavy liquids and light liquids assumed to be 100% VOC. Propane assumed to have 0% HAP. Heavy liquid (glycol) and methanol assumed to be 100% HAP.

³ Component counts are based on actual facility counts plus estimated counts for new modification. A safety factor is included for non-methanol service components.

The safety factor provides a conservative estimate of fugitive components, and conservatively estimates emissions to account for variation in gas quality.

Safety Factor

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].

⁶ Annual GHG Emissions [tpy] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count * Operating Hours [hr/yr] * 1/2000 [ton/lb]

⁷ CO₂e tpy Emission Rate = CO₂ Emission Rate + CH₄ Emission Rate *GWP Factor

FACILITY-WIDE FUGITIVE EMISSIONS PER PIECE OF EQUIPMENT

COMPONENT		EMIS. FACTOR ¹ KG/HR/COMP	EMIS. FACTOR ¹ LB/HR/COMP	COUNT ³	VOC CONTENT ² WT%	VOC ⁴ PPH	HAP CONTENT ² WT%	HAP ⁴ PPH	H ₂ S CONTENT ² WT%	H ₂ S ⁴ PPH	CO ₂ CONTENT ² WT%	CO ₂ ⁴ PPH	CH ₄ CONTENT ² WT%	CH ₄ ⁴ PPH	CO ₂ e ⁷ PPH
VALVES	GAS	4.50E-03	9.92E-03	968	23.15%	2.22E+00	0.85%	8.20E-02	0.0004%	3.84E-05	1.00%	9.61E-02	79.00%	7.5889	189.8188
	HEAVY OIL	8.40E-06	1.85E-05	123	100.00%	2.28E-03	100.00%	2.28E-03	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	2.50E-03	5.51E-03	41	100.00%	2.26E-01	100.00%	2.26E-01	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	2.50E-03	5.51E-03	317	100.00%	1.75E+00	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
FLANGES	LIGHT OIL - COND/PW	2.50E-03	5.51E-03	482	100.00%	2.66E+00	11.69%	3.10E-01	0.0004%	1.06E-05	0.074%	1.97E-03	0.78%	0.0206	0.5165
	GAS	3.90E-04	8.60E-04	486	23.15%	9.68E-02	0.85%	3.57E-03	0.0004%	1.67E-06	1.00%	4.18E-03	79.00%	0.3304	8.2646
	HEAVY OIL	3.90E-07	8.60E-07	51	100.00%	4.35E-05	100.00%	4.35E-05	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.10E-04	2.43E-04	9	100.00%	2.18E-03	100.00%	2.18E-03	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
CONNECTORS	LIGHT OIL- PROPANE	1.10E-04	2.43E-04	227	100.00%	5.49E-02	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	1.10E-04	2.43E-04	291	100.00%	7.06E-02	11.69%	8.25E-03	0.0004%	2.82E-07	0.074%	5.24E-05	0.78%	0.0005	0.0137
	GAS	2.00E-04	4.41E-04	2,252	23.15%	2.30E-01	0.85%	8.48E-03	0.0004%	3.97E-06	1.00%	9.93E-03	79.00%	0.7843	19.6181
	HEAVY OIL	7.50E-06	1.65E-05	486	100.00%	8.04E-03	100.00%	8.04E-03	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
OTHER	LIGHT OIL - MEOH	2.10E-04	4.63E-04	143	100.00%	6.62E-02	100.00%	6.62E-02	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	2.10E-04	4.63E-04	697	100.00%	3.23E-01	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	2.10E-04	4.63E-04	1,270	100.00%	5.88E-01	11.69%	6.87E-02	0.0004%	2.35E-06	0.074%	4.37E-04	0.78%	0.0046	0.1143
	GAS	8.80E-03	1.94E-02	12	23.15%	5.16E-02	0.85%	1.91E-03	0.0004%	8.92E-07	1.00%	2.23E-03	79.00%	0.1763	4.4086
PUMP SEALS	HEAVY OIL	3.20E-05	7.05E-05	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	7.50E-03	1.65E-02	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	7.50E-03	1.65E-02	3	100.00%	5.70E-02	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	7.50E-03	1.65E-02	0	100.00%	0.00E+00	11.69%	0.00E+00	0.0004%	0.00E+00	0.074%	0.00E+00	0.78%	0.0000	0.0000
OPEN ENDED-LINES	GAS	2.40E-03	5.29E-03	0	23.15%	0.00E+00	0.85%	0.00E+00	0.0004%	0.00E+00	1.00%	0.00E+00	79.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.30E-02	2.87E-02	2	100.00%	5.73E-02	100.00%	5.73E-02	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	1.30E-02	2.87E-02	3	100.00%	9.89E-02	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	1.30E-02	2.87E-02	9	100.00%	2.58E-01	11.69%	3.02E-02	0.0004%	1.03E-06	0.07%	1.92E-04	0.78%	0.0020	0.0502
	GAS	2.03E-03	4.48E-03	2	23.15%	2.38E-03	0.85%	8.79E-05	0.0004%	4.12E-08	1.00%	1.03E-04	79.00%	0.0081	0.2034
	HEAVY OIL	1.40E-04	3.09E-04	0	100.00%	0.00E+00	100.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - MEOH	1.40E-03	3.09E-03	1	100.00%	3.09E-03	100.00%	3.09E-03	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL- PROPANE	1.40E-03	3.09E-03	0	100.00%	0.00E+00	0.00%	0.00E+00	0.0000%	0.00E+00	0.00%	0.00E+00	0.00%	0.0000	0.0000
	LIGHT OIL - COND/PW	1.40E-03	3.09E-03	0	100.00%	0.00E+00	11.69%	0.00E+00	0.0004%	0.00E+00	0.074%	0.00E+00	0.78%	0.0000	0.0000
HOURLY EMISSION RATE (LB/HR) ⁴						8.8245		0.8788		0.0001		0.1152		8.9157	223.0081
ANNUAL EMISSION RATE (TPY) ⁵						38.6513		3.8490		0.0003		0.5044		39.0509	976.7757

NOTES

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

² Weight percent of gas and light liquid - Cond/PW components from facility gas analysis and liquid stream from ProMax report. H₂S is conservatively assumed to be 4 ppm. Weight percent of heavy liquids and light liquids assumed to be 100% VOC. Propane assumed to have 0% HAP. Heavy liquid (glycol) and methanol assumed to be 100% HAP.

³ Component counts are based on actual facility counts plus estimated counts for new modification. A safety factor is included for non-methanol service components. The safety factor provides a conservative estimate of fugitive components, and conservatively estimates emissions to account for variation in gas quality.

Safety Factor

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].

⁶ Annual GHG Emissions [tpy] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count * Operating Hours [hr/yr] * 1/2000 [ton/lb]

⁷ CO₂e tpy Emission Rate = CO₂ Emission Rate + CH₄ Emission Rate *GWP Factor

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
PIGGING

SOURCE ID PIGGING
SOURCE DESCRIPTION PIG RECEIVER AND LAUNCHER EMISSIONS: WL1, WL2, WLCS

AREA	TYPE	COUNT	BLOWDOWNS NO./YR	ACTUAL FT ³	PRESSURE PSIG	TEMP. DEG. F	SCF/EVENT PER PIG TRAP
WL CS	RECEIVER	2.0	312.0	21.4	50.0	80.0	92.10
WL1	AUTO-LAUNCHER	1.0	156.0	88.5	1,000.0	80.0	5973.15
WL1	RECEIVER	1.0	156.0	11.8	150.0	80.0	129.27
WL2	RECEIVER	1.0	156.0	11.8	150.0	80.0	129.27

INLET GAS ¹		
MOLE. WT.	21.74	LB/LB-MOL
METHANE	55.99%	WT%
CO2	0.19%	WT%
VOC	24%	WT%
HAPS	1%	WT%
H2S	0.0004%	WT%

TOTAL EMISSIONS								
AREA	VOC EMISSIONS PPH	VOC EMISSIONS TPY	HAP EMISSIONS PPH	HAP EMISSIONS TPY	H2S EMISSIONS PPH	H2S EMISSIONS TPY	CO2 EMISSIONS TPY	METHANE EMISSIONS TPY
WL CS	0.0451	0.1975	0.0019	0.0082	7.52E-07	3.29E-06	0.0016	0.0316
WL1	1.4625	6.4059	0.0609	0.2669	2.44E-05	1.07E-04	0.0507	8.4780
WL1	0.0317	0.1386	0.0013	0.0058	5.28E-07	2.31E-06	0.0011	0.0245
WL2	0.0317	0.1386	0.0013	0.0058	5.28E-07	2.31E-06	0.0011	0.0245
TOTAL	1.5709	6.8807	0.0655	0.2867	2.62E-05	1.15E-04	0.0545	8.5586

Notes

¹ WEIGHT PERCENT OF GAS FROM FACILITY INLET GAS ANALYSIS. HAPS ARE BASED OF INLET TO DEHY GAS ANALYSIS. H2S IS CONSERVATIVELY ASSUMED TO BE 4 PPM.

EMISSIONS (TPY) = $\frac{\text{NUMBER OF EVENTS PER YEAR} * \text{GAS VOLUME (SCF/EVENT)} * \text{MOLECULAR WEIGHT OF GAS (LB/LB-MOL)} * \text{WEIGHT FRACTION OF POLLUTANT}}{\text{DENSITY OF NATURAL GAS (379 SCF/LB-MOL)} * 2000 \text{ (LB/TON)}}$

PIGGING EMISSIONS BASED ON INLET ANALYSIS				
COMPOSITION	MW ¹	WET VOL/MOL% ²	DRY VOL/MOL%	MW*MOL%
HYDROGEN SULFIDE	34.082	0.0004%	0.0004%	0.0001
OXYGEN	15.999	0.0030%	0.0030%	0.0005
CARBON DIOXIDE	44.010	0.0940%	0.0940%	0.0414
NITROGEN	28.013	0.8930%	0.8930%	0.2502
METHANE	16.043	76.0090%	76.0087%	12.1941
ETHANE	30.070	12.6090%	12.6089%	3.7915
PROPANE	44.097	6.1250%	6.1250%	2.7009
I-BUTANE	58.123	0.8400%	0.8400%	0.4882
N-BUTANE	58.123	1.9530%	1.9530%	1.1351
I-PENTANE	72.150	0.4450%	0.4450%	0.3211
N-PENTANE	72.150	0.4910%	0.4910%	0.3543
HEXANES +	86.180	0.5380%	0.5380%	0.4636
TOTAL		100.0%	100.0%	21.7410

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HAULL ROAD INPUTS

SOURCE ID HAUL
SOURCE DESCRIPTION TRUCK LOADOUT OF CONDENSATE AND PROD. WATER

ITEM	UNITS	CONDENSATE	PROD. WATER
DENSITY	LBS/GAL	6.6720	8.3400
WL1	BBL/YR	7,500.00	10,000.00
WL2	BBL/YR	10,000.00	10,000.00
WLCS	BBL/YR	62,400.00	62,400.00
TOTAL	BBL/YR	79,900.00	82,400.00

HAUL ROAD INPUTS

MAX FACILITY THROUGHPUT:						
ITEM	PRODUCT	BBL/WEEK	BBL/YR	TRUCK CAPACITY (BBL)	VEHICLES PER DAY (VPD) ⁵	VEHICLES PER YEAR (VPY) ⁶
HAUL-1	CONDENSATE + PW	3,121.2	162,300.0	139.4	3.190	1,165.0
HAUL-2	NGL	0.0	0.0	200.0	0.000	0.0
TOTAL		3,121.2	162,300.0	169.7	3.190	1,165.0

VEHICLE TYPE	WEIGHT (TONS) EMPTY VEHICLE ¹	LOAD SIZE ²	LOADED VEHICLE ³	MEAN VEHICLE ⁴	SEGMENTS PER TRIP	TRIPS PER HOUR ⁷	OPERATION HRS/DAY	TOTAL VEHICLES NO./DAY	AVE. VEHICLE WT. TONS	TRIPS TRIPS/HR
HAUL-1	16.00	22.01	38.01	27.00	1.00	1.00	24.00	4.00	27.00	1.00
HAUL-2	16.00	21.02	37.02	26.51	1.00	0.00	24.00	0.00	26.51	0.00

- 1 Empty vehicle weight includes driver and occupants and full fuel load.
- 2 Cargo, transported materials, etc. (Water Density*SG*8400 gal truck/ 2000lb/ton)
- 3 Loaded vehicle weight = Empty + Load Size
- 4 Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
- 5 Vehicles per day =Maximum Facility Throughput per year*(1/Truck Capacity)*(1 year/365 days)
- 6 Vehicles per year =Maximum Facility Throughput per year (bbl/yr)*(1/Truck Capacity (bbl))
- 7 Trips per hour = Vehicles per day * Segments per trip ÷ Hours of Operation per Day

CRESTWOOD NEW MEXICO PIPELINE LLC
WILLOW LAKE
HAUL

SOURCE ID HAUL
SOURCE DESCRIPTION TRUCK LOADOUT OF CONDENSATE AND PROD. WATER

HAUL ROAD EMISSION FACTOR CALCULATION

EMISSION FACTOR CALCULATION (AP-42 SEC. 13.2.2.3 NOVEMBER, 2006, EQUATION 2)

SOURCE ID	OPERATON	S, SILT CONTENT ¹	W, AVG. VEH. WT.	K, PM-10	K, PM-2.5	A, PM-10	A, PM-2.5	B, PM-10	B, PM-2.5
UNITS	HRS/YR	%	TONS	LB/VMT	LB/VMT	LB/VMT	LB/VMT	LB/VMT	LB/VMT
HAUL-1	8,760.0	4.800	27.004	1.500	0.150	0.900	0.900	0.450	0.450
HAUL-2	8,760.0	4.800	26.508	1.500	0.150	0.900	0.900	0.450	0.450

SOURCE ID	HOURLY EMISSION FACTOR ²			WET DAY, ADJUSTED EMIS. FACTOR ³		
	E, PM-10 LB/VMT	E, PM-2.5 LB/VMT		WET DAYS NO.	E, PM-10 LB/VMT	E, PM-2.5 LB/VMT
HAUL-1	1.768	0.177		70.0	1.429	0.143
HAUL-2	1.753	0.175		70.0	1.417	0.142

HAUL ROAD EMISSION CALCULATIONS

SOURCE ID	AVG. TRIPS PER HOUR	AVG. TRIPS PER DAY	TRIPS PER YEAR	SEGMENT LENGTH	AVERAGE VMT/HR ⁴	AVERAGE VMT/YR ⁵	PM-10 ⁶		PM-2.5 ⁶	
	T	T	T	MI	MI/HR	MI/YR	PPH	TPY	PPH	TPY
HAUL-1	1.00	4.00	1165.00	0.096	0.0964	112.31	0.17	0.080	0.017	0.0080
HAUL-2	0.00	0.00	0.00	0.085	0.0000	0.00	0.00	0.00	0.000	0.000
TOTAL							0.17	0.08	0.017	0.008

NOTES

- ¹ Surface silt = % of 75 micron diameter and smaller particles (NMED Default)
- ² $E = k \times (s/12)^a \times (W/3)^b$ (AP-42 page 13.2.2-4 Equation 1a, November 2006)
E= Size Specific Emission Factor (lb/VMT)
s = surface material silt content (%)
k, a, b = constants from AP-42 Table 13.2.2-2
W = Weighted Mean Vehicle Weight from Haul Road Inputs (tons)
- ³ Wet Day Emission Factor = $E \times (365 - \text{Wet Days})/365$. Wet days value is the NM default allowed by NMED without additional justification.
- ⁴ VMT/hr = Vehicle Miles Travelled per hour= Trips per hour * Segment Length
- ⁵ VMT/yr = Vehicle Miles Travelled per year = Trips per day * 365 days per year * Segment Length
- ⁶ lb/hr PM = lb/VMT * VMT/hr
tpy PM = lb/VMT * VMT/yr * 1 ton/2000 lb

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.
-

Compressor Engines: C-1100, C-1200, C-2300, C-2400, and C-1110 to C-1180. These engines are unmodified under this permit revision request. However, the following information/parameters supplied in the prior permit revision were utilized:

- Manufacturer and catalyst data
- AP-42 Tables 3.2-1 and 3.2-2
- 40 CFR 98 Subparts A and C

Glycol Dehydrators: DEHY-803, DEHY-804 and DEHY-EG are to be deleted/removed from service under this permit revision request. DEHY-805 and DEHY-1505 are unmodified under this permit revision request. Operating parameters/controls/throughputs and emissions will remain as currently authorized, with emissions based on:

- GRI GlyCalc 4.0
- Dehy Upstream Gas Analysis (5/28/2020)
- 40 CFR 98 Subpart A

Heaters and Reboilers: HTR-802 (the gas plant regen heater), HTR-803, HTR-804 and HTR-730 are to be deleted/removed from service under this permit revision request. HTR-805 and HTR-1505 will remain unmodified under this permit revision request. Operating parameters/throughputs and emissions will remain as currently authorized.

- AP-42 Tables 1.4-1, 1.4-2, and 1.4-3
- 40 CFR 98 Subparts A and C

Fugitive Components: FUG-1 and FUG-2; are to be modified under this permit revision request, with updated component counts due to the shutdown of both natural gas processing units.

- Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates (1995)
- Dehy Upstream Gas Analysis (5/28/2020)
- BR&E ProMax Report

Storage Tanks: WL1-TK601 through WL1-TK603, WL2-TK8101 and WL2-TK8102, WLCS-TK2301 to WLCS-TK2304 will remain unmodified under this permit revision request. Operating parameters/controls/throughputs and emissions will remain as currently authorized.

- BR&E ProMax

- Condensate Liquid Analysis (5/28/2020)

Condensate Loading: ATM LOAD will remain unmodified under this permit revision request. Operating parameters/controls/throughputs and emissions will remain as currently authorized.

- BR&E ProMax
- Condensate Liquid Analysis (5/28/2020)

Natural Gas Liquid Loading; NGL LOAD) will be deleted/removed from service with the shutdown of both natural gas processing plants.

Case Name: 2020_Willow Lake_Dehy 5

File Name: P:\1. CLIENTS\Crestwood\Willow Lake NSR\ProMax and GlyCalc\GlyCalc
Runs\2020_Dehy5_WillowLake 2020 0817.ddf

Date: August 17, 2020

DESCRIPTION:DEHY-805

Description: 2020 PTE Calculations

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:**CONTROLLED REGENERATOR EMISSIONS**

Component	lbs/hr	lbs/day	tons/yr
Hydrogen Sulfide	0.0068	0.162	0.0296
Methane	1.3979	33.549	6.1227
Ethane	1.5788	37.892	6.9152
Propane	2.2892	54.940	10.0266
Isobutane	0.6413	15.392	2.8090
n-Butane	1.9162	45.989	8.3930
Isopentane	0.4313	10.351	1.8891
n-Pentane	0.5788	13.892	2.5352
n-Hexane	0.3897	9.353	1.7069
Other Hexanes	0.3860	9.263	1.6905
Heptanes	0.6258	15.020	2.7412
Benzene	0.0595	1.429	0.2608
Toluene	1.4731	35.354	6.4522
Ethylbenzene	0.0678	1.628	0.2971
Xylenes	0.2574	6.177	1.1273
C8+ Heavies	0.0078	0.186	0.0340
Total Emissions	12.1073	290.576	53.0302
Total Hydrocarbon Emissions	12.1006	290.414	53.0006
Total VOC Emissions	9.1239	218.974	39.9627
Total HAP Emissions	2.2475	53.941	9.8442
Total BTEX Emissions	1.8578	44.588	8.1373

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Hydrogen Sulfide	0.0073	0.174	0.0318
Methane	1.4039	33.693	6.1490
Ethane	1.6159	38.783	7.0778
Propane	2.5594	61.425	11.2102
Isobutane	0.7913	18.992	3.4661
n-Butane	2.5220	60.527	11.0462
Isopentane	0.8215	19.716	3.5981
n-Pentane	1.1584	27.801	5.0736
n-Hexane	1.2758	30.620	5.5881
Other Hexanes	1.0618	25.484	4.6508
Heptanes	4.5189	108.454	19.7928

Benzene	0.2927	7.025	1.2820
Toluene	18.5091	444.218	81.0698
Ethylbenzene	2.5935	62.244	11.3596
Xylenes	10.5216	252.517	46.0844
C8+ Heavies	16.4331	394.394	71.9769

Total Emissions	66.0861	1586.067	289.4572

Total Hydrocarbon Emissions	66.0789	1585.892	289.4254
Total VOC Emissions	63.0590	1513.417	276.1985
Total HAP Emissions	33.1927	796.624	145.3839
Total BTEX Emissions	31.9168	766.004	139.7958

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr

Hydrogen Sulfide	0.0132	0.317	0.0579
Methane	208.9957	5015.897	915.4011
Ethane	65.9011	1581.625	288.6466
Propane	47.5613	1141.472	208.3186
Isobutane	9.5035	228.084	41.6253
n-Butane	22.9093	549.824	100.3428
Isopentane	6.3946	153.471	28.0084
n-Pentane	7.2055	172.932	31.5601
n-Hexane	4.2568	102.162	18.6446
Other Hexanes	4.7382	113.716	20.7531
Heptanes	7.1305	171.131	31.2314
Benzene	0.0331	0.795	0.1451
Toluene	1.3065	31.356	5.7225
Ethylbenzene	0.1025	2.461	0.4491
Xylenes	0.2857	6.857	1.2515
C8+ Heavies	2.1529	51.671	9.4299

Total Emissions	388.4904	9323.770	1701.5880

Total Hydrocarbon Emissions	388.4772	9323.453	1701.5301
Total VOC Emissions	113.5804	2725.931	497.4823
Total HAP Emissions	5.9847	143.632	26.2128
Total BTEX Emissions	1.7279	41.470	7.5682

EQUIPMENT REPORTS:

CONDENSER

Condenser Outlet Temperature:	120.00 deg. F
Condenser Pressure:	13.50 psia
Condenser Duty:	1.24e-001 MM BTU/hr
Hydrocarbon Recovery:	4.35 bbls/day
Produced Water:	10.49 bbls/day
VOC Control Efficiency:	85.53 %
HAP Control Efficiency:	93.23 %
BTEX Control Efficiency:	94.18 %
Dissolved Hydrocarbons in Water:	383.12 mg/L

Component	Emitted	Condensed

Water	0.49%	99.51%

Carbon Dioxide	97.99%	2.01%
Hydrogen Sulfide	93.05%	6.95%
Nitrogen	99.57%	0.43%
Methane	99.57%	0.43%
Ethane	97.70%	2.30%
Propane	89.44%	10.56%
Isobutane	81.04%	18.96%
n-Butane	75.98%	24.02%
Isopentane	52.50%	47.50%
n-Pentane	49.97%	50.03%
n-Hexane	30.55%	69.45%
Other Hexanes	36.35%	63.65%
Heptanes	13.85%	86.15%
Benzene	20.34%	79.66%
Toluene	7.96%	92.04%
Ethylbenzene	2.61%	97.39%
Xylenes	2.45%	97.55%
C8+ Heavies	0.05%	99.95%

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25 and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages:	1.25
Calculated Dry Gas Dew Point:	3.04 lbs. H2O/MMSCF
Temperature:	100.0 deg. F
Pressure:	975.0 psig
Dry Gas Flow Rate:	65.0000 MMSCF/day
Glycol Losses with Dry Gas:	1.7246 lb/hr
Wet Gas Water Content:	Saturated
Calculated Wet Gas Water Content:	59.85 lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	5.84 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	5.07%	94.93%
Carbon Dioxide	99.68%	0.32%
Hydrogen Sulfide	98.10%	1.90%
Nitrogen	99.97%	0.03%
Methane	99.97%	0.03%
Ethane	99.93%	0.07%
Propane	99.90%	0.10%
Isobutane	99.87%	0.13%
n-Butane	99.83%	0.17%
Isopentane	99.84%	0.16%
n-Pentane	99.80%	0.20%
n-Hexane	99.70%	0.30%
Other Hexanes	99.77%	0.23%
Heptanes	99.51%	0.49%
Benzene	88.52%	11.48%
Toluene	85.15%	14.85%
Ethylbenzene	82.43%	17.57%
Xylenes	76.44%	23.56%
C8+ Heavies	98.84%	1.16%

FLASH TANK

Flash Control: Vented to atmosphere
Flash Temperature: 120.0 deg. F
Flash Pressure: 45.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.75%	0.25%
Carbon Dioxide	7.74%	92.26%
Hydrogen Sulfide	35.44%	64.56%
Nitrogen	0.64%	99.36%
Methane	0.67%	99.33%
Ethane	2.39%	97.61%
Propane	5.11%	94.89%
Isobutane	7.69%	92.31%
n-Butane	9.92%	90.08%
Isopentane	11.58%	88.42%
n-Pentane	14.06%	85.94%
n-Hexane	23.29%	76.71%
Other Hexanes	18.74%	81.26%
Heptanes	39.01%	60.99%
Benzene	90.33%	9.67%
Toluene	93.92%	6.08%
Ethylbenzene	96.59%	3.41%
Xylenes	97.70%	2.30%
C8+ Heavies	89.62%	10.38%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	45.15%	54.85%
Carbon Dioxide	0.00%	100.00%
Hydrogen Sulfide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	1.88%	98.12%
n-Pentane	1.75%	98.25%
n-Hexane	1.26%	98.74%
Other Hexanes	2.83%	97.17%
Heptanes	0.90%	99.10%
Benzene	5.44%	94.56%
Toluene	8.31%	91.69%
Ethylbenzene	10.66%	89.34%
Xylenes	13.13%	86.87%
C8+ Heavies	11.58%	88.42%

STREAM REPORTS:

WET GAS STREAM

Temperature: 100.00 deg. F
 Pressure: 989.70 psia
 Flow Rate: 2.71e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.26e-001	1.62e+002
Carbon Dioxide	1.81e-001	5.69e+002
Hydrogen Sulfide	4.00e-004	9.73e-001
Nitrogen	7.90e-001	1.58e+003
Methane	7.87e+001	9.02e+004
Ethane	1.12e+001	2.41e+004
Propane	5.11e+000	1.61e+004
Isobutane	7.30e-001	3.03e+003
n-Butane	1.62e+000	6.74e+003
Isopentane	3.83e-001	1.97e+003
n-Pentane	3.98e-001	2.05e+003
n-Hexane	1.79e-001	1.10e+003
Other Hexanes	2.15e-001	1.32e+003
Heptanes	2.33e-001	1.67e+003
Benzene	4.99e-004	2.79e+000
Toluene	2.00e-002	1.32e+002
Ethylbenzene	2.00e-003	1.52e+001
Xylenes	5.99e-003	4.55e+001
C8+ Heavies	1.12e-001	1.36e+003
Total Components	100.00	1.52e+005

DRY GAS STREAM

Temperature: 100.00 deg. F
 Pressure: 989.70 psia
 Flow Rate: 2.71e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	6.40e-003	8.23e+000
Carbon Dioxide	1.80e-001	5.67e+002
Hydrogen Sulfide	3.93e-004	9.55e-001
Nitrogen	7.91e-001	1.58e+003
Methane	7.88e+001	9.02e+004
Ethane	1.12e+001	2.41e+004
Propane	5.11e+000	1.61e+004
Isobutane	7.30e-001	3.03e+003
n-Butane	1.62e+000	6.72e+003
Isopentane	3.83e-001	1.97e+003
n-Pentane	3.97e-001	2.05e+003
n-Hexane	1.79e-001	1.10e+003
Other Hexanes	2.15e-001	1.32e+003
Heptanes	2.32e-001	1.66e+003
Benzene	4.43e-004	2.47e+000
Toluene	1.70e-002	1.12e+002
Ethylbenzene	1.65e-003	1.25e+001

Xylenes	4.59e-003	3.48e+001
C8+ Heavies	1.11e-001	1.35e+003
Total Components	100.00	1.52e+005

LEAN GLYCOL STREAM

Temperature: 100.00 deg. F
Flow Rate: 1.50e+001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.84e+001	8.30e+003
Water	1.50e+000	1.27e+002
Carbon Dioxide	2.16e-012	1.82e-010
Hydrogen Sulfide	2.19e-014	1.85e-012
Nitrogen	5.74e-013	4.84e-011
Methane	9.38e-018	7.92e-016
Ethane	9.85e-008	8.31e-006
Propane	8.08e-009	6.82e-007
Isobutane	1.43e-009	1.20e-007
n-Butane	3.38e-009	2.85e-007
Isopentane	1.86e-004	1.57e-002
n-Pentane	2.45e-004	2.07e-002
n-Hexane	1.94e-004	1.63e-002
Other Hexanes	3.66e-004	3.09e-002
Heptanes	4.88e-004	4.12e-002
Benzene	2.00e-004	1.68e-002
Toluene	1.99e-002	1.68e+000
Ethylbenzene	3.67e-003	3.10e-001
Xylenes	1.88e-002	1.59e+000
C8+ Heavies	2.55e-002	2.15e+000
Total Components	100.00	8.44e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 100.00 deg. F
Pressure: 989.70 psia
Flow Rate: 1.63e+001 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.17e+001	8.30e+003
Water	3.11e+000	2.81e+002
Carbon Dioxide	3.32e-002	3.00e+000
Hydrogen Sulfide	2.26e-004	2.05e-002
Nitrogen	4.16e-002	3.76e+000
Methane	2.32e+000	2.10e+002
Ethane	7.46e-001	6.75e+001
Propane	5.54e-001	5.01e+001
Isobutane	1.14e-001	1.03e+001
n-Butane	2.81e-001	2.54e+001
Isopentane	7.99e-002	7.23e+000
n-Pentane	9.26e-002	8.38e+000
n-Hexane	6.13e-002	5.55e+000
Other Hexanes	6.44e-002	5.83e+000
Heptanes	1.29e-001	1.17e+001

Benzene	3.79e-003	3.43e-001
Toluene	2.37e-001	2.15e+001
Ethylbenzene	3.32e-002	3.01e+000
Xylenes	1.37e-001	1.24e+001
C8+ Heavies	2.29e-001	2.07e+001

Total Components	100.00	9.05e+003
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FLASH TANK OFF GAS STREAM

Temperature: 120.00 deg. F
 Pressure: 59.70 psia
 Flow Rate: 6.64e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	2.20e-001	6.92e-001
Carbon Dioxide	3.60e-001	2.77e+000
Hydrogen Sulfide	2.22e-003	1.32e-002
Nitrogen	7.63e-001	3.74e+000
Methane	7.45e+001	2.09e+002
Ethane	1.25e+001	6.59e+001
Propane	6.17e+000	4.76e+001
Isobutane	9.35e-001	9.50e+000
n-Butane	2.25e+000	2.29e+001
Isopentane	5.07e-001	6.39e+000
n-Pentane	5.71e-001	7.21e+000
n-Hexane	2.82e-001	4.26e+000
Other Hexanes	3.14e-001	4.74e+000
Heptanes	4.07e-001	7.13e+000
Benzene	2.42e-003	3.31e-002
Toluene	8.11e-002	1.31e+000
Ethylbenzene	5.52e-003	1.03e-001
Xylenes	1.54e-002	2.86e-001
C8+ Heavies	7.23e-002	2.15e+000
Total Components	100.00	3.96e+002

FLASH TANK GLYCOL STREAM

Temperature: 120.00 deg. F
 Flow Rate: 1.54e+001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.59e+001	8.30e+003
Water	3.24e+000	2.80e+002
Carbon Dioxide	2.68e-003	2.32e-001
Hydrogen Sulfide	8.38e-005	7.25e-003
Nitrogen	2.80e-004	2.43e-002
Methane	1.62e-002	1.40e+000
Ethane	1.87e-002	1.62e+000
Propane	2.96e-002	2.56e+000
Isobutane	9.14e-003	7.91e-001
n-Butane	2.91e-002	2.52e+000
Isopentane	9.67e-003	8.37e-001
n-Pentane	1.36e-002	1.18e+000
n-Hexane	1.49e-002	1.29e+000

Other Hexanes	1.26e-002	1.09e+000
Heptanes	5.27e-002	4.56e+000
Benzene	3.58e-003	3.10e-001
Toluene	2.33e-001	2.02e+001
Ethylbenzene	3.35e-002	2.90e+000
Xylenes	1.40e-001	1.21e+001
C8+ Heavies	2.15e-001	1.86e+001

Total Components	100.00	8.66e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 3.54e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	9.16e+001	1.54e+002
Carbon Dioxide	5.66e-002	2.32e-001
Hydrogen Sulfide	2.28e-003	7.25e-003
Nitrogen	9.29e-003	2.43e-002
Methane	9.38e-001	1.40e+000
Ethane	5.76e-001	1.62e+000
Propane	6.22e-001	2.56e+000
Isobutane	1.46e-001	7.91e-001
n-Butane	4.65e-001	2.52e+000
Isopentane	1.22e-001	8.21e-001
n-Pentane	1.72e-001	1.16e+000
n-Hexane	1.59e-001	1.28e+000
Other Hexanes	1.32e-001	1.06e+000
Heptanes	4.84e-001	4.52e+000
Benzene	4.02e-002	2.93e-001
Toluene	2.15e+000	1.85e+001
Ethylbenzene	2.62e-001	2.59e+000
Xylenes	1.06e+000	1.05e+001
C8+ Heavies	1.03e+000	1.64e+001

Total Components	100.00	2.20e+002

CONDENSER VENT GAS STREAM

Temperature: 120.00 deg. F
 Pressure: 13.50 psia
 Flow Rate: 1.26e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	1.26e+001	7.57e-001
Carbon Dioxide	1.55e+000	2.28e-001
Hydrogen Sulfide	5.95e-002	6.75e-003
Nitrogen	2.59e-001	2.42e-002
Methane	2.62e+001	1.40e+000
Ethane	1.58e+001	1.58e+000
Propane	1.56e+001	2.29e+000
Isobutane	3.31e+000	6.41e-001
n-Butane	9.90e+000	1.92e+000
Isopentane	1.80e+000	4.31e-001

n-Pentane	2.41e+000	5.79e-001
n-Hexane	1.36e+000	3.90e-001
Other Hexanes	1.35e+000	3.86e-001
Heptanes	1.88e+000	6.26e-001
Benzene	2.29e-001	5.95e-002
Toluene	4.80e+000	1.47e+000
Ethylbenzene	1.92e-001	6.78e-002
Xylenes	7.28e-001	2.57e-001
C8+ Heavies	1.37e-002	7.76e-003

Total Components	100.00	1.31e+001
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CONDENSER PRODUCED WATER STREAM

Temperature: 120.00 deg. F
Flow Rate: 3.06e-001 gpm

Component	Conc. (wt%)	Loading (lb/hr)	(ppm)
Water	1.00e+002	1.53e+002	999603.
Carbon Dioxide	1.25e-003	1.91e-003	12.
Hydrogen Sulfide	1.21e-004	1.86e-004	1.
Nitrogen	3.46e-006	5.29e-006	0.
Methane	3.86e-004	5.91e-004	4.
Ethane	4.96e-004	7.59e-004	5.
Propane	7.39e-004	1.13e-003	7.
Isobutane	1.13e-004	1.73e-004	1.
n-Butane	4.47e-004	6.84e-004	4.
Isopentane	7.10e-005	1.09e-004	1.
n-Pentane	1.02e-004	1.56e-004	1.
n-Hexane	5.70e-005	8.73e-005	1.
Other Hexanes	4.55e-005	6.97e-005	0.
Heptanes	5.08e-005	7.77e-005	1.
Benzene	1.39e-003	2.13e-003	14.
Toluene	2.83e-002	4.33e-002	283.
Ethylbenzene	9.81e-004	1.50e-003	10.
Xylenes	5.16e-003	7.90e-003	52.
C8+ Heavies	3.97e-007	6.08e-007	0.
Total Components	100.00	1.53e+002	1000000.

CONDENSER RECOVERED OIL STREAM

Temperature: 120.00 deg. F
Flow Rate: 1.27e-001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
Water	4.01e-002	2.16e-002
Carbon Dioxide	5.12e-003	2.76e-003
Hydrogen Sulfide	5.90e-004	3.18e-004
Nitrogen	1.85e-004	9.99e-005
Methane	1.01e-002	5.42e-003
Ethane	6.74e-002	3.64e-002
Propane	4.99e-001	2.69e-001
Isobutane	2.78e-001	1.50e-001
n-Butane	1.12e+000	6.05e-001
Isopentane	7.23e-001	3.90e-001

n-Pentane	1.07e+000	5.79e-001
n-Hexane	1.64e+000	8.86e-001
Other Hexanes	1.25e+000	6.76e-001
Heptanes	7.22e+000	3.89e+000
Benzene	4.28e-001	2.31e-001
Toluene	3.15e+001	1.70e+001
Ethylbenzene	4.68e+000	2.52e+000
Xylenes	1.90e+001	1.03e+001
C8+ Heavies	3.04e+001	1.64e+001

Total Components	100.00	5.39e+001

Case Name: 2020_Willow Lake_Dehy_80MMSCFD

File Name: P:\1. CLIENTS\Crestwood\Willow Lake NSR Sig Rev\ProMax and GlyCalc\GlyCalc
Runs\Dehydration Unit\2020_Dehy_WLCS_80MMSCFD.ddf

Date: December 08, 2020

DESCRIPTION:DEHY-1505

Description: 2020 PTE Calculations

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:**CONTROLLED REGENERATOR EMISSIONS**

Component	lbs/hr	lbs/day	tons/yr
Hydrogen Sulfide	0.0081	0.194	0.0353
Methane	1.8638	44.731	8.1633
Ethane	2.0662	49.589	9.0500
Propane	3.0541	73.299	13.3771
Isobutane	0.8593	20.623	3.7636
n-Butane	2.5787	61.889	11.2947
Isopentane	0.6127	14.706	2.6838
n-Pentane	0.8160	19.584	3.5741
n-Hexane	0.5606	13.455	2.4555
Other Hexanes	0.5560	13.344	2.4352
Heptanes	0.8949	21.478	3.9198
Benzene	0.0757	1.818	0.3318
Toluene	1.9355	46.452	8.4774
Ethylbenzene	0.0908	2.178	0.3975
Xylenes	0.3473	8.335	1.5211
C8+ Heavies	0.0102	0.246	0.0449
Total Emissions	16.3300	391.919	71.5252
Total Hydrocarbon Emissions	16.3219	391.725	71.4899
Total VOC Emissions	12.3919	297.406	54.2765
Total HAP Emissions	3.0099	72.237	13.1833
Total BTEX Emissions	2.4493	58.783	10.7278

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Hydrogen Sulfide	0.0086	0.206	0.0375
Methane	1.8701	44.881	8.1908
Ethane	2.1037	50.488	9.2140
Propane	3.3304	79.930	14.5872
Isobutane	1.0133	24.319	4.4382
n-Butane	3.2040	76.895	14.0334
Isopentane	1.0360	24.863	4.5376
n-Pentane	1.4482	34.757	6.3431
n-Hexane	1.5384	36.923	6.7384
Other Hexanes	1.3023	31.255	5.7040
Heptanes	5.1747	124.194	22.6653

Benzene	0.3026	7.262	1.3253
Toluene	19.0405	456.973	83.3975
Ethylbenzene	2.6596	63.831	11.6491
Xylenes	10.9008	261.619	47.7454
C8+ Heavies	16.6000	398.401	72.7081
Total Emissions	71.5331	1716.795	313.3150
Total Hydrocarbon Emissions	71.5245	1716.589	313.2775
Total VOC Emissions	67.5508	1621.220	295.8726
Total HAP Emissions	34.4419	826.606	150.8556
Total BTEX Emissions	32.9035	789.684	144.1172

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr
Hydrogen Sulfide	0.0118	0.284	0.0519
Methane	209.1286	5019.087	915.9834
Ethane	65.4390	1570.537	286.6230
Propane	46.8732	1124.957	205.3047
Isobutane	9.2882	222.917	40.6824
n-Butane	22.2317	533.562	97.3750
Isopentane	6.1784	148.283	27.0616
n-Pentane	6.9083	165.800	30.2585
n-Hexane	3.9783	95.479	17.4250
Other Hexanes	4.4851	107.643	19.6449
Heptanes	6.4042	153.701	28.0504
Benzene	0.0264	0.634	0.1156
Toluene	1.0450	25.081	4.5773
Ethylbenzene	0.0827	1.984	0.3621
Xylenes	0.2318	5.564	1.0154
C8+ Heavies	1.7714	42.513	7.7586
Total Emissions	384.0844	9218.026	1682.2898
Total Hydrocarbon Emissions	384.0726	9217.742	1682.2380
Total VOC Emissions	109.5049	2628.118	479.6315
Total HAP Emissions	5.3642	128.742	23.4953
Total BTEX Emissions	1.3859	33.262	6.0704

EQUIPMENT REPORTS:

CONDENSER

Condenser Outlet Temperature: 120.00 deg. F
 Condenser Pressure: 13.50 psia
 Condenser Duty: 1.49e-001 MM BTU/hr
 Hydrocarbon Recovery: 4.45 bbls/day
 Produced Water: 12.85 bbls/day
 VOC Control Efficiency: 81.66 %
 HAP Control Efficiency: 91.26 %
 BTEX Control Efficiency: 92.56 %
 Dissolved Hydrocarbons in Water: 377.75 mg/L

Component	Emitted	Condensed
Water	0.54%	99.46%

Carbon Dioxide	98.33%	1.67%
Hydrogen Sulfide	94.24%	5.76%
Nitrogen	99.67%	0.33%
Methane	99.66%	0.34%
Ethane	98.22%	1.78%
Propane	91.70%	8.30%
Isobutane	84.80%	15.20%
n-Butane	80.48%	19.52%
Isopentane	59.15%	40.85%
n-Pentane	56.35%	43.65%
n-Hexane	36.44%	63.56%
Other Hexanes	42.69%	57.31%
Heptanes	17.29%	82.71%
Benzene	25.04%	74.96%
Toluene	10.17%	89.83%
Ethylbenzene	3.41%	96.59%
Xylenes	3.19%	96.81%
C8+ Heavies	0.06%	99.94%

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25 and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages:	1.25
Calculated Dry Gas Dew Point:	3.35 lbs. H2O/MMSCF
Temperature:	100.0 deg. F
Pressure:	975.0 psig
Dry Gas Flow Rate:	80.0000 MMSCF/day
Glycol Losses with Dry Gas:	2.1234 lb/hr
Wet Gas Water Content:	Saturated
Calculated Wet Gas Water Content:	59.85 lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	4.77 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	5.58%	94.42%
Carbon Dioxide	99.74%	0.26%
Hydrogen Sulfide	98.47%	1.53%
Nitrogen	99.98%	0.02%
Methane	99.98%	0.02%
Ethane	99.94%	0.06%
Propane	99.92%	0.08%
Isobutane	99.89%	0.11%
n-Butane	99.86%	0.14%
Isopentane	99.87%	0.13%
n-Pentane	99.84%	0.16%
n-Hexane	99.76%	0.24%
Other Hexanes	99.81%	0.19%
Heptanes	99.60%	0.40%
Benzene	90.58%	9.42%
Toluene	87.77%	12.23%
Ethylbenzene	85.47%	14.53%
Xylenes	80.28%	19.72%
C8+ Heavies	99.07%	0.93%

FLASH TANK

Flash Control: Vented to atmosphere
Flash Temperature: 120.0 deg. F
Flash Pressure: 65.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.82%	0.18%
Carbon Dioxide	10.04%	89.96%
Hydrogen Sulfide	41.98%	58.02%
Nitrogen	0.85%	99.15%
Methane	0.89%	99.11%
Ethane	3.11%	96.89%
Propane	6.63%	93.37%
Isobutane	9.84%	90.16%
n-Butane	12.60%	87.40%
Isopentane	14.54%	85.46%
n-Pentane	17.53%	82.47%
n-Hexane	28.10%	71.90%
Other Hexanes	22.91%	77.09%
Heptanes	44.88%	55.12%
Benzene	92.37%	7.63%
Toluene	95.20%	4.80%
Ethylbenzene	97.30%	2.70%
Xylenes	98.18%	1.82%
C8+ Heavies	91.36%	8.64%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	40.18%	59.82%
Carbon Dioxide	0.00%	100.00%
Hydrogen Sulfide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	1.49%	98.51%
n-Pentane	1.40%	98.60%
n-Hexane	1.04%	98.96%
Other Hexanes	2.30%	97.70%
Heptanes	0.78%	99.22%
Benzene	5.32%	94.68%
Toluene	8.20%	91.80%
Ethylbenzene	10.59%	89.41%
Xylenes	13.07%	86.93%
C8+ Heavies	11.34%	88.66%

STREAM REPORTS:

WET GAS STREAM

Temperature: 100.00 deg. F
 Pressure: 989.70 psia
 Flow Rate: 3.34e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.26e-001	2.00e+002
Carbon Dioxide	1.81e-001	7.00e+002
Hydrogen Sulfide	4.00e-004	1.20e+000
Nitrogen	7.90e-001	1.95e+003
Methane	7.87e+001	1.11e+005
Ethane	1.12e+001	2.97e+004
Propane	5.11e+000	1.98e+004
Isobutane	7.30e-001	3.73e+003
n-Butane	1.62e+000	8.29e+003
Isopentane	3.83e-001	2.43e+003
n-Pentane	3.98e-001	2.52e+003
n-Hexane	1.79e-001	1.36e+003
Other Hexanes	2.15e-001	1.63e+003
Heptanes	2.33e-001	2.05e+003
Benzene	4.99e-004	3.43e+000
Toluene	2.00e-002	1.62e+002
Ethylbenzene	2.00e-003	1.87e+001
Xylenes	5.99e-003	5.60e+001
C8+ Heavies	1.12e-001	1.68e+003
Total Components	100.00	1.87e+005

DRY GAS STREAM

Temperature: 100.00 deg. F
 Pressure: 989.70 psia
 Flow Rate: 3.33e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	7.05e-003	1.12e+001
Carbon Dioxide	1.81e-001	6.98e+002
Hydrogen Sulfide	3.94e-004	1.18e+000
Nitrogen	7.91e-001	1.95e+003
Methane	7.88e+001	1.11e+005
Ethane	1.12e+001	2.96e+004
Propane	5.12e+000	1.98e+004
Isobutane	7.30e-001	3.73e+003
n-Butane	1.62e+000	8.28e+003
Isopentane	3.83e-001	2.43e+003
n-Pentane	3.97e-001	2.52e+003
n-Hexane	1.79e-001	1.35e+003
Other Hexanes	2.15e-001	1.63e+003
Heptanes	2.32e-001	2.04e+003
Benzene	4.53e-004	3.11e+000
Toluene	1.76e-002	1.42e+002
Ethylbenzene	1.71e-003	1.60e+001

Xylenes	4.82e-003	4.49e+001
C8+ Heavies	1.11e-001	1.66e+003

Total Components	100.00	1.87e+005

LEAN GLYCOL STREAM

Temperature: 100.00 deg. F
Flow Rate: 1.50e+001 gpm

Component	Conc. (wt%)	Loading (lb/hr)

TEG	9.84e+001	8.30e+003
Water	1.50e+000	1.27e+002
Carbon Dioxide	2.15e-012	1.82e-010
Hydrogen Sulfide	2.18e-014	1.84e-012
Nitrogen	5.69e-013	4.80e-011
Methane	9.30e-018	7.85e-016
Ethane	9.75e-008	8.22e-006
Propane	8.05e-009	6.79e-007
Isobutane	1.42e-009	1.20e-007
n-Butane	3.36e-009	2.83e-007
Isopentane	1.85e-004	1.56e-002
n-Pentane	2.44e-004	2.06e-002
n-Hexane	1.92e-004	1.62e-002
Other Hexanes	3.63e-004	3.07e-002
Heptanes	4.83e-004	4.08e-002
Benzene	2.02e-004	1.70e-002
Toluene	2.02e-002	1.70e+000
Ethylbenzene	3.73e-003	3.15e-001
Xylenes	1.94e-002	1.64e+000
C8+ Heavies	2.52e-002	2.12e+000

Total Components	100.00	8.44e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 100.00 deg. F
Pressure: 989.70 psia
Flow Rate: 1.64e+001 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)

TEG	9.14e+001	8.30e+003
Water	3.47e+000	3.16e+002
Carbon Dioxide	3.30e-002	3.00e+000
Hydrogen Sulfide	2.25e-004	2.04e-002
Nitrogen	4.15e-002	3.77e+000
Methane	2.32e+000	2.11e+002
Ethane	7.43e-001	6.75e+001
Propane	5.53e-001	5.02e+001
Isobutane	1.13e-001	1.03e+001
n-Butane	2.80e-001	2.54e+001
Isopentane	7.96e-002	7.23e+000
n-Pentane	9.22e-002	8.38e+000
n-Hexane	6.09e-002	5.53e+000
Other Hexanes	6.40e-002	5.82e+000
Heptanes	1.28e-001	1.16e+001

Benzene	3.81e-003	3.46e-001
Toluene	2.40e-001	2.18e+001
Ethylbenzene	3.36e-002	3.06e+000
Xylenes	1.41e-001	1.28e+001
C8+ Heavies	2.26e-001	2.05e+001

Total Components	100.00	9.09e+003
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FLASH TANK OFF GAS STREAM

Temperature: 120.00 deg. F
 Pressure: 79.70 psia
 Flow Rate: 6.61e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.86e-001	5.84e-001
Carbon Dioxide	3.52e-001	2.70e+000
Hydrogen Sulfide	1.99e-003	1.18e-002
Nitrogen	7.66e-001	3.74e+000
Methane	7.49e+001	2.09e+002
Ethane	1.25e+001	6.54e+001
Propane	6.10e+000	4.69e+001
Isobutane	9.18e-001	9.29e+000
n-Butane	2.20e+000	2.22e+001
Isopentane	4.92e-001	6.18e+000
n-Pentane	5.50e-001	6.91e+000
n-Hexane	2.65e-001	3.98e+000
Other Hexanes	2.99e-001	4.49e+000
Heptanes	3.67e-001	6.40e+000
Benzene	1.94e-003	2.64e-002
Toluene	6.51e-002	1.05e+000
Ethylbenzene	4.47e-003	8.27e-002
Xylenes	1.25e-002	2.32e-001
C8+ Heavies	5.97e-002	1.77e+000
Total Components	100.00	3.91e+002

FLASH TANK GLYCOL STREAM

Temperature: 120.00 deg. F
 Flow Rate: 1.55e+001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.55e+001	8.30e+003
Water	3.62e+000	3.15e+002
Carbon Dioxide	3.47e-003	3.01e-001
Hydrogen Sulfide	9.85e-005	8.56e-003
Nitrogen	3.71e-004	3.22e-002
Methane	2.15e-002	1.87e+000
Ethane	2.42e-002	2.10e+000
Propane	3.83e-002	3.33e+000
Isobutane	1.17e-002	1.01e+000
n-Butane	3.68e-002	3.20e+000
Isopentane	1.21e-002	1.05e+000
n-Pentane	1.69e-002	1.47e+000
n-Hexane	1.79e-002	1.55e+000

Other Hexanes	1.53e-002	1.33e+000
Heptanes	6.00e-002	5.22e+000
Benzene	3.68e-003	3.20e-001
Toluene	2.39e-001	2.07e+001
Ethylbenzene	3.42e-002	2.97e+000
Xylenes	1.44e-001	1.25e+001
C8+ Heavies	2.15e-001	1.87e+001

Total Components	100.00	8.69e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 4.31e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	9.21e+001	1.88e+002
Carbon Dioxide	6.03e-002	3.01e-001
Hydrogen Sulfide	2.21e-003	8.56e-003
Nitrogen	1.01e-002	3.22e-002
Methane	1.03e+000	1.87e+000
Ethane	6.16e-001	2.10e+000
Propane	6.65e-001	3.33e+000
Isobutane	1.53e-001	1.01e+000
n-Butane	4.85e-001	3.20e+000
Isopentane	1.26e-001	1.04e+000
n-Pentane	1.77e-001	1.45e+000
n-Hexane	1.57e-001	1.54e+000
Other Hexanes	1.33e-001	1.30e+000
Heptanes	4.55e-001	5.17e+000
Benzene	3.41e-002	3.03e-001
Toluene	1.82e+000	1.90e+001
Ethylbenzene	2.21e-001	2.66e+000
Xylenes	9.04e-001	1.09e+001
C8+ Heavies	8.58e-001	1.66e+001

Total Components	100.00	2.60e+002

CONDENSER VENT GAS STREAM

Temperature: 120.00 deg. F
 Pressure: 13.50 psia
 Flow Rate: 1.69e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	1.26e+001	1.01e+000
Carbon Dioxide	1.51e+000	2.96e-001
Hydrogen Sulfide	5.32e-002	8.07e-003
Nitrogen	2.57e-001	3.21e-002
Methane	2.61e+001	1.86e+000
Ethane	1.54e+001	2.07e+000
Propane	1.55e+001	3.05e+000
Isobutane	3.32e+000	8.59e-001
n-Butane	9.96e+000	2.58e+000
Isopentane	1.91e+000	6.13e-001

n-Pentane	2.54e+000	8.16e-001
n-Hexane	1.46e+000	5.61e-001
Other Hexanes	1.45e+000	5.56e-001
Heptanes	2.00e+000	8.95e-001
Benzene	2.18e-001	7.57e-002
Toluene	4.71e+000	1.94e+000
Ethylbenzene	1.92e-001	9.08e-002
Xylenes	7.34e-001	3.47e-001
C8+ Heavies	1.35e-002	1.02e-002

Total Components	100.00	1.77e+001
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CONDENSER PRODUCED WATER STREAM

Temperature: 120.00 deg. F

Flow Rate: 3.75e-001 gpm

Component	Conc. (wt%)	Loading (lb/hr)	(ppm)
Water	1.00e+002	1.87e+002	999609.
Carbon Dioxide	1.22e-003	2.28e-003	12.
Hydrogen Sulfide	1.08e-004	2.03e-004	1.
Nitrogen	3.44e-006	6.44e-006	0.
Methane	3.85e-004	7.21e-004	4.
Ethane	4.85e-004	9.09e-004	5.
Propane	7.37e-004	1.38e-003	7.
Isobutane	1.13e-004	2.12e-004	1.
n-Butane	4.49e-004	8.43e-004	4.
Isopentane	7.54e-005	1.41e-004	1.
n-Pentane	1.08e-004	2.02e-004	1.
n-Hexane	6.13e-005	1.15e-004	1.
Other Hexanes	4.90e-005	9.19e-005	0.
Heptanes	5.42e-005	1.02e-004	1.
Benzene	1.32e-003	2.48e-003	13.
Toluene	2.77e-002	5.20e-002	277.
Ethylbenzene	9.81e-004	1.84e-003	10.
Xylenes	5.21e-003	9.76e-003	52.
C8+ Heavies	3.91e-007	7.34e-007	0.
Total Components	100.00	1.87e+002	1000000.

CONDENSER RECOVERED OIL STREAM

Temperature: 120.00 deg. F

Flow Rate: 1.30e-001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
Water	3.97e-002	2.19e-002
Carbon Dioxide	4.99e-003	2.75e-003
Hydrogen Sulfide	5.26e-004	2.90e-004
Nitrogen	1.81e-004	9.98e-005
Methane	1.01e-002	5.56e-003
Ethane	6.62e-002	3.65e-002
Propane	4.98e-001	2.75e-001
Isobutane	2.79e-001	1.54e-001
n-Butane	1.13e+000	6.24e-001
Isopentane	7.67e-001	4.23e-001

n-Pentane	1.15e+000	6.32e-001
n-Hexane	1.77e+000	9.78e-001
Other Hexanes	1.35e+000	7.46e-001
Heptanes	7.76e+000	4.28e+000
Benzene	4.07e-001	2.24e-001
Toluene	3.09e+001	1.71e+001
Ethylbenzene	4.65e+000	2.57e+000
Xylenes	1.91e+001	1.05e+001
C8+ Heavies	3.01e+001	1.66e+001

Total Components	100.00	5.52e+001



Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Midland, TX (432) 704-5351

GAS ANALYSIS REPORT

LABORATORY REPORT NUMBER 200226-5000-02-022620-19

PHYSICAL CONSTANTS PER GPA 2145-16

COMPANY:	CRESTWOOD	CYLINDER NO.:	12174
STATION:	WL2-0002	DATE ON:	02/17/2020
PROD.:	CRESTWOOD	DATE OFF:	
LEASE:	WL PLANT 2 INLET	DATE ANALYZED:	02/26/2020
TEMP:	64	EFFECTIVE DATE:	02/01/2020
PRESS.	182	SAMPLED BY	JG
COMPONENT	MOLE %	GPM	WT. %
H2S	0.0000		
OXYGEN	0.0030		0.0040
CARBON DIOXIDE	0.0040		0.1900
NITROGEN	0.8930		1.1490
METHANE	78.0080		55.9900
ETHANE	12.6090	3.3840	17.4090
PROPANE	6.1250	1.8940	12.4010
I-BUTANE	0.8400	0.2760	2.2420
N-BUTANE	1.9630	0.8180	5.2120
I-PENTANE	0.4450	0.1630	1.4740
N-PENTANE	0.4910	0.1790	1.6270
HEXANE PLUS	0.5380	0.2340	2.3020
TOTAL	100.0000	6.5480	100.0000

PRESSURE BASE	14.65	14.73	15.025
BTU DRY BASIS	1302.05	1309.17	1335.38
BTU SAT BASIS	1279.39	1286.37	1312.14

REAL GRAVITY 0.7545 H2S: 0.4 ppm
 Z FACTOR 0.9981 SAMPLE TYPE: SPOT
 MERCAPTAN PPM: 0

ANALYZED BY: PETER DOUGLAS CHROMATOGRAPH 5000-02-022620-19

06-20-2018



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GAS ANALYSIS REPORT

LABORATORY REPORT NUMBER

190522-5000-05-052219-15

PHYSICAL CONSTANTS PER GPA 2145-16

COMPANY:	CRESTWOOD	CYLINDER NO.:	1589
STATION:	WL2-0002FL	DATE ON:	05/07/2019
PROD.:	CRESTWOOD	DATE OFF:	
LEASE:	WL PLANT 2 FUEL	DATE ANALYZED:	05/22/2019
TEMP:	88	EFFECTIVE DATE:	05/01/2019
PRESS:	157	SAMPLED BY:	PL
COMPONENT	MOLE %	GPM	WT. %
H2S	0.0000		
OXYGEN	0.0140		0.0270
CARBON DIOXIDE	0.0350		0.0920
NITROGEN	1.4900		2.4980
METHANE	95.0800		91.1980
ETHANE	3.2800	0.8790	5.8970
PROPANE	0.0930	0.0260	0.2450
I-BUTANE	0.0000	0.0000	0.0000
N-BUTANE	0.0000	0.0000	0.0000
I-PENTANE	0.0000	0.0000	0.0000
N-PENTANE	0.0000	0.0000	0.0000
HEXANE PLUS	0.0080	0.0030	0.0450
TOTAL	100.0000	0.9080	100.0000

PRESSURE BASE	14.65	14.73	15.025
BTU DRY BASIS	1020.05	1025.62	1046.18
BTU SAT BASIS	1002.29	1007.76	1027.94

REAL GRAVITY 0.5785

H2S: 0 ppm

Z FACTOR 0.9979

SAMPLE TYPE: SPOT

COMMENT: SPOT

ANALYZED BY: PETER DOUGLAS

CHROMATOGRAPH 5000-05-052219-15

06-20-2018



Athens, TX (903) 677-0700 - Beeville, TX (361) 354-5200 - Midland, TX (432) 704-5351

GAS EXTENDED ANALYSIS REPORT

LAB REPORT NUMBER: 200601-5000-05-060120-01

PHYSICAL CONSTANTS PER GPA 2145-09 & TP-17 (1998)

CUSTOMER :	CRESTWOOD	DATE ON:	05/28/2020
STATION:	BLACK RIVER COMP DEHY UPSTREAM	DATE ANALYZED:	06/01/2020
PRODUCER:	CRESTWOOD	EFFECTIVE DATE:	05/01/2020
LEASE:	BLACK RIVER COMP DEHY UPSTREAM	DATE OFF:	

COMPONENT	MOLE %	GPM	WT. %
H2S	0.000		0.000
OXYGEN	0.002		0.003
NITROGEN	0.791		1.044
CARBON DIOXIDE	0.181		0.375
METHANE	78.781		59.530
ETHANE	11.225	3.012	15.898
PROPANE	5.118	1.415	10.628
I-BUTANE	0.731	0.240	2.001
N-BUTANE	1.823	0.513	4.443
I-PENTANE	0.383	0.141	1.302
N-PENTANE	0.398	0.145	1.353
HEXANES (C6's)	0.394	0.163	1.509
HEPTANES (C7+)	0.253	0.109	1.177
OCTANES (C8+)	0.109	0.055	0.582
NONANES (C9+)	0.007	0.002	0.041
DECANES (C10+)	0.004	0.001	0.024
TOTAL	100.000	5.796	100.000

REAL SP. GRAVITY	0.7354	REAL BTU DRY	1277.894
MOL. WT.	21.230	REAL BTU SAT	1255.648
Z FACTOR	0.9963	PRESS BASE	14.730
C2+ GPM	5.796	C4+ GPM	1.369
C3+ GPM	2.784	C5+ GPM	0.616
C6-C10+ MOL WT	103.795	C6-C10+ GRAVITY	3.574

SAMPLED BY:	WJ	SAMPLE PRESS:	885
SAMPLE TYPE:	SPOT	SAMPLE TEMP:	100
CYLINDER NO.:		COUNTY / STATE:	14.73
COMMENT:	SPOT	ANALYST	MIKE HOBGOOD

* SEE NEXT PAGE FOR C6+ COMPOSITIONAL BREAKDOWN
PAGE 1 OF 3

06-04-2020



Amarillo, TX (805) 677-0700 | Bayville, TX (817) 394-5208 | Midland, TX (432) 704-5353

STATION: BLACK RIVER COMP DEH-LEASE: BLACK RIVER COMP DEHY UPSTREAM

C6+ FRACTION COMPOSITION

HEXANE ISOMERS (C6'S)		MOLE %	GPM	WT. %
2,2-Dimethylbutane	P	0.010	0.004	0.040
2,3-Dimethylbutane	PN	0.000	0.000	0.000
2-Methylpentane	P	0.133	0.055	0.538
3-Methylpentane	P	0.071	0.029	0.288
Methylcyclopentane	N	0.000	0.000	0.000
Benzene	A	0.000	0.000	0.000
Cyclohexane	N	0.002	0.001	0.008
n-Hexane	P	0.179	0.074	0.726
HEPTANE ISOMERS (C7'S)				
3,3-Dimethylpentane	P	0.000	0.000	0.001
2,2-Dimethylpentane	P	0.003	0.001	0.012
2,4-Dimethylpentane	P	0.007	0.003	0.034
2 & 3-Methylhexane	P	0.031	0.015	0.148
2,3-Dimethylpentane	P	0.020	0.008	0.083
1,t-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,c-3-Dimethylcyclopentane	N	0.000	0.000	0.000
3-Ethylpentane	N	0.000	0.000	0.000
1,t-2-Dimethylcyclopentane	N	0.000	0.000	0.000
Toluene	A	0.020	0.007	0.087
Methylcyclohexane	N	0.105	0.043	0.487
Ethylcyclopentane	N	0.000	0.000	0.000
n-Heptane	P	0.067	0.031	0.315
OCTANE ISOMERS (C8'S)				
2,4 & 2,5-Dimethylhexane	P	0.006	0.003	0.033
2,2,4-Trimethylpentane	N	0.000	0.000	0.000
1,t-2,c-4-Trimethylcyclopentane	N	0.000	0.000	0.000
1,t-2,c-3-Trimethylcyclopentane	N	0.000	0.000	0.000
2-Methylheptane	P	0.021	0.011	0.112
1,c-2,t-4-Trimethylcyclopentane	N	0.000	0.000	0.000
3-Methylheptane	P	0.013	0.007	0.071
1,c-3-Dimethylcyclohexane	N	0.004	0.002	0.019
1,t-4-Dimethylcyclohexane	N	0.000	0.000	0.000
methyl-ethylcyclopentanes	N	0.000	0.000	0.000
1,t-3 & 1,c-4 Dimethylcyclohexane	N	0.008	0.004	0.046
1,c-2-Dimethylcyclohexane	N	0.002	0.001	0.000
Ethylcyclohexane	N	0.013	0.006	0.069
Ethylbenzene	A	0.002	0.001	0.012
m & p-Xylene	A	0.002	0.001	0.008
o-Xylene	A	0.004	0.002	0.022
Cyclooctane	P	0.001	0.000	0.006
n-Octane	P	0.032	0.017	0.174



Athens, TX (903) 677-0700 Beeville, TX (361) 354-5200 Midland, TX (432) 704-0351

STATION: BLACK RIVER COMP DEH LEASE: BLACK RIVER COMP DEHY UPSTREAM

C6+ FRACTION COMPOSITION

<u>NONANE ISOMERS (C9'S)</u>		<u>MOLE %</u>	<u>GPM</u>	<u>WT. %</u>
Trimethylhexanes	P	0.000	0.000	0.000
Dimethylpentanes	P	0.000	0.000	0.000
Isopropylcyclopentane	N	0.000	0.000	0.000
n-Propylcyclopentane	N	0.000	0.000	0.000
3-Methyloctane	P	0.000	0.000	0.000
Trimethylcyclohexanes	N	0.000	0.000	0.000
Isopropylbenzene	A	0.003	0.001	0.018
Isopropylcyclohexane	N	0.000	0.000	0.000
n-Propylcyclohexane	N	0.000	0.000	0.002
n-Propylbenzene	A	0.002	0.001	0.014
m-Ethyltoluene	A	0.000	0.000	0.000
p-Ethyltoluene	A	0.000	0.000	0.000
1,3,5-Trimethylbenzene	A	0.000	0.000	0.001
4 & 5-Methylnonane	P	0.000	0.000	0.000
o-Ethyltoluene & 3-Methylnonane	AP	0.000	0.000	0.000
1,2,3-Trimethylbenzene	A	0.000	0.000	0.000
1,2,4-Trimethylbenzene	A	0.001	0.000	0.006
n-Nonane	P	0.000	0.000	0.002
<u>DECANE ISOMERS (C10'S)</u>				
2-Methylnonane	P	0.000	0.000	0.000
tert-Butylbenzene	A	0.003	0.001	0.017
Isobutylcyclohexane & tert-Butylcyclohexane		0.000	0.000	0.000
Isobutylbenzene	A	0.000	0.000	0.000
sec-Butylbenzene	A	0.000	0.000	0.002
n-Butylcyclohexane	N	0.001	0.000	0.005
1,3-Diethylbenzene	A	0.000	0.000	0.000
1,2-Diethylbenzene & n-Butylbenzene	A	0.000	0.000	0.000
1,4-Diethylbenzene	A	0.000	0.000	0.000
n-Decane	P	0.000	0.000	0.000
<u>UNDECANE ISOMERS (C11'S)</u>				
n-Undecane	P	0.000	0.000	0.000
<u>DODECANE ISOMERS (C12'S)</u>				
n-Dodecane +	P	0.000	0.000	0.000

X *Michael Howard*

ANALYST



Athens, TX (903) 672-0700 • Beeville, TX (361) 354-5200 • Edmond, OK (409) 525-0579

LIQUID EXTENDED ANALYSIS REPORT

LABORATORY REPORT NUMBER

200604-6000-05-080420-01

PHYSICAL CONSTANTS PER GPA 2145-09 & TP-17 (1998)

CUSTOMER :	CRESTWOOD	DATE ON:	05/28/2020
STATION:	BLACK RIVER CONDENSATE	DATE ANALYZED:	06/04/2020
PRODUCER:	CRESTWOOD	EFFECTIVE DATE:	05/01/2020
LEASE:	BLACK RIVER CONDENSATE	DATE OFF:	

COMPONENT	MOLE %	LIQUID VOL %	WT. %
H2S	0.000	0.000	0.000
OXYGEN	0.000	0.000	0.000
NITROGEN	0.085	0.024	0.029
CARBON DIOXIDE	0.027	0.012	0.014
METHANE	5.070	2.214	0.974
ETHANE	4.815	3.316	1.734
PROPANE	7.870	5.441	4.052
I-BUTANE	2.497	2.104	1.738
N-BUTANE	8.122	6.595	5.654
I-PENTANE	4.386	4.131	3.790
N-PENTANE	6.011	5.612	5.195
HEXANES (C6's)	12.302	12.277	12.581
HEPTANES (C7+)	19.991	21.607	23.593
OCTANES (C8+)	22.113	27.049	29.782
NONANES (C9+)	4.108	5.505	6.191
DECANES (C10+)	2.803	4.113	4.703
TOTAL	100.000	100.000	100.000

IDEAL SP. GRAVITY	0.6813	BTU / GAL	116521.77
MOL. WT.	83.486	VAPOR PRESS.	319.80
CUBIC FT / GAL	25.819	LBS / GAL	5.88
C1/C2 LV % RATIO	86.767	API GRAVITY	76.19
CO2/C2 LV % RATIO	0.362	SP GRAV AS VAPOR	2.88
C6-C10+ MOL WT	104.594	C6-C10+ GRAVITY	

SAMPLED BY	WJ	SAMPLE PRESS:	140
SAMPLE TYPE:	SPOT	SAMPLE TEMP:	80
CYLINDER NO.:		COUNTY / STATE:	0
COMMENT:	SPOT	ANALYST	MIKE HOBGOOD

* SEE NEXT PAGE FOR C6+ COMPOSITIONAL BREAKDOWN

PAGE 1 OF 3

06-04-2020



Athens, TX (903) 577-0700 Beeville, TX (361) 354-5200 Edmond, OK (405) 525-0579

STATION: BLACK RIVER CONDENS/LEASE: BLACK RIVER CONDENSATE

C6+ FRACTION COMPOSITION

HEXANE ISOMERS (C6'S)		MOLE %	LIQ VOL %	WT. %
2,2-Dimethylbutane	P	0.106	0.114	0.109
2,3-Dimethylbutane	PN	0.000	0.000	0.000
2-Methylpentane	P	2.389	2.531	2.446
3-Methylpentane	P	1.434	1.506	1.480
Methylcyclopentane	N	0.000	0.000	0.000
Benzene	A	0.341	0.246	0.320
Cyclohexane	N	3.535	3.097	3.564
n-Hexane	P	4.516	4.783	4.662
HEPTANE ISOMERS (C7'S)				
3,3-Dimethylpentane	P	0.038	0.044	0.045
2,3-Dimethylpentane	P	0.000	0.000	0.000
2,2-Dimethylpentane	P	0.096	0.116	0.115
2,4-Dimethylpentane	P	0.579	0.698	0.695
2 & 3-Methylhexane	P	1.260	1.499	1.512
1,t-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,o-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,t-2-Dimethylcyclopentane	N	0.000	0.000	0.000
3-Ethylpentane	N	0.000	0.000	0.000
Toluene	A	2.011	1.734	2.220
Methylcyclohexane	N	9.803	10.144	11.528
Ethylcyclopentane	N	0.000	0.000	0.000
n-Heptane	P	6.204	7.372	7.447
OCTANE ISOMERS (C8'S)				
2,4 & 2,5-Dimethylhexane	P	0.525	0.701	0.718
1,t-2,o-4-Trimethylcyclopentane	N	0.000	0.000	0.000
1,t-2,o-3-Trimethylcyclopentane	N	0.000	0.000	0.000
2-Methylheptane	P	3.883	5.151	5.313
1,o-2,t-4-Trimethylcyclopentane	N	0.000	0.000	0.000
3-Methylheptane	P	1.857	2.437	2.541
1,o-3-Dimethylcyclohexane	N	0.257	0.305	0.345
1,t-4-Dimethylcyclohexane	N	0.000	0.000	0.000
methyl-ethylcyclopentanes	N	0.000	0.000	0.000
1,t-3 & 1,o-4 Dimethylcyclohexane	N	1.359	1.576	1.827
1,o-2-Dimethylcyclohexane	N	2.510	2.889	3.374
Ethylcyclohexane	N	1.904	2.199	2.559
Ethylbenzene	A	0.413	0.411	0.526
m & p-Xylene	A	2.415	2.407	3.071
o-Xylene	A	0.520	0.509	0.661
n-Octane	P	6.242	8.236	8.541



Athens, TX (903) 677-0700 Beeville, TX (361) 354-5200 Edmond, OK (405) 525-0579

STATION: BLACK RIVER CONDENSATE LEASE: BLACK RIVER CONDENSATE

C6+ FRACTION COMPOSITION

NONANE ISOMERS (C9'S)		MOLE %	LIQ VOL %	WT %
Trimethylhexanes	P	0.000	0.000	0.000
Dimethylpentanes	P	0.000	0.000	0.000
Isopropylcyclopentane	N	0.000	0.000	0.000
n-Propylcyclopentane	N	0.000	0.000	0.000
3-Methyloctane	P	0.000	0.000	0.000
Trimethylcyclohexanes	N	0.000	0.000	0.000
Isopropylbenzene	A	0.201	0.228	0.290
Isopropylcyclohexane	N	0.000	0.000	0.000
n-Propylcyclohexane	N	0.550	0.710	0.832
n-Propylbenzene	A	0.372	0.421	0.535
m-Ethyltoluene	A	0.000	0.000	0.000
p-Ethyltoluene	A	0.000	0.000	0.000
1,3,5-Trimethylbenzene	A	0.006	0.007	0.009
4 & 5-Methylnonane	P	0.000	0.000	0.000
o-Ethyltoluene & 3-Methylnonane	AP	0.000	0.000	0.000
1,2,3-Trimethylbenzene	A	0.000	0.000	0.000
1,2,4-Trimethylbenzene	A	0.530	0.590	0.763
n-Nonane	P	2.449	3.549	3.762
DECANE ISOMERS (C10'S)				
2-Methylnonane	P	0.000	0.000	0.000
tert-Butylbenzene	A	0.187	0.236	0.301
Isobutylcyclohexane & tert-Butylcyclohexane		0.497	0.696	0.835
Isobutylbenzene	A	0.113	0.145	0.182
sec-Butylbenzene	A	0.089	0.112	0.142
n-Butylcyclohexane	N	0.385	0.520	0.613
1,3-Diethylbenzene	A	0.000	0.000	0.000
1,2-Diethylbenzene & n-Butylbenzene	A	0.152	0.192	0.244
1,4-Diethylbenzene	A	0.000	0.000	0.000
n-Decane	P	1.400	2.213	2.388
UNDECANE ISOMERS (C11'S)				
n-Undecane	P	0.000	0.000	0.000
DODECANE ISOMERS (C12'S)				
n-Dodecane +	P	0.000	0.000	0.000

x *Michael Howard*
ANALYST



Protocol for Equipment Leak Emission Estimates

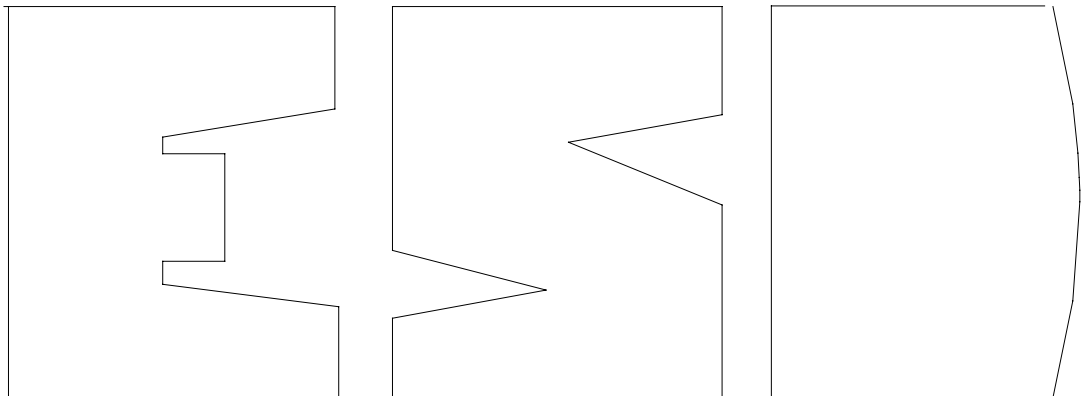
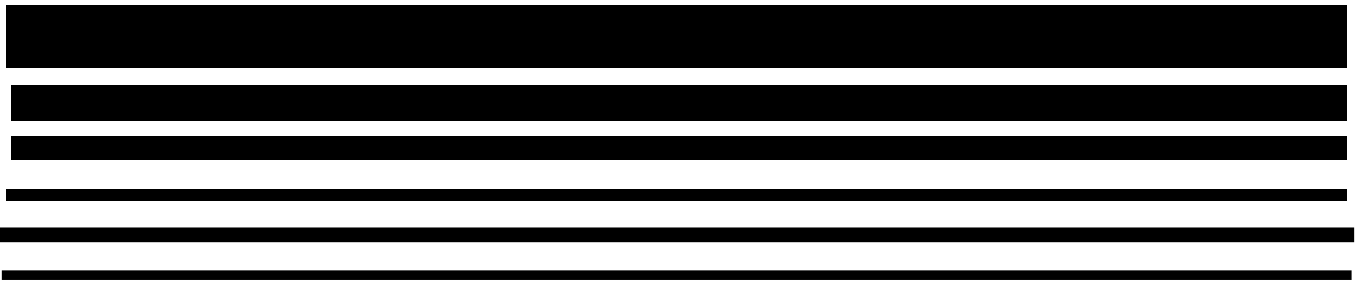


TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

Equipment Type	Service ^a	Emission Factor (kg/hr/source) ^b
Valves	Gas	4.5E-03
	Heavy Oil	8.4E-06
	Light Oil	2.5E-03
	Water/Oil	9.8E-05
Pump seals	Gas	2.4E-03
	Heavy Oil	NA
	Light Oil	1.3E-02
	Water/Oil	2.4E-05
Others ^c	Gas	8.8E-03
	Heavy Oil	3.2E-05
	Light Oil	7.5E-03
	Water/Oil	1.4E-02
Connectors	Gas	2.0E-04
	Heavy Oil	7.5E-06
	Light Oil	2.1E-04
	Water/Oil	1.1E-04
Flanges	Gas	3.9E-04
	Heavy Oil	3.9E-07
	Light Oil	1.1E-04
	Water/Oil	2.9E-06
Open-ended lines	Gas	2.0E-03
	Heavy Oil	1.4E-04
	Light Oil	1.4E-03
	Water/Oil	2.5E-04

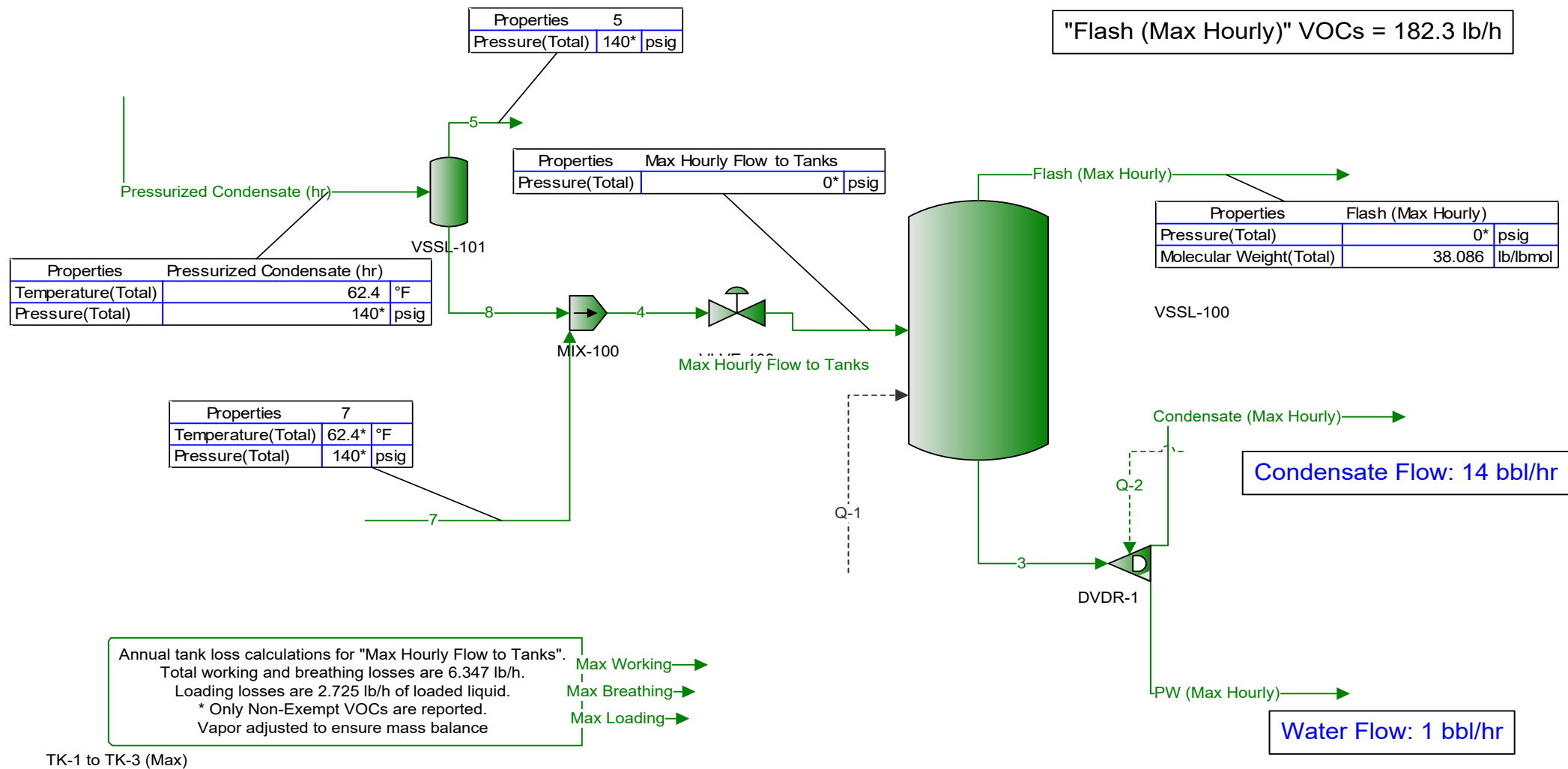
^aWater/Oil emission factors apply to water streams in oil service with a water content greater than 50%, from the point of origin to the point where the water content reaches 99%. For water streams with a water content greater than 99%, the emission rate is considered negligible.

^bThese factors are for total organic compound emission rates (including non-VOC's such as methane and ethane) and apply to light crude, heavy crude, gas plant, gas production, and off shore facilities. "NA" indicates that not enough data were available to develop the indicated emission factor.

^cThe "other" equipment type was derived from compressors, diaphragms, drains, dump arms, hatches, instruments, meters, pressure relief valves, polished rods, relief valves, and vents. This "other" equipment type should be applied for any equipment type other than connectors, flanges, open-ended lines, pumps, or valves.

Willow Lake Gas Plant Plant 1 Tanks

210 BBL Tanks – Max Hourly Emissions



TK-1 to TK-3 (Max)

Willow Lake Gas Plant

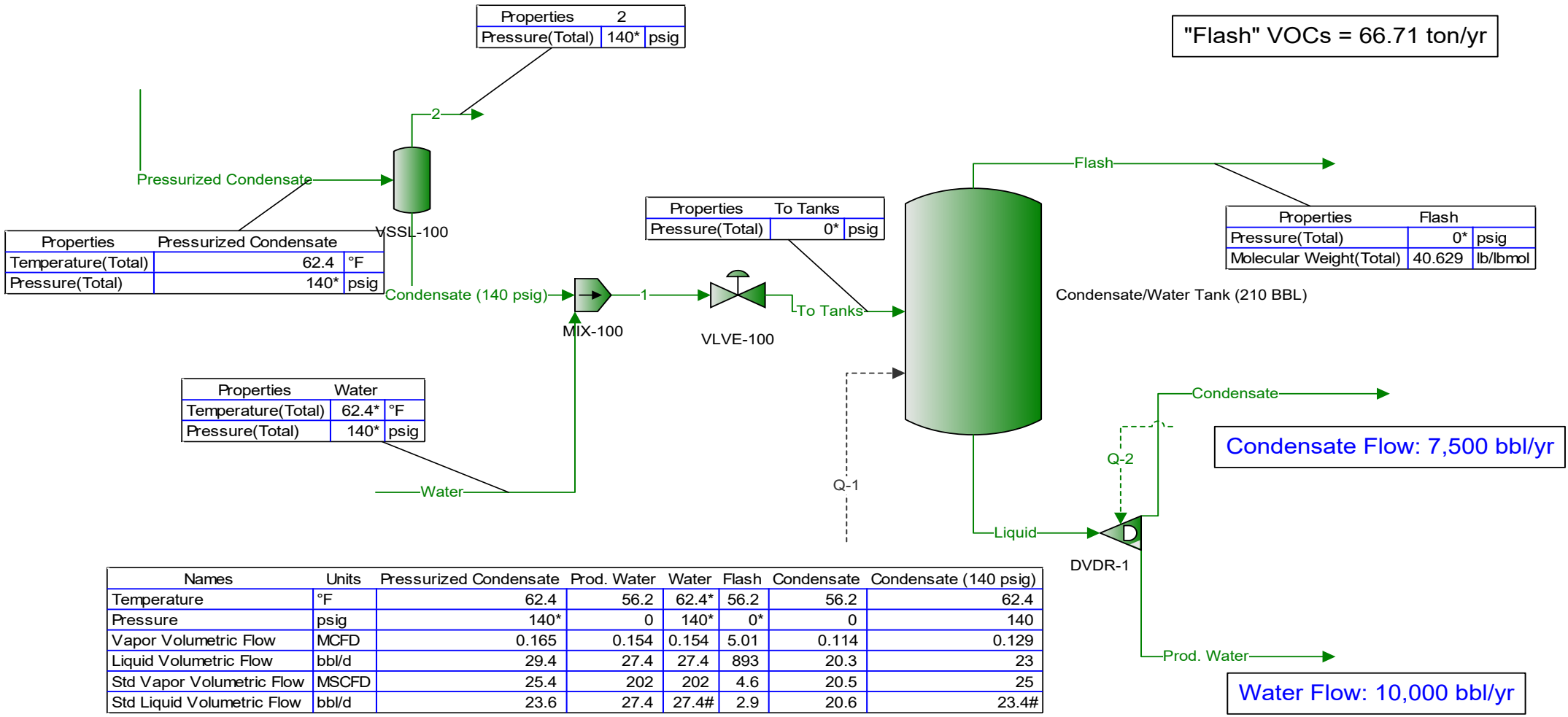
Plant 1 Tanks

210 BBL Tanks – Annual Emissions

Annual tank loss calculations for "To Tanks".
Total working and breathing losses are 7.346 ton/yr.
Loading losses are 1.667 ton/yr of loaded liquid.
* Only Non-Exempt VOCs are reported.
Vapor adjusted to ensure mass balance

Working
Breathing
Loading

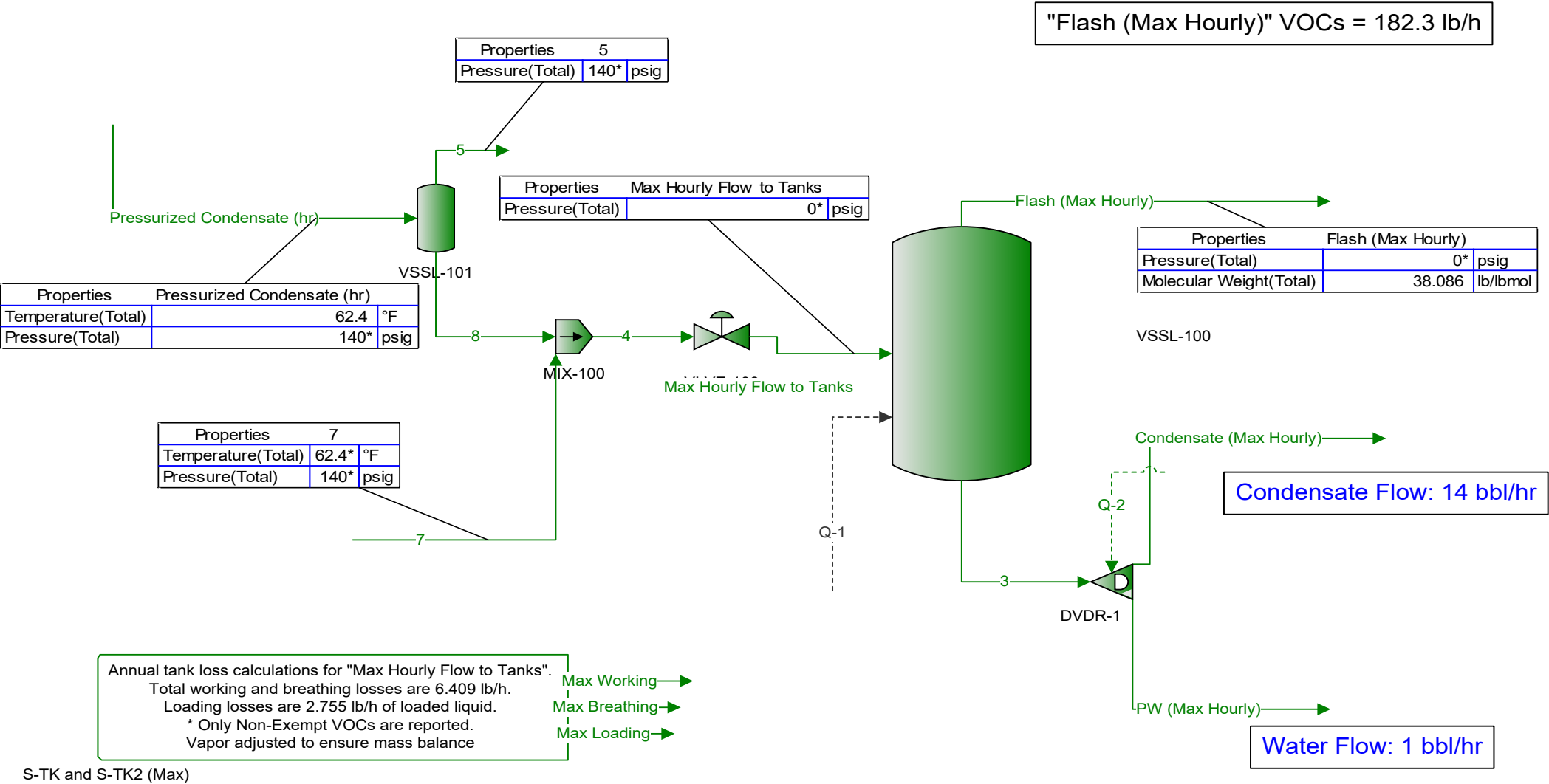
TK-1 to TK-3



Willow Lake Gas Plant

Plant 2 Tanks

400 BBL Tanks – Max Hourly Emissions



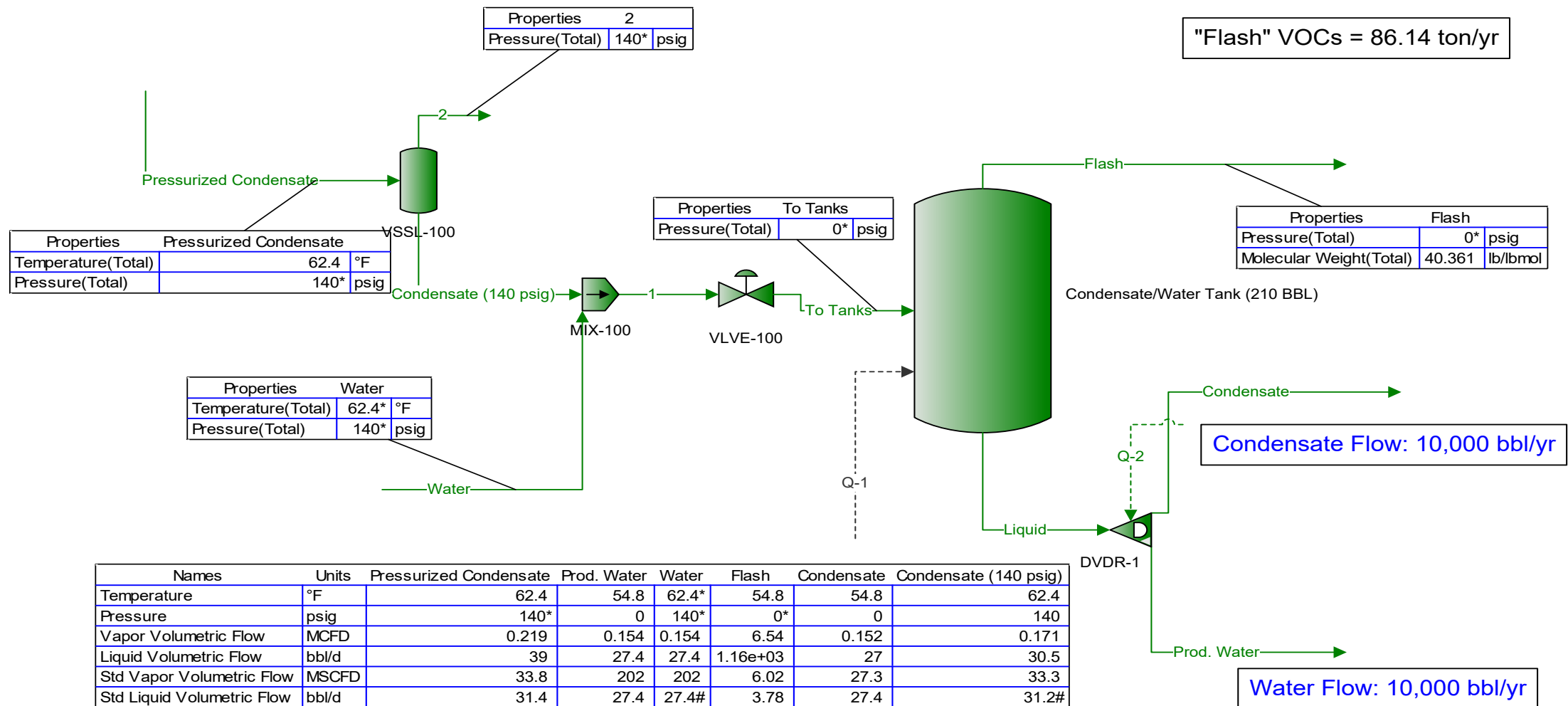
Willow Lake Gas Plant Plant 2 Tanks

400 BBL Tanks – Annual Emissions

Annual tank loss calculations for "To Tanks".
Total working and breathing losses are 7.792 ton/yr.
Loading losses are 1.909 ton/yr of loaded liquid.
* Only Non-Exempt VOCs are reported.
Vapor adjusted to ensure mass balance

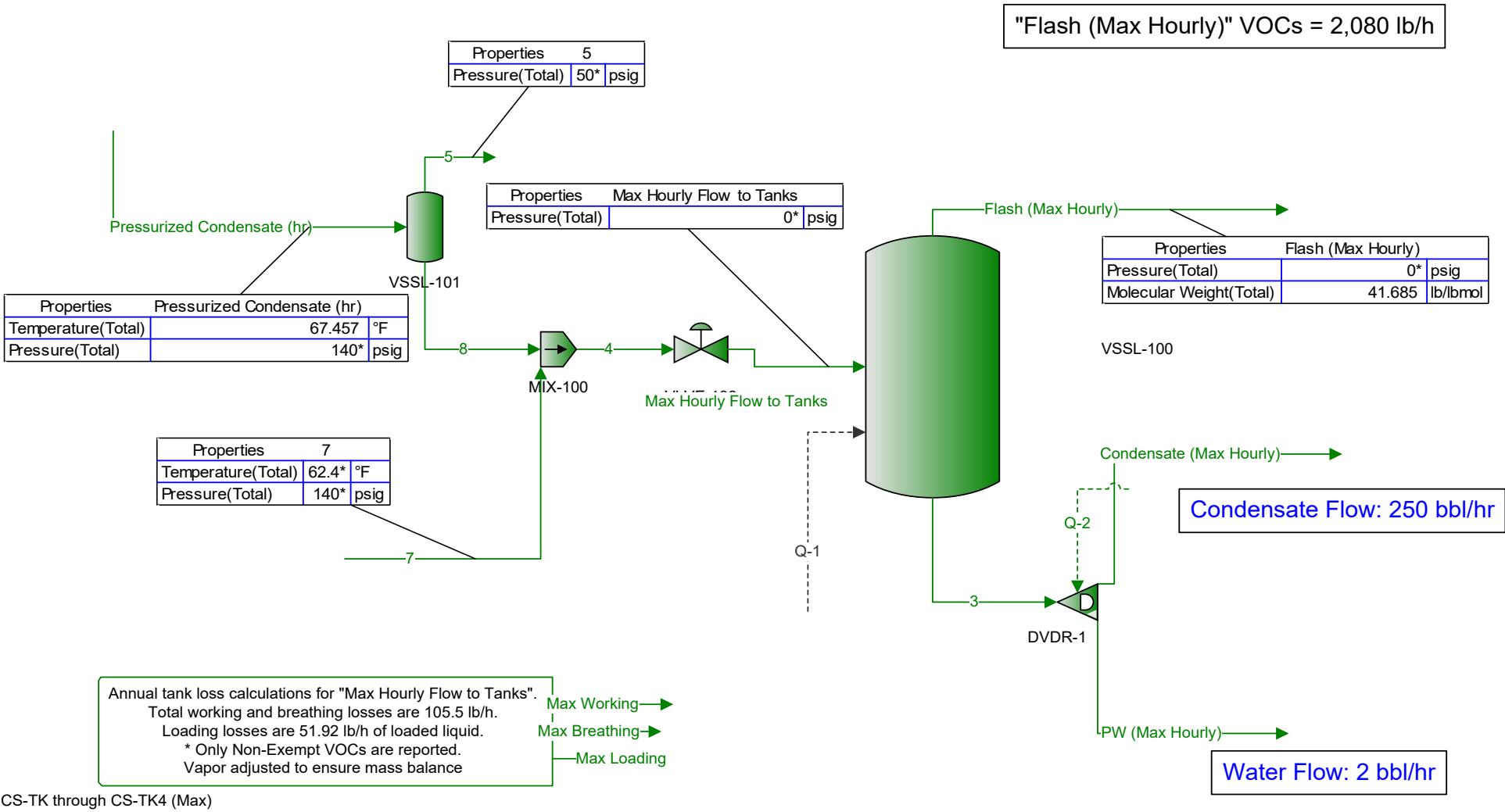
S-TK and S-TK2

"Flash" VOCs = 86.14 ton/yr



Willow Lake Gas Plant Compressor Station Tanks

400 BBL Tanks – Max Hourly Emissions



Willow Lake Gas Plant Compressor Station Tanks

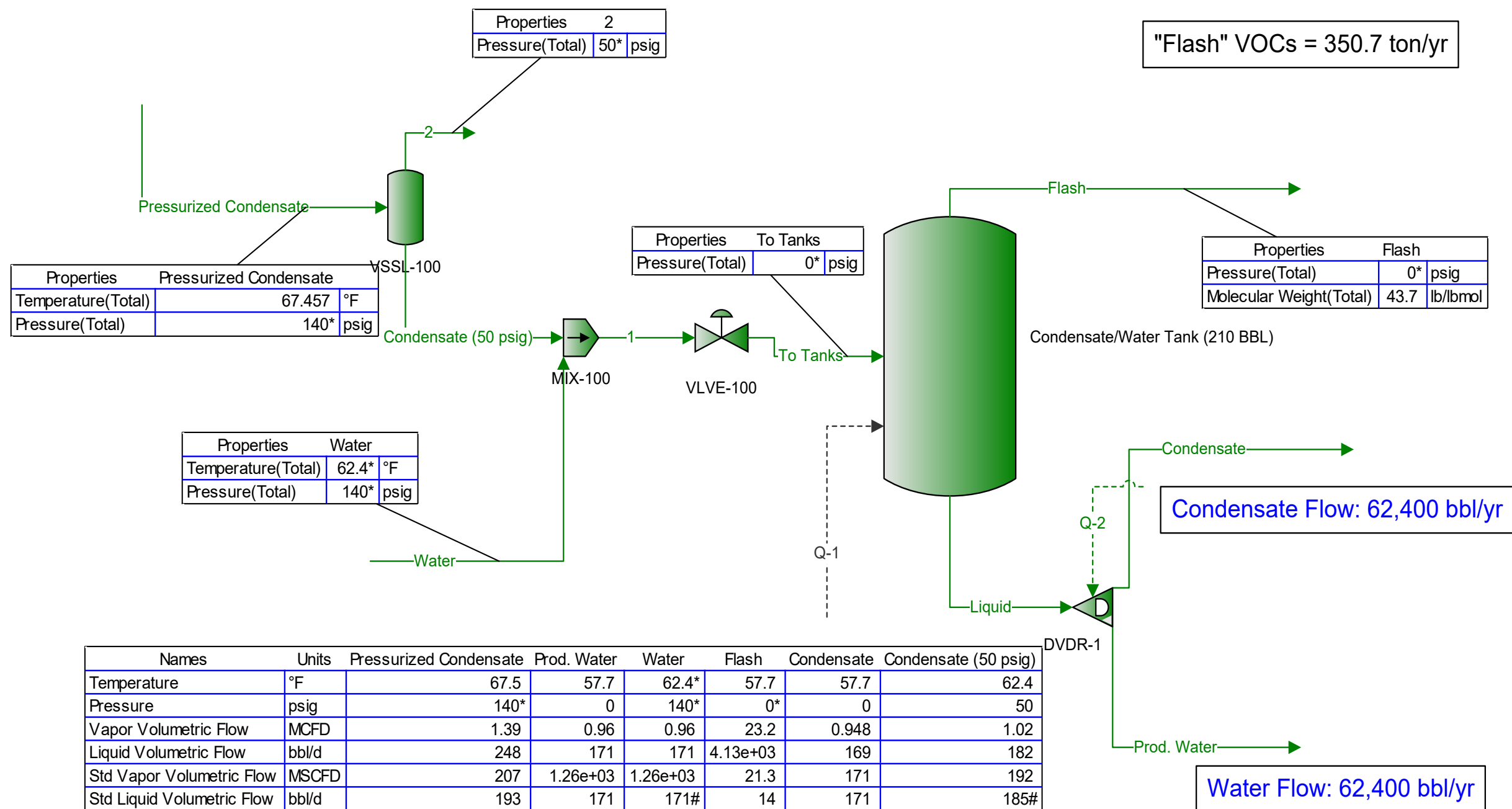
400 BBL Tanks – Annual Emissions

Annual tank loss calculations for "To Tanks".
Total working and breathing losses are 35.72 ton/yr.
Loading losses are 13.34 ton/yr of loaded liquid.
* Only Non-Exempt VOCs are reported.
Vapor adjusted to ensure mass balance

Working
Breathing
Loading

CS-TK through CS-TK4

"Flash" VOCs = 350.7 ton/yr





October 2000
RG-109 (Draft)

Air Permit Technical Guidance for Chemical Sources:

Flares and Vapor Oxidizers

printed on
recycled paper

Air Permits Division

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Waste Stream	Destruction/Removal Efficiency (DRE)		
VOC	98 percent (generic)		
	99 percent for compounds containing no more than 3 carbons that contain no elements other than carbon and hydrogen in addition to the following compounds: methanol, ethanol, propanol, ethylene oxide and propylene oxide		
H ₂ S	98 percent		
NH ₃	case by case		
CO	case by case		
Air Contaminants	Emission Factors		
thermal NO _x	steam-assist:	high Btu low Btu	0.0485 lb/MMBtu 0.068 lb/MMBtu
	other:	high Btu low Btu	0.138 lb/MMBtu 0.0641 lb/MMBtu
fuel NO _x	NO _x is 0.5 wt percent of inlet NH ₃ , other fuels case by case		
CO	steam-assist:	high Btu low Btu	0.3503 lb/MMBtu 0.3465 lb/MMBtu
	other:	high Btu low Btu	0.2755 lb/MMBtu 0.5496 lb/MMBtu
PM	none, required to be smokeless		
SO ₂	100 percent S in fuel to SO ₂		

*The only exception of this is if inorganics might be emitted from the flare. In the case of landfills, the AP-42 PM factor may be used. In other cases, the emissions should be based on the composition of the waste stream routed to the flare.

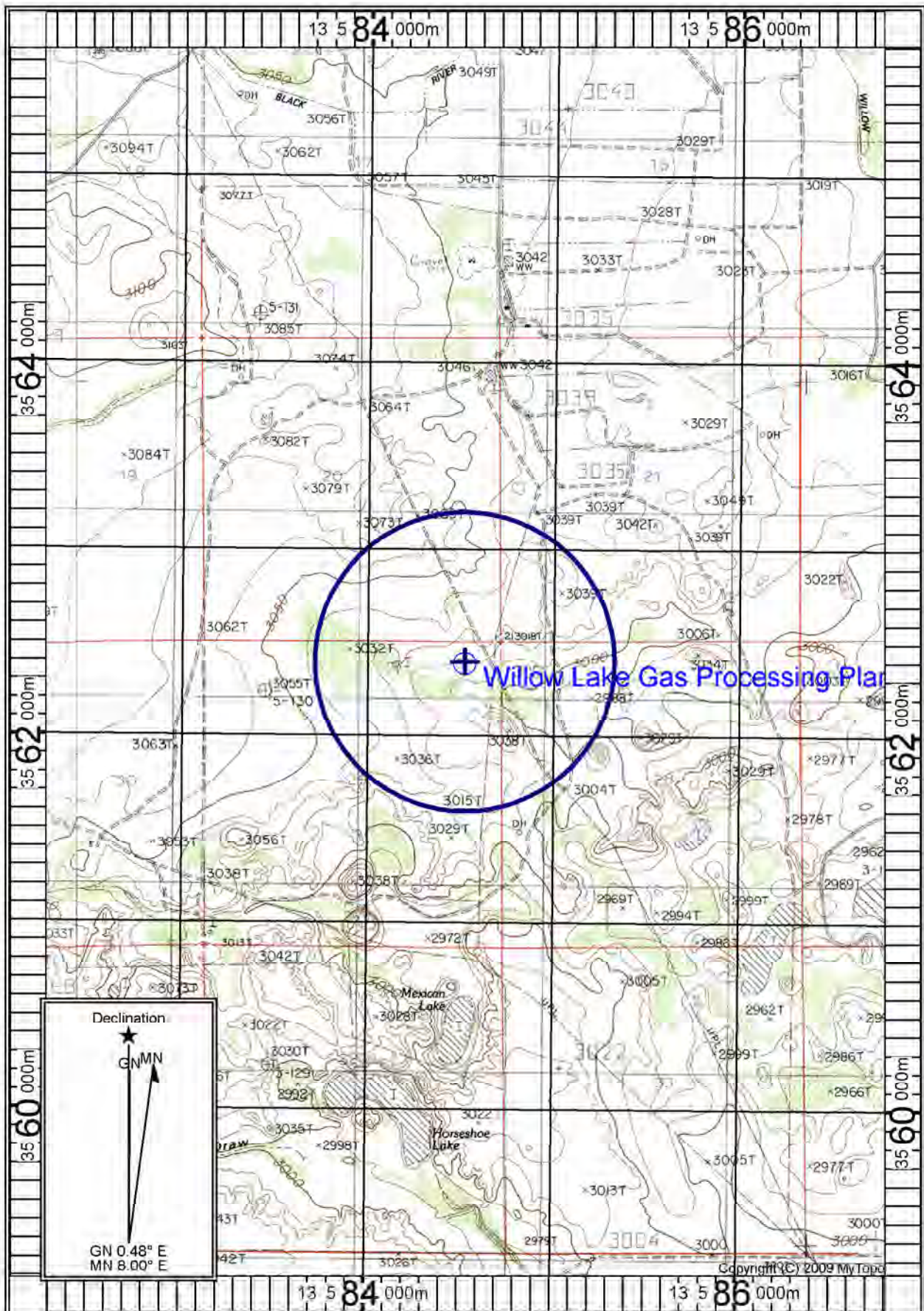
Section 8

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 attached.



Map Name: MALAGA
 Print Date: 08/20/20
 Scale: 1 inch = 2,500 ft.
 Map Center: 13 0584520 E 3562399 N

Horizontal Datum: WGS84

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.
-

All public notice requirements have been satisfied and are included in this section as applicable.

9589 0710 5270 2625 0142 61

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com.
Carlsbad, NM 88220

Certified Mail Fee \$5.30
\$0.00
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$11.00

Total Postage and Fees \$16.30

Sent To EDDY COUNTY MANAGER
Street and Apt. No., or PO Box No.
101 W. GREENE ST., SUITE 110
City, State, ZIP+4®
CARLSBAD, NM 88220

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

0048 16
Postmark Here
JUL 28 2025
07/28/2025

9589 0710 5270 2625 0142 48

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com.
Santo Fe, NM 87504

Certified Mail Fee \$5.30
\$0.00
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$11.00

Total Postage and Fees \$16.30

Sent To STATE OF NEW MEXICO
Street and Apt. No., or PO Box No.
310 OLD SANTA FE TRAIL
City, State, ZIP+4®
SANTA FE, NM 87504

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

0048 16
Postmark Here
JUL 28 2025
07/28/2025

9589 0710 5270 2625 0142 24

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com.
Midland, TX 79702

Certified Mail Fee \$5.30
\$0.00
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$11.00

Total Postage and Fees \$16.30

Sent To WILCOX, CHARLES R & COATS, RICHARD H & AGAR, FRANK
Street and Apt. No., or PO Box No.
PO Box 10562
City, State, ZIP+4®
MIDLAND, TX 79702

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

0048 16
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9589 0710 5270 2625 0142 54

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For delivery information, visit our website at www.usps.com.
Loving, NM 88256

Certified Mail Fee \$5.30
\$0.00
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$11.00

Total Postage and Fees \$16.30

Sent To CITY OF LOVING MANAGER
Street and Apt. No., or PO Box No.
415 W CEDAR ST.
City, State, ZIP+4®
LOVING, NM 88256

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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07/28/2025

9589 0710 5270 2625 0142 23

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

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Roswell, NM 88202

Certified Mail Fee \$5.30
\$0.00
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$11.00

Total Postage and Fees \$16.30

Sent To Pecos VALLEY ARTESIAN CONSERV. DIST.
Street and Apt. No., or PO Box No.
PO Box 1346
City, State, ZIP+4®
ROSWELL, NM 88202

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

0048 16
Postmark Here
JUL 28 2025
07/28/2025



9589 0710 5270 2625 0141 31

U.S. Postal Service™
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Houston, TX 77070

OFFICIAL USE

Certified Mail Fee	\$5.30
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$11.00
Total Postage and Fees	\$16.30

Sent To
LEGEND NATURAL GAS II LP
Street and Apt. No., or PO Box No.
10330 LAKE RD, SUITE DD
City, State, ZIP+4®
HOUSTON, TX 77070

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 2625 0142 30

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
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For delivery information, visit our website at www.usps.com®.

Kansas City, MO 64108

OFFICIAL USE

Certified Mail Fee	\$5.30
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$11.00
Total Postage and Fees	\$16.30

Sent To
CRESTWOOD NEW MEXICO PIPELINE LLC
Street and Apt. No., or PO Box No.
2440 PERSHING RD, SUITE 600
City, State, ZIP+4®
KANSAS CITY, MO 64108

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 2625 0142 47

U.S. Postal Service™
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For delivery information, visit our website at www.usps.com®.

Santa Fe, NM 87508

OFFICIAL USE

Certified Mail Fee	\$5.30
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$11.00
Total Postage and Fees	\$16.30

Sent To
BUREAU OF LAND MANAGEMENT
Street and Apt. No., or PO Box No.
301 DINOSAUR TRAIL
City, State, ZIP+4®
SANTA FE, NM 87508

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 2625 0141 62

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Russellville, AR 72802

OFFICIAL USE

Certified Mail Fee	\$5.30
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$11.00
Total Postage and Fees	\$16.30

Sent To
NEARHOOD, MARY + BRENT ALAN + CARLA KAY
Street and Apt. No., or PO Box No.
405 N OAKS LN
City, State, ZIP+4®
RUSSELLVILLE, AR 72802

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions



RIVER OAKS
1900 W GRAY ST
HOUSTON, TX 77019-9998
www.usps.com

07/28/2025

02:06 PM

TRACKING NUMBERS

9589 0710 5270 2625 0142 61
9589 0710 5270 2625 0141 48
9589 0710 5270 2625 0141 24
9589 0710 5270 2625 0142 54
9589 0710 5270 2625 0142 23

TRACK STATUS OF ITEMS WITH THIS CODE
(UP TO 25 ITEMS)



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Send tracking number to 28777 (2USPS)
Standard message and data rates may apply

TRACK STATUS ONLINE

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Text and e-mail alerts available

PURCHASE DETAILS

Product	Qty	Unit Price	Price
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Priority Mail®	1		\$11.00
Window FR Env			
Carlsbad, NM 88220			
Flat Rate			
Expected Delivery Date			
Thu 07/31/2025			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$5.30
Tracking #:			
9589 0710 5270 2625 0142 61			
Total			\$16.30

Priority Mail®	1		\$11.00
Window FR Env			
Santa Fe, NM 87504			
Flat Rate			
Expected Delivery Date			
Thu 07/31/2025			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$5.30
Tracking #:			
9589 0710 5270 2625 0141 48			
Total			\$16.30

Priority Mail®	1		\$11.00
Window FR Env			
Midland, TX 79702			
Flat Rate			
Expected Delivery Date			
Thu 07/31/2025			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$5.30
Tracking #:			
9589 0710 5270 2625 0141 24			
Total			\$16.30

Priority Mail®	1		\$11.00
Window FR Env			
Loving, NM 88256			
Flat Rate			
Expected Delivery Date			
Thu 07/31/2025			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$5.30
Tracking #:			
9589 0710 5270 2625 0142 54			
Total			\$16.30

Priority Mail®	1		\$11.00
Window FR Env			
Roswell, NM 88202			
Flat Rate			
Expected Delivery Date			
Thu 07/31/2025			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$5.30
Tracking #:			
9589 0710 5270 2625 0142 23			
Total			\$16.30



RIVER OAKS
1900 W GRAY ST
HOUSTON, TX 77019-9998
www.usps.com

07/28/2025

02 16 PM

TRACKING NUMBERS

9589 0710 5270 2625 0141 31
9589 0710 5270 2625 0142 30
9589 0710 5270 2625 0142 47
9589 0710 5270 2625 0141 62

TRACK STATUS OF ITEMS WITH THIS CODE
(UP TO 25 ITEMS)



TRACK STATUS BY TEXT MESSAGE
Send tracking number to 28777 (2USPS)
Standard message and data rates may apply

TRACK STATUS ONLINE
Visit <https://www.usps.com/tracking>
Text and e-mail alerts available

PURCHASE DETAILS

Product	Qty	Unit Price	Price
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Priority Mail® Window FR Env Houston, TX 77070 Flat Rate Expected Delivery Date Wed 07/30/2025 Insurance Up to \$100.00 included Certified Mail® Tracking #: 9589 0710 5270 2625 0141 31	1		\$11.00
Total			\$16.30

Priority Mail® Window FR Env Kansas City, MO 64108 Flat Rate Expected Delivery Date Thu 07/31/2025 Insurance Up to \$100.00 included Certified Mail® Tracking #: 9589 0710 5270 2625 0142 30	1		\$11.00
Total			\$16.30

Priority Mail® Window FR Env Santa Fe, NM 87508 Flat Rate Expected Delivery Date Thu 07/31/2025 Insurance Up to \$100.00 included Certified Mail® Tracking #: 9589 0710 5270 2625 0142 47	1		\$11.00
Total			\$16.30

Priority Mail® Window FR Env Russellville, AR 72802 Flat Rate Expected Delivery Date Thu 07/31/2025 Insurance Up to \$100.00 included Certified Mail® Tracking #: 9589 0710 5270 2625 0141 62	1		\$11.00
Total			\$16.30

Section 9
Crestwood New Mexico Pipeline LLC
PROPERTY OWNERS Within 0.5 Mile Radius

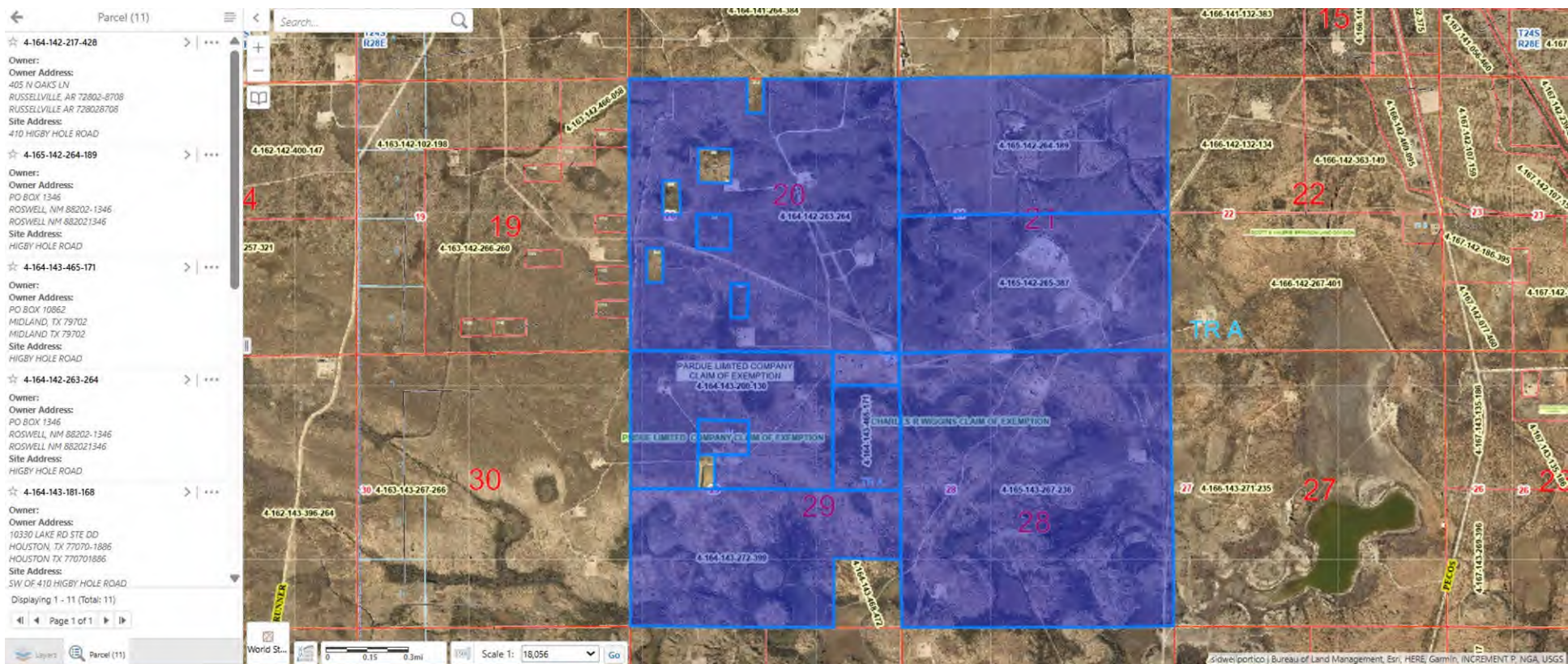
PROPERTY OWNERS			
PARCEL ID	OWNER NAME	ADDRESS	CITYSTATEZIP
4-164-143-465-033	CRESTWOOD NEW MEXICO PIPELINE LLC	2440 PERSHING ROAD, SUITE 600	KANSAS CITY, MO 64108
4-164-142-263-264 4-165-143-267-236 4-164-142-166-295 4-165-142-265-387 4-165-142-264-189 4-164-143-200-130	PECOS VALLEY ARTESIAN CONSERV DIST	PO BOX 1346	ROSWELL, NM 88202
4-164-143-465-171	WIGGINS, CHARLES R & COATS, RICHARD H & AGAR, FRANK JR	PO BOX 10862	MIDLAND, TX 79702
4-164-143-181-168	LEGEND NATURAL GAS III LP	10330 LAKE ROAD, SUITE DD	HOUSTON, TX 77070
4-164-142-217-428	NEARHOOD, MARY & BRENT ALAN, & DICKSON, CARLA KAY NEARHOOD	405 N OAKS LN	RUSSELLVILLE, AR 72802
4-164-144-091-396	STATE OF NEW MEXICO	310 OLD SANTA FE TRAIL	SANTA FE, NM 87504
4-163-143-267-266	BUREAU OF LAND MANAGEMENT	301 DINOSAUR TRAIL	SANTA FE, NM 87508

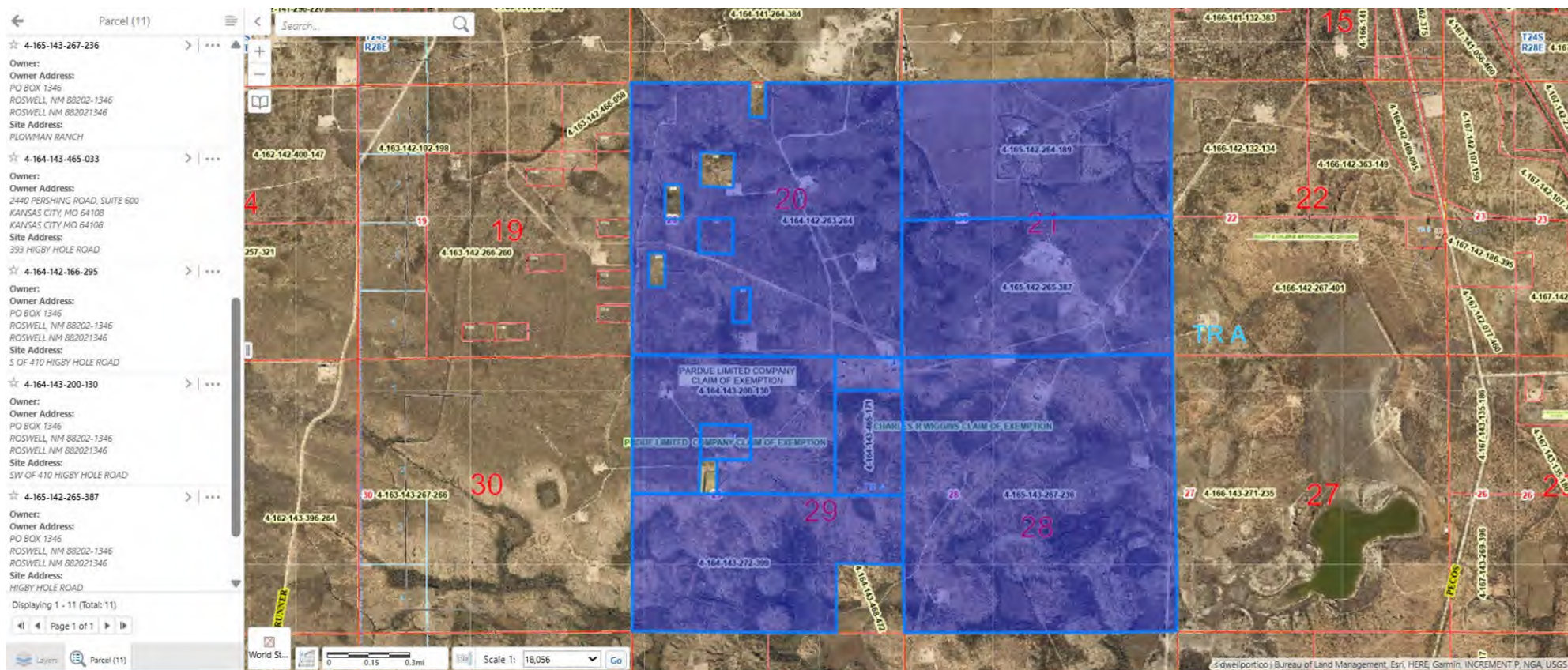
Section 9

Crestwood New Mexico Pipeline LLC

0.5 Mile Radius







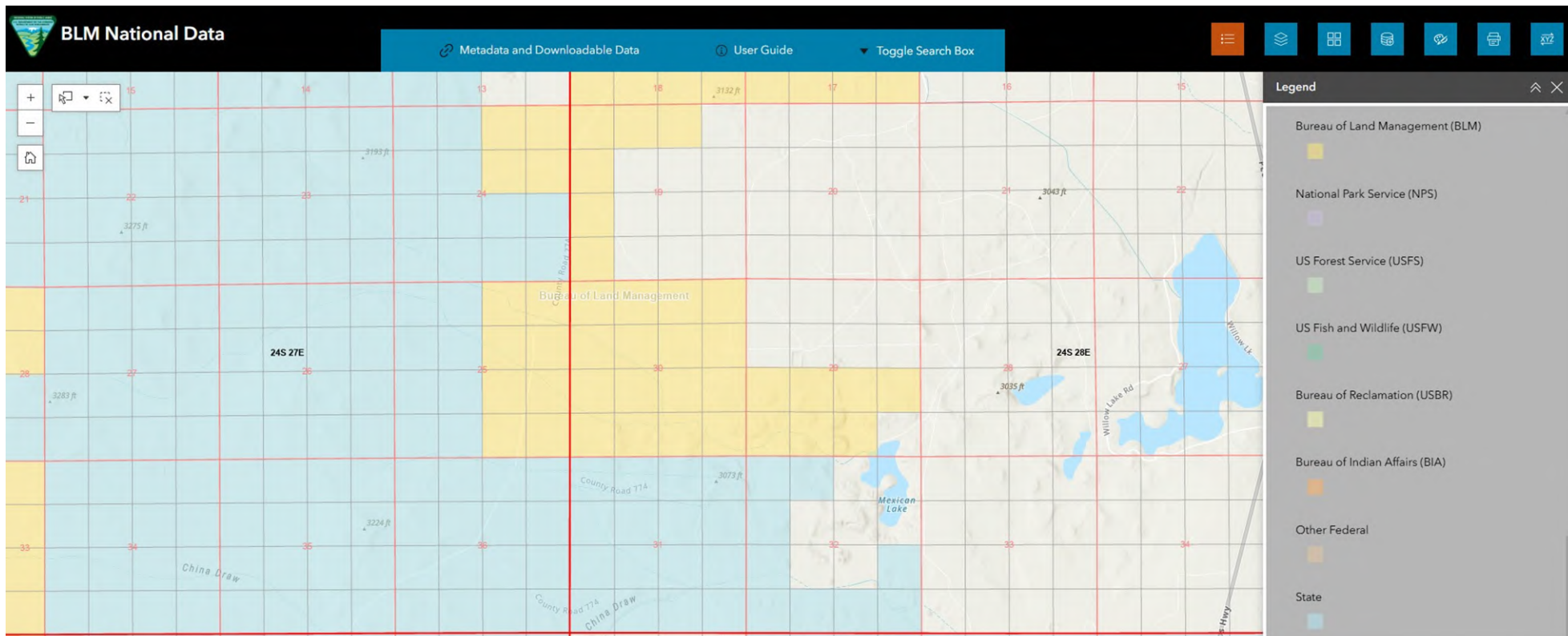
Owner: State of New Mexico



Owner: Bureau of Land Management

Owner Address: 301 Dinosaur Trail, Santa Fe, NM 87508





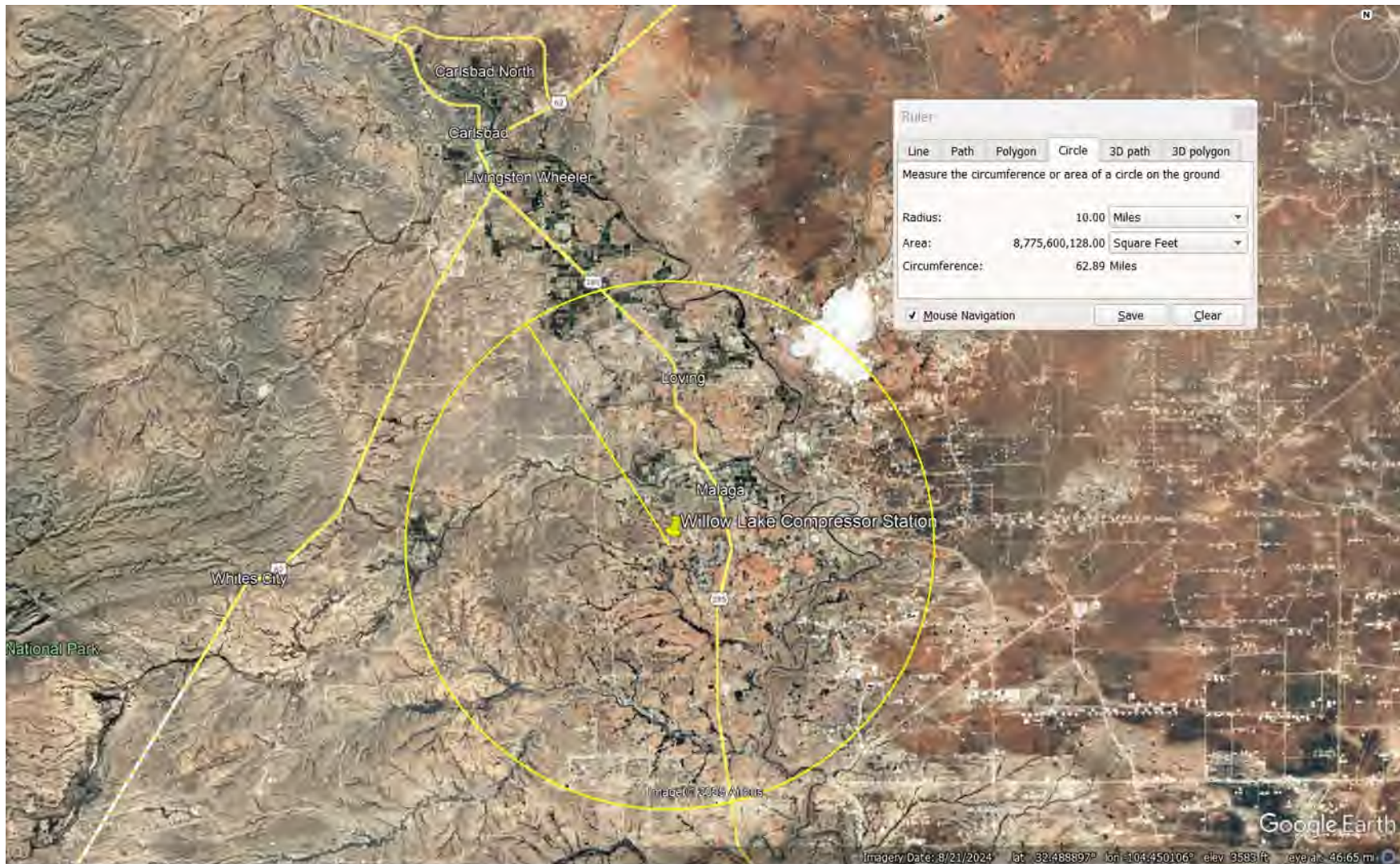
Section 9
Crestwood New Mexico Pipeline LLC
TRIBES, COUNTIES & MUNICIPALITIES WITHIN 10 MILE RADIUS

TRIBES					
N/A - No tribes within 10 mile radius.					
COUNTIES					
EDDY COUNTY	COUNTY MANAGER	101 W GREENE STREET, SUITE 110	CARLSBAD	NM	88220
MUNICIPALITIES					
LOVING	CITY MANAGER	415 W CEDAR	LOVING	NM	88256

Section 9

Crestwood New Mexico Pipeline LLC

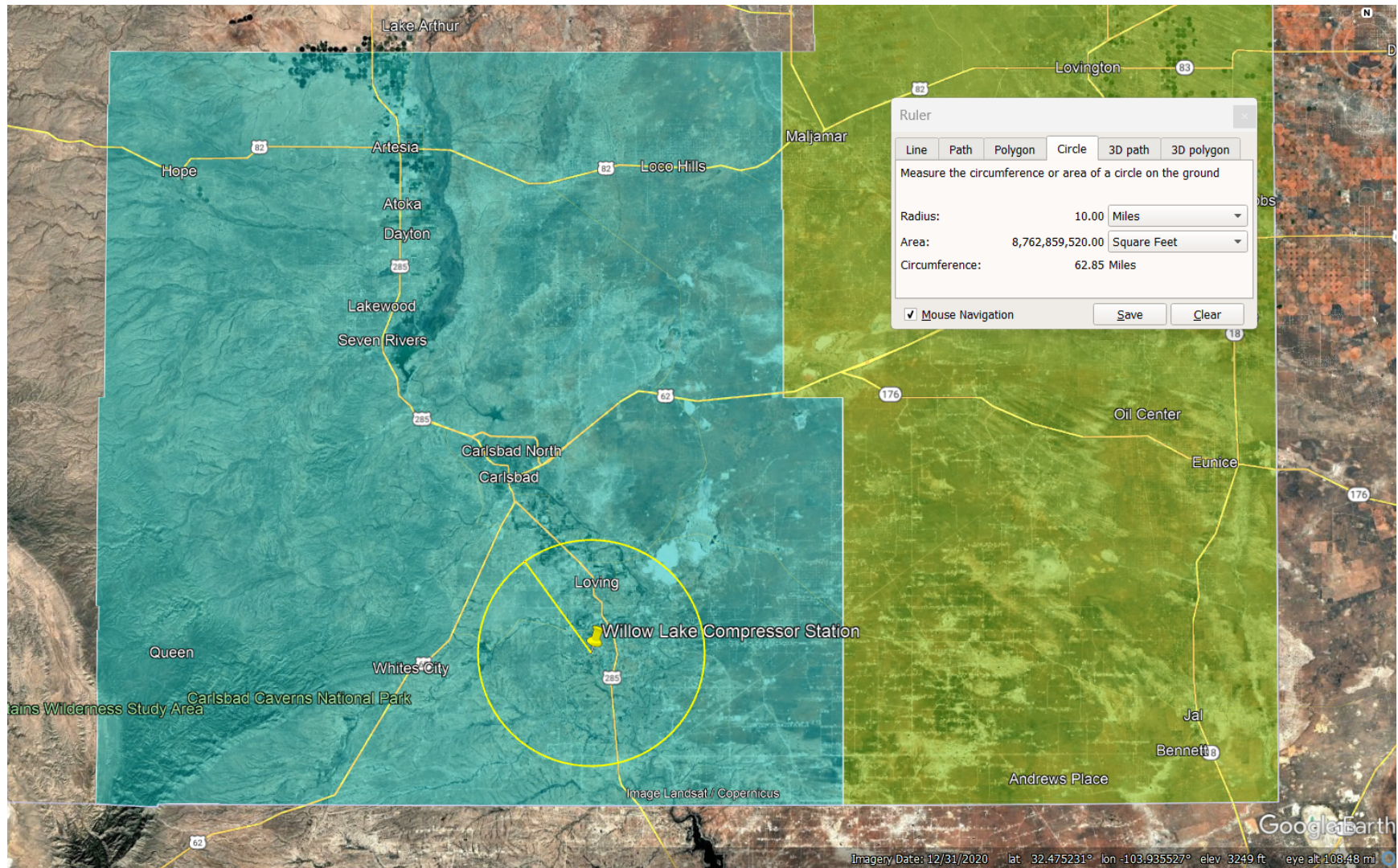
Municipalities within 10 miles – Loving



Section 9

Crestwood New Mexico Pipeline LLC

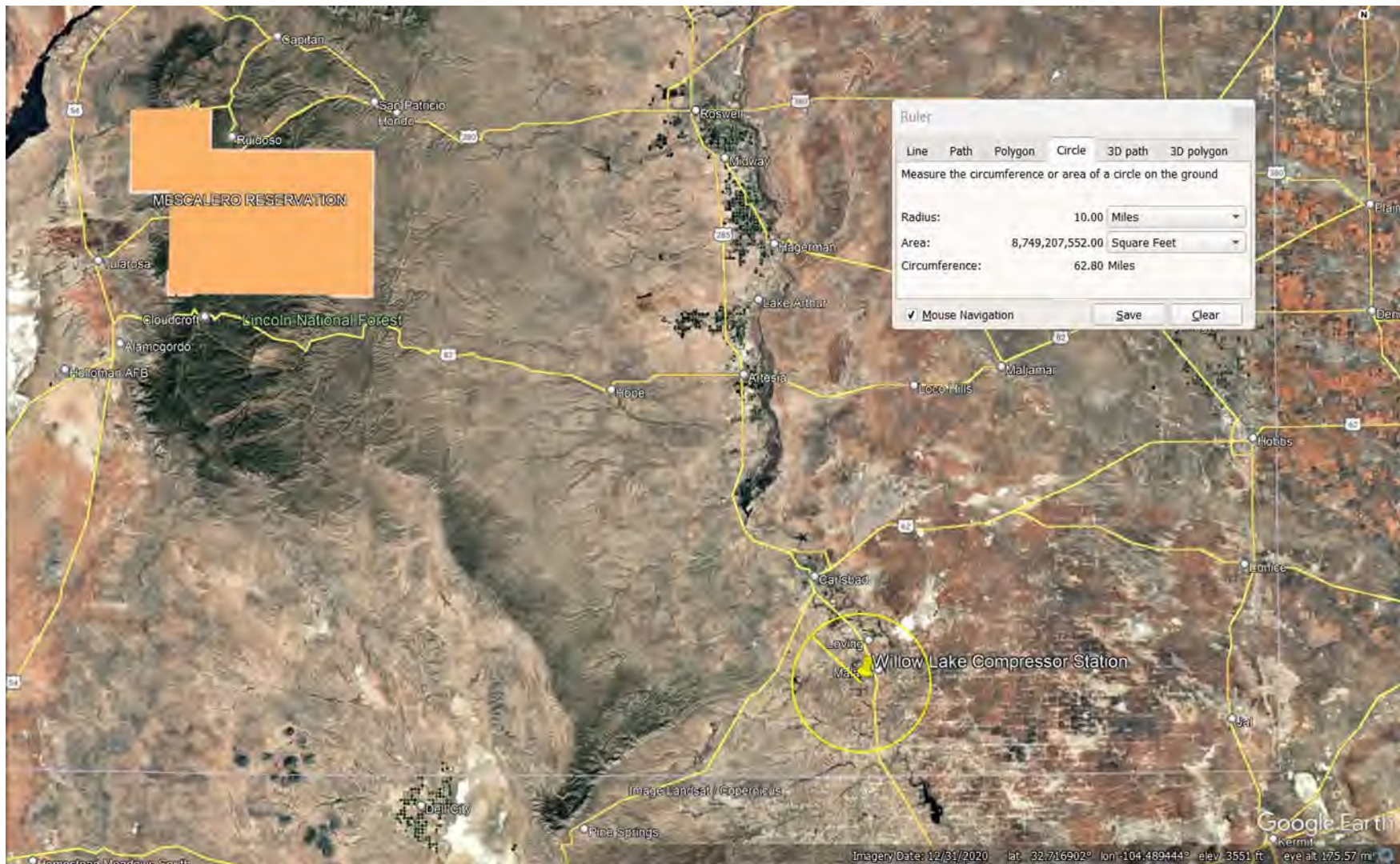
Counties within 10 miles – Eddy



Section 9

Crestwood New Mexico Pipeline LLC

Tribes within 10 miles – N/A



July 28, 2025

CERTIFIED MAIL 9589 0710 5270 2625 0142 23

Dear **Pecos Valley Aertesian Conserv. Dist.**,

Crestwood New Mexico Pipeline LLC (Crestwood) 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 **August 22, 2025**.

The exact location for the proposed facility known as, **Willow Lake Compressor Station**, is at **393 Higby Hole Road, Malaga, NM 88263**. The approximate location of this facility is **2.7 miles southwest of Malaga, NM** in **Eddy** county.

The proposed **modification** consists of shutting down/removing-from-service natural gas processing facilities and operating the facility as a compressor station.

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

Pollutant:	Pounds per hour	Tons per year
Particulate Matter (PM)	3 pph	11 tpy
PM ₁₀	3 pph	11 tpy
PM _{2.5}	3 pph	11 tpy
Sulfur Dioxide (SO ₂)	4 pph	13 tpy
Hydrogen Sulfide (H ₂ S)	1 pph	2 tpy
Nitrogen Oxides (NO _x)	190 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	506 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO _{2e}	N/A	120,000 tpy

The standard and maximum operating schedules of the facility will be continuous: 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: **Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256; Mailing Address: PO Box 450, Loving, NM 88256)**.

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 facility 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.

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 505-629-3395.

Sincerely,

Crestwood New Mexico Pipeline LLC
1025 Bounds Road
Loving, NM 88256

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.

July 28, 2025

CERTIFIED MAIL 9589 0710 5270 2625 0142 61

Dear **Eddy County Manager**,

Crestwood New Mexico Pipeline LLC (Crestwood) 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 **August 22, 2025**.

The exact location for the proposed facility known as, **Willow Lake Compressor Station**, is at **393 Higby Hole Road, Malaga, NM 88263**. The approximate location of this facility is **2.7 miles southwest of Malaga, NM** in **Eddy** county.

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PM _{2.5}	3 pph	11 tpy
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Nitrogen Oxides (NO _x)	190 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	506 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO _{2e}	N/A	120,000 tpy

The standard and maximum operating schedules of the facility will be continuous: 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: **Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256; Mailing Address: PO Box 450, Loving, NM 88256)**.

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Please refer to the company name and facility 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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Sincerely,

Crestwood New Mexico Pipeline LLC
1025 Bounds Road
Loving, NM 88256

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Holloman personnel donate time to Ruidoso recovery



TODD FUQUA | CURRENT-ARGUS
Holloman Air Force Base personnel work on rehabilitating the fields at White Mountain Athletic Complex in Ruidoso, July 25.

Todd Fuqua
Carlsbad Current-Argus
tfuqua@elritomedia.com

RUIDOSO – Volunteers from Holloman Air Force Base were out in force at the White Mountain Athletic Complex July 25, cleaning up mud and debris caused by the previous day’s flooding along White Mountain Drive. The project was part of Casa’s Big Give, a month-long event sponsored by Casa Auto Group in Alamogordo to encourage Holloman personnel to contribute time and effort to improve the community. The volunteers’ primary goal at the White Mountain sports complex was to clean up the area surrounding the football and soccer fields, parts of which were saturated and

covered with mud. Tech. Sgt. Bianca Otero, who organized the Holloman team and the cleanup, said this particular project meant a great deal to her. “I’m a mom with a child in soccer and track, and it’s really important to keep these sports complexes clean, particularly with school about to start,” Otero said. The Holloman team was made of active duty personnel as well as family and friends representing the 8th, 311th and 314th fighter squadrons. Throughout July, Big Give teams worked to benefit Alamogordo, Tularosa, Clouderoft and Ruidoso. The teams had until Monday to complete their projects and will present their results for judging on July 31. “We chose Ruidoso,

given all the flooding they’ve had and wanted to help,” Otero said. “The men helping here are students going through training in the squadrons, and they were gracious enough to help.” Otero and her team got a firsthand look at the destruction wrought by the floods that have hit the village along the South Fork burn scar since monsoon season began. What she saw was devastating, she said. “This was the first time I’d been here, and I saw how beautiful this town is,” Otero said. “I feel bad that this is how I see it. It’s an awful feeling, and we just want to help.” *Todd Fuqua is Assistant Editor for the Alamogordo News and can be reached on Instagram at @toadfox1.*



TODD FUQUA | CURRENT-ARGUS
1st Lts. Josh Stevic, left, and Jeff Carter dig up mud and debris along a walking trail at White Mountain Athletic Complex in Ruidoso on July 25. Both are members of the 8th Fighter Squadron at Holloman Air Force Base.

NOTICE OF AIR QUALITY PERMIT APPLICATION

Crestwood New Mexico Pipeline LLC (Crestwood) 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 **August 22, 2025**.

The exact location for the proposed facility known as, **Willow Lake Compressor Station**, is at **393 Higby Hole Road, Malaga, NM 88263**. The approximate location of this facility is **2.7 miles southwest of Malaga, NM** in **Eddy** county.

The proposed **modification** consists of shutting down/removing-from-service natural gas processing facilities and operating the facility as a compressor station.

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
Particulate Matter (PM)	3 pph	11 tpy
PM 10	3 pph	11 tpy
PM 2.5	3 pph	11 tpy
Sulfur Dioxide (SO2)	4 pph	13 tpy
Hydrogen Sulfide (H2S)	1 pph	2 tpy
Nitrogen Oxides (NOx)	190 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	506 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO2e	N/A	120,000 tpy

The standard and maximum operating schedules of the facility will be continuous: 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: **Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256; Mailing Address: PO Box 450, Loving, NM 88256).**

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 505-629-3395.

Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination 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.

AVISO DE SOLICITUD DE PERMISO DE CALIDAD DEL AIRE

Crestwood New Mexico Pipeline LLC (Crestwood) anuncia el envío de su solicitud al Departamento de Medio Ambiente de Nuevo México para un permiso de calidad del aire para la **modificación de su estación de compresores**. La fecha prevista de presentación de la solicitud a la Oficina de Calidad del Aire es **22 de agosto de 2025**.

La ubicación exacta de la instalación propuesta conocida como **Willow Lake Compressor Station**, está en **393 Higby Hole Road, Malaga, NM 88263**. La ubicación aproximada de esta instalación es 2,7 millas al suroeste de Malaga, NM en el condado de Eddy.

La **modificación** propuesta consiste en cerrar o retirar del servicio las instalaciones de procesamiento de gas natural y operar la instalación como una estación compresora.

Las cantidades máximas estimadas de cualquier contaminante del aire regulado serán las siguientes en libras por hora (pph) y toneladas por año (tpy) y podrían cambiar ligeramente durante el transcurso de la revisión del Departamento:

Contaminante:	Libras por hora	Toneladas por año
Material Particulado (PM)	3 pph	11 tpy
PM 10	3 pph	11 tpy
PM 2.5	3 pph	11 tpy
Dióxido de azufre (SO2)	4 pph	13 tpy
Sulfuro de hidrógeno (H2S)	1 pph	2 tpy
Oxidos de nitrógeno (NOx)	190 pph	185 tpy
Monóxido de carbono (CO)	328 pph	145 tpy
Compuestos Orgánicos Volátiles (VOC)	506 pph	162 tpy
Suma total de todos los contaminantes atmosféricos peligrosos (HAPs)	40 pph	24 tpy
Contaminante Atmosférico Tóxico (TAP)	N/A	N/A
Gases de efecto invernadero como CO2e Total	N/A	120,000 tpy

Los horarios de operación estándar y máximos de funcionamiento de la instalación serán continuos: 7 días a la semana y un máximo de 52 semanas al año.

El propietario y/o operador de la Instalación es: Crestwood New Mexico Pipeline LLC (La dirección física: 1025 Bounds Road, Loving, NM 88256; La dirección postal: PO Box 450, Loving, NM 88256).

Si tiene algún comentario sobre la construcción u operación de esta instalación, y desea que sus comentarios se hagan como parte del proceso de revisión de permisos, debe enviar sus comentarios por escrito a esta dirección: Gerente de Programas de Permisos; Departamento de Medio Ambiente de Nuevo México; Oficina de Calidad del Aire; 525 Camino de los Márquez, Suite 1; Santa Fe, Nuevo México; 87505-1816. Otros comentarios y preguntas pueden ser presentados verbalmente. (505) 476-4300; 1 800 224-7009.

Indique el nombre de la compañía y el nombre del sitio, o envíe una copia de este aviso junto con sus comentarios, ya que el Departamento puede aún no haber recibido la solicitud de permiso. Por favor incluya una dirección postal de devolución legible con sus comentarios. Una vez que el Departamento haya realizado una revisión preliminar de la solicitud y sus impactos en la calidad del aire, el aviso del Departamento se publicará en la sección legal de un periódico que circula cerca de la ubicación de la instalación.

Puede encontrar información general sobre la calidad del aire y el proceso de autorización, así como enlaces a las regulaciones, en el sitio web de la Oficina de Calidad del Aire: www.env.nm.gov/air-quality/permitting-section-home-page/. El reglamento relativo a la participación pública en el proceso de revisión de permisos es de 20.2.72.206 NMAC.

Atención
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Email: wturner@waterbank.com

Broker: William Turner, QB, PhD

Albuquerque, NM 87102

ER-ERM56200

NOTICE OF AIR QUALITY PERMIT APPLICATION

Crestwood New Mexico Pipeline LLC (Crestwood) 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 **August 22, 2025**.

The exact location for the proposed facility known as, **Willow Lake Compressor Station**, is at **393 Higby Hole Road, Malaga, NM 88263**. The approximate location of this facility is **2.7 miles southwest of Malaga, NM in Eddy county**.

The proposed **modification** consists of shutting down/removing-from-service natural gas processing facilities and operating the facility as a compressor station.

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
Particulate Matter (PM)	3 pph	11 tpy
PM ₁₀	3 pph	11 tpy
PM _{2.5}	3 pph	11 tpy
Sulfur Dioxide (SO ₂)	4 pph	13 tpy
Hydrogen Sulfide (H ₂ S)	1 pph	2 tpy
Nitrogen Oxides (NO _x)	190 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	506 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO ₂ e	N/A	120,000 tpy

The standard and maximum operating schedules of the facility will be continuous: 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: **Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256; Mailing Address: PO Box 450, Loving, NM 88256)**.

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 505-629-3395.

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

Published in the Carlsbad Current-Argus July 29, 2025. #56660

Public Notices

NOTICE

Admiral Permian Operating LLC announces its intent to apply to the New Mexico Environment Department for an air quality General Construction Permit, **GCP-Oil and Gas**. The name of this facility is **War Pigeon Federal**. The expected date of the submittal of our registration form to the Air Quality Bureau is **August, 2025**. This notice is a requirement according to New Mexico air quality regulations.

The exact location of the facility is/will be **32.249269° Latitude, -104.235811° Longitude** The approximate location of this site is **6.3 miles southwest of Carlsbad in Eddy County**. The standard operating schedule of this facility will be continuous.

Air emissions of any regulated air contaminant will be less than or equal to :

	Tons per year (TPY)
1. Nitrogen Oxides (NOx)	95
2. Carbon Monoxide (CO)	95
3. Volatile Organic Compounds (VOC) (stack)	95
4. Particulate Matter (PM10)	25
5. Particulate Matter (PM2.5)	25
6. Sulfur Dioxide (SO2)	95
7. Hydrogen Sulfide (H2S)	25
8. Any one (1) Hazardous Air Pollutant (HAP)	<10
9. Sum of all Hazardous Air Pollutants (HAPs)	< 25

The owner and/or operator of the Plant is:

Admiral Permian Operating LLC
200 N. Loraine Street, Suite 800
Midland, TX 79701

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

New Mexico Environment Department
Air Quality Bureau Permit Section
525 Camino de los Marquez, Suite 1, Santa Fe, New Mexico, 87505
Phone (505) 476-4300

Other comments and questions may be submitted verbally.

Please refer to the company name and site name in this notice or send a copy of this notice with your comments, since the Department may not have received the permit Registration at the time of this notice.

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.

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Public Notices

Public Notices

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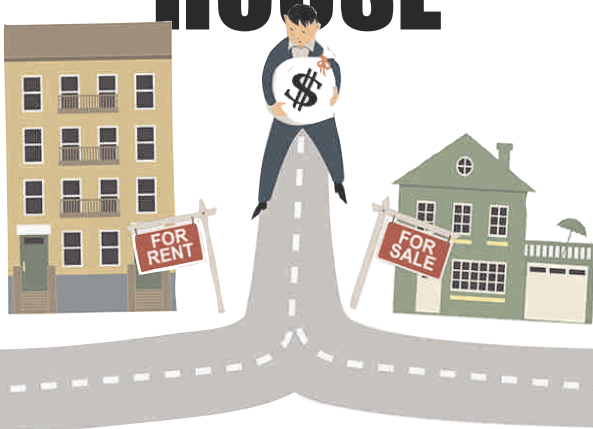
Published in the Carlsbad Current-Argus July 29, 2025. #56690

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AVISO DE SOLICITUD DE PERMISO DE CALIDAD DEL AIRE

Crestwood New Mexico Pipeline LLC (Crestwood) anuncia el envío de su solicitud al Departamento de Medio Ambiente de Nuevo México para un permiso de calidad del aire para la **modificación** de su **estación de compresores**. La fecha prevista de presentación de la solicitud a la Oficina de Calidad del Aire es **22 de agosto de 2025**.

La ubicación exacta de la instalación propuesta conocida como **Willow Lake Compressor Station**, está en **393 Higby Hole Road, Malaga, NM 88263**. La ubicación aproximada de esta instalación es **2,7 millas al suroeste de Malaga, NM** en el condado de **Eddy**.

La **modificación** propuesta consiste en cerrar o retirar del servicio las instalaciones de procesamiento de gas natural y operar la instalación como una estación compresora.

Las cantidades máximas estimadas de cualquier contaminante del aire regulado serán las siguientes en libras por hora (pph) y toneladas por año (tpy) y podrían cambiar ligeramente durante el transcurso de la revisión del Departamento:

Contaminante:	Libras por hora	Toneladas por año
Material Particulado (PM)	3 pph	11 tpy
PM ₁₀	3 pph	11 tpy
PM _{2.5}	3 pph	11 tpy
Dióxido de azufre (SO ₂)	4 pph	13 tpy
Sulfuro de hidrógeno (H ₂ S)	1 pph	2 tpy
Óxidos de nitrógeno (NO _x)	190 pph	185 tpy
Monóxido de carbono (CO)	328 pph	145 tpy
Compuestos Orgánicos Volátiles (VOC)	506 pph	162 tpy
Suma total de todos los contaminantes atmosféricos peligrosos (HAPs)	40 pph	24 tpy
Contaminante Atmosférico Tóxico (TAP)	N/A	N/A
Gases de efecto invernadero como CO ₂ e Total	N/A	120,000 tpy

Los horarios de operación estándar y máximos de funcionamiento de la instalación serán continuos: 7 días a la semana y un máximo de 52 semanas al año.

El propietario y/o operador de la Instalación es: **Crestwood New Mexico Pipeline LLC (La dirección física: 1025 Bounds Road, Loving, NM 88256; La dirección postal: PO Box 450, Loving, NM 88256)**.

Si tiene algún comentario sobre la construcción u operación de esta instalación, y desea que sus comentarios se hagan como parte del proceso de revisión de permisos, debe enviar sus comentarios por escrito a esta dirección: Gerente de Programas de Permisos; Departamento de Medio Ambiente de Nuevo México; Oficina de Calidad del Aire; 525 Camino de los Márquez, Suite 1; Santa Fe, Nuevo México; 87505-1816. Otros comentarios y preguntas pueden ser presentados verbalmente. (505) 476-4300; 1 800 224-7009.

Indique el nombre de la compañía y el nombre del sitio, o envíe una copia de este aviso junto con sus comentarios, ya que el Departamento puede aún no haber recibido la solicitud de permiso. Por favor incluya una dirección postal de devolución legible con sus comentarios. Una vez que el Departamento haya realizado una revisión preliminar de la solicitud y sus impactos en la calidad del aire, el aviso del Departamento se publicará en la sección legal de un periódico que circula cerca de la ubicación de la instalación.

Puede encontrar información general sobre la calidad del aire y el proceso de autorización, así como enlaces a las regulaciones, en el sitio web de la Oficina de Calidad del Aire: www.env.nm.gov/air-quality/permitting-section-home-page/. El reglamento relativo a la participación pública en el proceso de revisión de permisos es de 20.2.72.206 NMAC.

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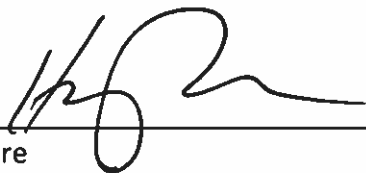
Classified shoppers aren't desperate... just smart consumers that like to save money.

General Posting of Notices – Certification

I, Heather Patterson, the undersigned, certify that on **7/25/2025** posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in **Loving of Eddy** County, State of New Mexico on the following dates:

1. Facility entrance 7/25/2025
2. Carlsbad, NM Library 7/25/2025
3. La Tienda, Carlsbad NM 7/25/2025
4. Loving, NM Post Office 7/25/2025

Signed this 25th day of July, 2025,


Signature

7/25/2025
Date

Heather Patterson
Printed Name

Environmental Specialist
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

NOTICE

Crestwood New Mexico Pipeline LLC (Crestwood) announces its application 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 **August 22, 2025**.

The exact location for the proposed facility known as, **Willow Lake Compressor Station**, is at **393 Higby Hole Road, Malaga, NM 88263**. The approximate location of this facility is **2.7 miles southwest of Malaga, NM** in **Eddy** county.

The proposed **modification** consists of shutting down/removing-from-service natural gas processing facilities and operating the facility as a compressor station.

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

Pollutant:	Pounds per hour	Tons per year
Particulate Matter (PM)	3 pph	11 tpy
PM ₁₀	3 pph	11 tpy
PM _{2.5}	3 pph	11 tpy
Sulfur Dioxide (SO ₂)	4 pph	13 tpy
Hydrogen Sulfide (H ₂ S)	1 pph	2 tpy
Nitrogen Oxides (NO _x)	190 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	506 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO _{2e}	N/A	120,000 tpy

The standard operating schedule of the facility will be continuous: 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: **Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256; Mailing Address: PO Box 450, Loving, NM 88256)**.

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

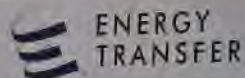
With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has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

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Willow Lake Plant 1
393 Higby Hole Rd
Malaga NM 88263

ALL VISITORS MUST SIGN IN
IN AN EMERGENCY CALL 1-800-375-5702
ENERGY TRANSFER COMPANY



NOTICE

Crestwood New Mexico Pipeline LLC (Crestwood) announces its application to the New Mexico Environment Department for an air quality permit for the modification of its compressor station facility. The expected date of application (initial) to the Air Quality Bureau is August 22, 2025.

The exact location for the proposed facility known as, Willow Lake Compressor Station, is at 393 Highway Road, Malaga, NM 88263. The approximate location of this facility is 2.7 miles southwest of Malaga, NM in Eddy county.

The proposed modification consists of shutting down/oncoming-from service natural gas processing facilities and operating the facility as a compressor station.

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

Pollutant:	Pounds per hour	Tons per year
Particulate Matter (PM)	3 pph	11 tpy
PM ₁₀	3 pph	11 tpy
PM _{2.5}	3 pph	11 tpy
Sulfur Dioxide (SO ₂)	4 pph	13 tpy
Hydrogen Sulfide (H ₂ S)	1 pph	3 tpy
Nitrogen Dioxide (NO ₂)	100 pph	185 tpy
Carbon Monoxide (CO)	328 pph	145 tpy
Volatile Organic Compounds (VOC)	595 pph	162 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	40 pph	24 tpy
Toxic Air Pollutant (TAP)	N/A	N/A
Green House Gas Emissions as Total CO ₂ e	N/A	120,000 tpy

The standard operating schedule of the facility will be continuous 7 days a week and a maximum of 53 weeks per year.

The owner and/or operator of the Facility is: Crestwood New Mexico Pipeline LLC (Physical Address: 1025 Bounds Road, Loving, NM 88256, Mailing Address: PO Box 458, Loving, NM 88256).

If you have any comments about the construction or operation of this facility, and you wish your comments to be made a part of the permit review process, you must submit your comments in writing to this address: Permit Processing Manager, New Mexico Environment Department, Air Quality Bureau, 525 Camino de las Mariposas, Suite 1, Santa Fe, New Mexico; 87503-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7000.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary so the Department may facilitate your request for permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Atención:

Este es un aviso de la oficina de Calidad del Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones de contaminantes por un cierto número en esta área. Si usted desea información o ayuda, por favor comuníquese con una oficina de telefonía 505-476-4300.

Notice of Non-Discrimination

NMDEQ does not discriminate on the basis of race or ethnicity in its programs or activities. NMDEQ is responsible for implementing all requirements of Title VI of the Civil Rights Act of 1964 as amended, Section 504 of the Rehabilitation Act of 1973, and Section 1547 of the Federal Railroad Reform Act of 1973. If you have any questions about this notice or NMDEQ's non-discrimination program, please contact: NMDEQ, 525 Camino de las Mariposas, Suite 1, Santa Fe, New Mexico; 87503-1816. P.O. Box 5400, Santa Fe, NM 87503. (505) 476-2945. If you believe you have been discriminated against with respect to NMDEQ's program or activity, you may contact: NMDEQ's Discrimination Coordinator, NMDEQ, 525 Camino de las Mariposas, Suite 1, Santa Fe, New Mexico; 87503-1816. P.O. Box 5400, Santa Fe, NM 87503. (505) 476-2945. You may also contact our website at <http://www.nmenv.gov> for information on our non-discrimination program and where to file a complaint or other information.

2025

event calendar

**JUNE 13TH & 14TH
CAVERNFEST**

**SPRING THROUGH FALL
FARMERS & MAKERS**
Apr 3 to May 23 Jun 21 to Aug 30
Every second Sat in Town Sat & Sun 10am-5pm

**JULY 4TH
4TH OF JULY PARADE**

**OCTOBER 31ST
FALL FESTIVAL**

**NOVEMBER 20TH
SMALL BUSINESS SATURDAY**

**NOVEMBER 29TH
ELECTRIC LIGHT PARADE**

Each by City of Carlsbad Library's Tax.

Made in Librayhouse # 2024/2025/2026

FREE PEOPLE READ FREELY

This library supports your right to read what you want.

Offering!

High School
Citizenship
English
ESL Class

**511 N 12TH
575-885-1752
EMAIL director**

NOTICE

Carlsbad Public Library, a public agency, is providing this notice to inform you of the public hearing on the proposed changes to the Carlsbad Public Library's policies and procedures regarding the use of the library's facilities for private events. The public hearing will be held on Friday, July 25th, 2025, at 6:00 PM, at the Carlsbad Public Library, 101 S. Hoagueno, Carlsbad, CA 92008. The public hearing will be open to all interested parties and will provide an opportunity for you to provide input on the proposed changes. The public hearing will be held in the main meeting room of the library. The public hearing will be held on Friday, July 25th, 2025, at 6:00 PM, at the Carlsbad Public Library, 101 S. Hoagueno, Carlsbad, CA 92008. The public hearing will be open to all interested parties and will provide an opportunity for you to provide input on the proposed changes. The public hearing will be held in the main meeting room of the library.

Summer's End Ice Cream Social

Friday July 25th
3-5 pm

Come and go event with ice cream and activities. Drawing for art kits at 4 pm

CARLSBAD PUBLIC LIBRARY
101 S Hoagueno Carlsbad NH 92008
575.885.6778

Caffeine & Cultivation

Saturdays from 9:30 - 11:30 am

July: 12th & 26th
August: 5th & 23rd
September: 6th & 20th

Seeds, Sprouts, & Plant swap

CARLSBAD PUBLIC LIBRARY

KINDERGARTEN READINESS PARTY

Friday August 1, 2025
4-6 pm

Join us for a fun and go event geared towards kids going into kindergarten with a variety of activities for kids to do.

CARLSBAD PUBLIC LIBRARY
101 S Hoagueno Carlsbad NH 92008
575.885.6778

STORY TIME AT THE ZOO

JOIN CARLSBAD PUBLIC LIBRARY AT THE LIVING DESERT ZOO FOR A SPECIAL STORY TIME
FRIDAY AUGUST 29, 2025
9:30 AM

CARLSBAD PUBLIC LIBRARY
101 S Hoagueno Carlsbad NH 92008
575.885.6778



HOME SERVICE

SCHEDULE YOUR APPOINTMENT
AND WE WILL LEAVE YOUR CAR
ANY Carlsbad Nm

Social net work facebook
Turbo auto detailing
Contact:
8062154730

2:00 PM SPECIAL PERFORMANCE BY TOP NOTCH

2:30 PM RAFFLES BEGIN, MUST BE PRESENT TO WIN

3:00 PM AGENCY INTERACTION & RELAY GAMES
5:00 PM EVENT CONCLUDES AT 5 PM. THANK YOU, SP

JUMPERS 8-5

LET'S HAVE FOAM 12-3

FACE PA

ExxonMobil

SIMCO

AH

AMERICAN MARKET

ZEALOUS

NO RIDE? NO PROBLEM

EMERGENCY TRANSPORT
AND FROM AGH APPOINT

AVAILABLE MON-FRI, 7AM-5PM
ENDING ARTESIA, CARLSBAD &

prioritize safe, cost-effective transp
patients. All vans are wheelchair a
our certified drivers will pick you u
and take you to your AGH appoint

FREE IN CITY RIDES
AUGUST -

CALL TO SCHED
575.7
LLAME PARA

GRATUITOS DENTRO DE
AGOSTO A

TRANSPORTE NO URGENTE
DIA Y DESDE LAS CITAS E

DISPONIBLE DE LUNES A VIERNES, D

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nuestros pacientes. Todas las

unidades certificadas lo rean

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NOTICE

Crestwood New Mexico Pipeline LLC (Crestwood) announces its application to the New Mexico Environment Department for a de quality permit for the modification of its compressor station facility. The expected date of application approval is the late Quality Review in August 2015.

The start location for the proposed facility known as, Willow Lake Compressor Station, is at 393 Highway 101, Malaga, NM 88261. The approximate location of this facility is 2.7 miles southwest of Malaga, NM in Eddy county.

The proposed modification consists of shutting down existing four-service natural gas processing facilities and opening the facility as a compressor station.

The maximum quantities of any regulated air contaminants will be as follows at point per hour (pphr) and per year (pyr). These releases could change slightly during the course of the Department's review.

Process	Tons per hour	Tons per year
Particulate Matter (TSP)	3 pphr	15 pyr
PM10	3 pphr	15 pyr
PM2.5	3 pphr	15 pyr
Sulfur Dioxide (SO2)	3 pphr	15 pyr
Carbon Monoxide (CO)	3 pphr	15 pyr
Nitrogen Dioxide (NO2)	100 pphr	160 pyr
Nitrogen Oxide (NOx)	300 pphr	160 pyr
Hydrogen Sulfide (H2S)	500 pphr	160 pyr
Hydrogen Cyanide (HCN)	50 pphr	20 pyr
Hydrogen Chloride (HCl)	N/A	20 pyr
Hydrogen Fluoride (HF)	N/A	20 pyr
Hydrogen Sulfide (H2S)	N/A	20 pyr
Hydrogen Sulfide (H2S)	N/A	20 pyr

The compressor station will be in operation 7 days a week and a maximum of 52 weeks per year.

The proposed modification of the facility is located at Crestwood New Mexico Pipeline LLC (Physical Address: 1625 South Road, El Paso, NM 88505). Mailing Address: PO Box 480, Loving, NM 88226.

If you have any comments about the construction or operation of this facility, and you wish your comments to be considered in the permit review process, you must submit your comments in writing to the address: Permit Program Manager, New Mexico Environment Department, Air Quality Bureau, 725 Camino de las Mariposas, Suite 11, Santa Fe, New Mexico 87505-1116. Other comments and questions may be submitted verbally at 476-4900, 1-800-331-7000.

You may also submit comments to the company name and facility name, or send a copy of this notice along with your comments. The comments must be submitted to the company name and facility name, or send a copy of this notice along with your comments. The comments must be submitted to the company name and facility name, or send a copy of this notice along with your comments.

The Department has completed its preliminary review of the application and the air quality impacts. The Department's review will be published in a newspaper circulated near the facility location.

Additional:
This notice is given in the office of the Secretary of the Department of the State of New Mexico, at the New Mexico Environment Department, 725 Camino de las Mariposas, Suite 11, Santa Fe, New Mexico 87505-1116.

Notice of:
The Department of the State of New Mexico, at the New Mexico Environment Department, 725 Camino de las Mariposas, Suite 11, Santa Fe, New Mexico 87505-1116, is hereby giving notice to the public that the Department is reviewing the application for a permit to construct and operate a compressor station at the location of the Willow Lake Compressor Station, located at 393 Highway 101, Malaga, NM 88261. The Department is reviewing the application for a permit to construct and operate a compressor station at the location of the Willow Lake Compressor Station, located at 393 Highway 101, Malaga, NM 88261. The Department is reviewing the application for a permit to construct and operate a compressor station at the location of the Willow Lake Compressor Station, located at 393 Highway 101, Malaga, NM 88261.

LISTENING SESSION:
IN YOUR COMMUNITY /
BIÓN DE ESCUCHA
A EN TO COMUNIDAD



ROADRUNNER
FOOD BANK

AR D

at 12 / Mar 12 de Ago

RATE AHORA

inter

and Food/
nida

/ Sesión de escucha

nos queremos la opinión sobre:





UNITED STATES
POST OFFICE TM

Loving NM. 88256

COME TO THE
LOVING
SENIOR CENTER
MONDAY, WEDNESDAY, FRIDAY
TUESDAY, THURSDAY
3PM TO 8PM
9AM TO 3PM
Exercise equipment
crafts
AGE 40+

Age 40+

CRAFT TIME

• THE LOVING SEBASTE CENTER

2PM

- TOPIC: CARD MAKING 101
- TRADITIONAL SCRAPBOOKING

2011
SEBASTIAN, IL

be well nm

[illegible]

Loving Water System 2021 Consumer Satisfaction Report

September 1, 2021

Thank you for taking the time to complete this survey. Your feedback is important to us and will help us improve our services. This survey is confidential and your responses will be kept private.

By my email and:

We would like to personally thank you for completing this survey. Your feedback is important to us and will help us improve our services. This survey is confidential and your responses will be kept private.

Do I need to be a water system customer?

Yes, you must be a water system customer to complete this survey. If you are not a water system customer, please do not complete this survey.

What are the water system's goals?

The water system's goals are to provide safe, reliable, and affordable water to its customers. The water system also aims to protect the environment and promote sustainable water use.

How can I get more information?

You can get more information by visiting our website at www.lovingwater.com or by calling our customer service line at 1-800-555-1234.

Thank you for your feedback!

Loving Water System
1234 Main Street
Anytown, USA 12345
Phone: 1-800-555-1234
Email: info@lovingwater.com

**NOW HIRING
CDL DRIVER
LEASE OPERATOR**

[illegible]

The image shows a newspaper page with a large table at the bottom. The table has multiple columns and rows, with headers that are partially legible. The text above the table is dense and mostly illegible due to the resolution of the scan. The table appears to be a financial or statistical report, possibly related to the 'New York Times' mentioned in the caption.

[illegible][illegible][illegible]

Submittal of Public Service Announcement – Certification

I, Catherine Le, the undersigned, certify that on **July 25, 2025**, submitted a public service announcement to **RADIO KATK – 92.1 FM** that serves the City of **CARLSBAD**, in **EDDY** County, New Mexico, in which the source is or is proposed to be located and that **RADIO KATK RESPONDED THAT IT WOULD AIR THE ANNOUNCEMENT.**

Signed this 28 day of July, 2025,



Signature

7/28/2025
Date

Catherine Le
Printed Name

Environmental Specialist – EnTech Consulting Corp (contractor for applicant)
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

Re: PSA Request for Air Quality Permit - Willow Lake Compressor Station

From Catherine Le <catherine.le@entechservice.com>

Date Mon 7/28/2025 10:47 AM

To Don Hughes <donhughes42@gmail.com>

That sounds good. Thanks!

Catherine Le
Environmental Scientist
EnTech Consulting Corporation
21 Waterway Avenue
Suite 300
The Woodlands, TX 77380
Mobile: 314-489-4229
Office: 281-362-2714
Email: catherine.le@entechservice.com
Website: www.entechservice.com



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From: Don Hughes <donhughes42@gmail.com>

Sent: Monday, July 28, 2025 9:16 AM

To: Catherine Le <catherine.le@entechservice.com>

Subject: Re: PSA Request for Air Quality Permit - Willow Lake Compressor Station

I am proceeding on this....will get the message produced today for you to review and will schedule the ad to air on July 30th.

Stand by!

Don

On Mon, Jul 28, 2025 at 8:36 AM Catherine Le <catherine.le@entechservice.com> wrote:
Hi Don,

Please proceed and send the invoice. Just to confirm, this is a one-time airing?

Thank you,

Catherine Le
Environmental Scientist
EnTech Consulting Corporation
21 Waterway Avenue
Suite 300
The Woodlands, TX 77380
Mobile: 314-489-4229
Office: 281-362-2714
Email: catherine.le@entechservice.com
Website: www.entechservice.com



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From: Don Hughes <donhughes42@gmail.com>
Sent: Friday, July 25, 2025 6:05 PM
To: Catherine Le <catherine.le@entechservice.com>
Subject: Re: PSA Request for Air Quality Permit - Willow Lake Compressor Station

Hi Catherine... we are these PSA request for our clients on a regular basis. To get this aired there will be a \$500 charge. That covers production cost – scheduling – proof of performance-invoicing.

Please let me know if you would like to proceed.

Don
Sent from my iPhone

On Jul 25, 2025, at 12:50 PM, Catherine Le <catherine.le@entechservice.com> wrote:

Dear Carlsbad Radio,

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 or 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 information shown below as a Public Service Announcement on Radio KATK – 92.1 FM.**

The public service announcement request must contain the following information about the facility or proposed facility (20.2.72.203.D NMAC):

- (a)** The name: **Willow Lake Compressor Station**, location: **393 Highbly Hole Road, Malaga, NM 88263** and type of business: **Compressor Station**.
- (b)** The name of the principal owner or operator: **Crestwood New Mexico Pipeline, LLC** – owner & operator.
- (c)** The type of process or change for which the permit is sought: **The proposed modification consists of shutting down/removing-from-service natural gas processing facilities and operating the facility as a compressor station.**
- (d)** Locations where the notices have been posted: **(1) Willow Lake Facility Entrance; (2) Loving Post Office; (3) Carlsbad Public Library; (4) La Tienda grocery store in Carlsbad**
- (e)** The Department's address or telephone number to which comments may be directed: **Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1, Santa Fe, New Mexico; 87505-1816; (505) 476-4300**

Please let me know if there are any questions.

Thank you,

Catherine Le
Environmental Scientist
EnTech Consulting Corporation
21 Waterway Avenue
Suite 300
The Woodlands, TX 77380
Mobile: 314-489-4229
Office: 281-362-2714
Email: catherine.le@entechservice.com
Website: www.entechservice.com



Statement of Confidentiality: This email and any attachments transmitted with it are confidential and intended solely for the use of the individual or entity to which they are addressed. The information contained in this email is highly confidential and may be subject to legally enforceable privileges. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that any disclosure, reliance, copying, distribution, dissemination or use of any of the information contained in or attached to this transmission is STRICTLY PROHIBITED. If you have received this communication in error, please notify EnTech immediately by replying to this email. Please delete all copies of this message and any attachments immediately.

--

Don Hughes

General Manager
Carlsbad Radio

575.887.7563w

575.302.3803c

575.887.7000f

Carlsbad Radio does not discriminate on the basis of race or ethnicity. Any provisions in any order or agreement for advertising that purports to discriminate on the basis of race or ethnicity is void.

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.

Crestwood New Mexico Pipeline LLC (Crestwood) owns and operates the Willow Lake Gas Processing Plant (Willow Lake) located in Eddy County, New Mexico. As permitted, The Willow Lake facility consists of two (2) gas processing plant to recover natural gas liquids (NGL): Willow Lake 1 consists of a turbo-expander cryogenic separation system that removes a significant fraction of the C2+ compounds from the cooled gas stream, and Willow Lake 2 consists of a refrigerated Joule-Thompson (RJT) plant that also removes C2+ compounds using a combination of mechanical refrigeration and a Joule-Thompson effect. The NGL streams from these units are routed to pressurized storage tanks prior to truck loading and transport. Willow Lake 1 has a maximum processing capacity of 20 MMSCFD of natural gas. Willow Lake 2 has a maximum processing capacity of 35 MMSCFD of natural gas. The two processing units have separate inlets but share two outlet residue lines. **Crestwood intends to shutdown Willow Lake 1 and Willow Lake 2 natural gas processing plants under this proposed permit revision. Willow Lake will be operated as a natural gas compressor station subsequent to permit revision approval.**

Subsequent to this permit revision approval, Willow Lake will operate as a stand-alone compressor station. The Willow Lake Compressor Station will include the following emission sources proposed under this permit revision request:

- Twelve compressor engines (C-1110, C-1120, C-1130, C-1140, C-1150, C-1160, C-1170, C-1180, C-1100, C-1200, C-2300, C-2400);
- Two TEG dehydration units (DEHY-805, DEHY-1505) will operate unmodified, in support of the compressor station. Operating parameters/controls/throughputs and emissions will remain as currently authorized.
 - o DEHY-805 flash tank emissions will continue to be routed into the reboiler fuel line for reboiler firing and/or continuous pilot fuel. Flash tank vapors will continue to be routed to the VRU in the event of low fuel demand or to the flare during VRU downtime. Regenerator vapors are routed to the reboiler fire-box/glow-plug combination.
 - o DEHY-1505 flash tank emissions are recycled and directed back into the suction side of the compressor station. Flash tank emissions may also be routed to VRU, or to flare during VRU downtime. Regenerator vapors are routed to the reboiler fire-box/glow-plug combination;
 - o Refer to Table 2-C “Emissions Control Equipment” for a detailed summary of these vapor controls;
- Two TEG dehydration unit reboilers (HTR-805, HTR-1505) will operate unmodified, in support of the two remaining TEG dehydration units referenced above;
- The following storage tanks will remain unmodified under this permit revision request. Operating parameters/controls/throughputs and emissions will remain as currently authorized. These tanks receive condensate/produced water from the inlet scrubber/separator and will continue to be under VRU control. As currently authorized, tank vapors will continue to be directed to flare during VRU downtime. Refer to Table 2-C “Emissions Control Equipment” for a detailed summary of these vapor controls;
 - o Three (3), 210 bbl condensate/produced water tanks (WL1-TK601, WL1-TK602, WL1-TK603);
 - o Six (6), 400 bbl condensate/produced water tanks (WL2-TK8101, WL2-TK8102, WLCS-TK2301, WLCS-TK2302, WLCS-TK2303, WLCS-TK2304);
- The following two (2) existing flares will control emissions from the following sources:
 - o WL1-FL will continue to control vapors from WL1-TK601, WL1-TK602, WL1-TK603, WLCS-TK2301, WLCS-TK2302, WLCS-TK2303, WLCS-TK2304, DEHY-805 and DEHY-1505; and, vapors from WL1-VRU/WLCS-VRU during VRU downtime. This flare will continue to control compressor blowdowns. This flare will no longer control vapors associated with deleted units DEHY-803, DEHY-804;
 - o WL2-FL will continue to control vapors from compressor blowdowns and WL2-VRU (this VRU controls vapors from WL2-TK8101, WL2-TK8102) during VRU downtime. This flare will no longer control vapors associated with deleted DEHY-EG.

All emission sources under this requested permit revision will continue to operate under currently authorized operating parameters/controls/throughputs and under currently authorized emissions, with the exception of the following source modifications:

- Willow Lake NGL plant no. 1 and Willow Lake NGL plant no. 2 will be removed from service. The following associated sources will be shut down:
 - o DEHY-803, DEHY-804, DEHY-EG;
 - o HTR-802, HTR-803, HTR-804, HTR-730;
 - o NGL-LOAD;
 - o All NGL storage tanks will be removed from service;
- The following emission sources will be modified due to NGL plant shut down, with a net reduction of all criteria pollutants:
 - o WL1-FL/WL2-FL
 - o FUG-1/FUG-2
 - o PIGGING (frequency increased to 156 events/year)

The emissions represented in this application represent the worst-case emissions calculated as if each piece of equipment operates 8,760 hours/year.

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):

Refer to the emission source list provided in Table 2-A.

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.**

B. This facility **[is not]** one of the listed 20.2.74.501 Table I – PSD Source Categories.

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/>

STATE REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
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 SIP approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets maximum allowable concentrations of SO ₂ , H ₂ S, NO _x , and CO under this regulation.
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 emission per 20.2.7.110 NMAC.
20.2.23 NMAC	Fugitive Dust Control	No	Facility	This regulation does not apply as the facility has no need to fugitive dust control measures as the facility does not generate enough particulate matter.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have gas burning equipment (external combustion emission sources, such as gas fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.33.108 NMAC.
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No	N/A	This facility does not have oil burning equipment (external combustion emission sources, such as oil fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. The facility does not meet the minimum sulfur emission requirement of an average of 5 tons/day [20.2.35.110.A NMAC]. Additionally, both NGL plants will be removed from service. Therefore, this facility is not subject to the operational, recordkeeping, or reporting requirements of this regulation.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
20.2.38 NMAC	Hydrocarbon Storage Facility	No	N/A	This facility does not meet the definition of a petroleum production facility or tank battery as defined in 20.2.38 NMAC and is therefore not subject to this regulation.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This regulation establishes sulfur emission standards for sulfur recovery plants that are not part of petroleum or natural gas processing facilities. This regulation does not apply to the facility because this facility does not have a sulfur recovery plant.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	C-1100, C-1200, C-2300, C-2400, C-1110 to C-1180, HTR-805, HTR-1505, WL1-FL, WL2-FL	This regulation establishes controls on smoke and visible emissions from certain sources, including stationary combustion equipment. The engines, heaters, flares and combustors at this facility are subject to this regulation.
20.2.70 NMAC	Operating Permits	Yes	N/A	Facility emissions are above Title V thresholds. It is major with respect to Title V.
20.2.71 NMAC	Operating Permit Fees	Yes	N/A	This facility will be subject to 20.2.70 and will therefore comply with the fee requirements of this regulation.
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes the requirements for obtaining a construction permit. This facility is subject to the requirements of this subpart and currently complies with NSR-5142-M7. The facility will continue to comply with the permit once this significant revision is issued.

STATE REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
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	Facility	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. This facility is not a major source with respect to PSD and is therefore not subject to 20.2.74 NMAC.
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 Standards	Yes	C-1100, C-1200, C-2300 C-2400, C-1110 to C-1180, FUG-1 and FUG-2	The facility currently operates equipment that is subject to subparts of 40 CFR 60: the compressors associated with Units C-2300, C-2400 and units C-1110 to C-1180 will be subject to subpart OOOOa. All engines will be subject to subpart JJJJ. Additionally, fugitive components (FUG-1 and FUG-2) associated with the compressor station will trigger subpart OOOOa applicability.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This regulation establishes state authority to implement emission standards for hazardous air pollutants subject to 40 CFR Part 61. This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61 and is therefore not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	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	Yes	Facility	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This facility is a new facility pursuant to 20.2.80.110, this facility is subject to this regulation.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	C-1100, C-1200, C-2300, C-2400, C-1110 to C-1180, DEHY-805, DEHY-1505	The engines at this facility are subject to 40 CFR 63 subpart ZZZZ and the TEG dehydrators at this facility are subject to 40 CFR 63 subpart HH. Therefore, this regulation applies.

FEDERAL REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NOX, CO, SO2, H2S, PM10, and PM2.5 under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	C-1100, C-1200, C-2300 C-2400, C-1110 to C-1180, FUG-1, FUG-2	The facility currently operates equipment that is subject to subparts of 40 CFR 60:the compressors associated with Units C-2300, C-2400 and units C-1110 to C-1180 will be subject to subpart OOOOa. All engines will be subject to subpart JJJJ. Fugitive components at Willow Lake 1 (FUG-1) will remain subject to NSPS OOOO associated with the compressor station. Fugitive components (FUG-2) associated with the prior expansion of the compressor station will trigger subpart OOOOa applicability (not NSPS OOOO).
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for fossil-fuel-fired stream 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)1.
NSPS 40 CFR60.40b 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 the facility does not have any steam generating units which meet the applicability criteria of a heat input greater than or equal to 10 MMBtu/hr.
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 regulation establishes performance standards for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. The tanks at the facility, which are regulated emission sources, are 400 bbl (16,800 gallons) and 210 bbl (8,820 gallons). The capacities of the tanks at the facility are less than 40,000 gallons and are not subject to this regulation. [40 CFR Part 60.110a(a)1
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 regulation establishes performance standards for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984. This facility does not have any storage vessels with a capacity greater than or equal to 75 cubic meters that were constructed, reconstructed or modified after July 23, 1984. This regulation is not applicable.”

FEDERAL REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No	N/A	There are no stationary gas turbines at this facility; this regulation does not apply.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No	N/A	This subpart applies to gas processing plants constructed after January 20, 1984, and on or before August 23, 2011. The gas processing plants were constructed after August 23, 2011 and will be removed from service.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO ₂ Emissions	No	N/A	NSPS Subpart LLL applies to onshore natural gas processing facilities that contain sweetening units that commenced construction after January 20, 1984 but before August 23, 2011. The facility is an onshore natural gas processing plant for which construction, reconstruction, or modification commenced after August 23, 2011. Additionally, both gas plants will be removed from service. This subpart does not apply.
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	Units C-1100 and C-1200 were constructed prior to August 23, 2011 and are therefore not subject to this regulation. The compressors associated with Units C-2300, C-2400 and units C-1110 to C-1180 were constructed or modified after September 18, 2015 and are subject to subpart OOOOa. Fugitive components (FUG-2) associated with the prior expansion of the compressor station will trigger subpart OOOOa applicability (not NSPS OOOO). The storage vessels at this facility each emit less than 6 tpy of VOC and are therefore not subject to this regulation.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	C-2300 C-2400, C-1110 to C-1180, FUG-2	The compressors associated with Units C-2300, C-2400 and units C-1110 to C-1180 were constructed or modified after September 18, 2015 and are subject to subpart OOOOa. Fugitive components at Willow Lake 1 (FUG-1) will remain subject to NSPS OOOO associated with the compressor station. Fugitive components (FUG-2) associated with the prior expansion of the compressor station will trigger subpart OOOOa applicability (not NSPS OOOO). The storage vessels at this facility each emit less than 6 tpy of VOC and 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	There are no CI engines at this facility; this regulation does not apply.

FEDERAL REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	C-1100, C-1200, C-2300, C-2400, C-1110 to C-1180	All engines at this facility are new stationary spark ignition engines with respect to NSPS JJJJ pursuant to 40 CFR 60.4230(4)(i). This regulation applies.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	There are no electric generating units at this facility; this regulation does not apply.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	There are no electric utility generating units at this facility; 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 municipal solid waste landfill; 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. This facility does not process mercury ore, use mercury chlor-alkali cells, or incinerate or dry wastewater treatment plant sludge. Therefore, this facility is not subject to this regulation.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No	N/A	This regulation establishes national emission standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service [40 CFR Part 61.240]. The regulated activities subject to this regulation do not take place at this facility. The facility is not subject to this regulation.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	C-1100, C-1200, C-2300, C-2400, C-1110 to C-1180, DEHY-805, DEHY-1505	The engines at this facility are subject to 40 CFR 63 subpart ZZZZ and the TEG dehydrators at this facility are subject to 40 CFR 63 subpart HH. Therefore, this regulation applies.

FEDERAL REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	DEHY-805, DEHY-1505	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. The facility is an area source of HAPs and meets the definition of a natural gas processing plant. MACT Subpart HH applies to emission points at oil and natural gas production facilities that are HAP major or HAP area sources and that process, upgrade, or store either hydrocarbon liquids or natural gas prior to the point of custody transfer. This regulation applies to TEG units at area sources pursuant to 40 CFR 63.760(b)(2). The facility's TEG dehydrators will comply with the requirements of this subpart as applicable. Since benzene emissions from each dehydrator are less than 1 tpy, the facility is subject to only recordkeeping requirements.
MACT 40 CFR 63 Subpart HHH	Natural Gas Transmission and Storage Facilities	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from boilers and heaters at major sources for HAPs. This facility is an area source for HAPs therefore this regulation 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	Subpart DDDDD covers major sources of HAPs. Willow Lake is an area source of HAPs; and therefore, is not subject to Subpart DDDDD.
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 RICE	Yes	C-1100, C-1200, C-2300, C-2400, C-1110 to C-1180	The engines at this facility are subject to MACT ZZZZ. Units C-1100, C-1200, C-2300, C-2400 and C-1110 through C-1180 will fulfill the requirements of this regulation by complying with NSPS JJJJ.
40 CFR 64	Compliance Assurance Monitoring	No	N/A	Units C-1200, C-2300 and C-2400 have an uncontrolled PTE > 100 tpy of NOx and CO but are subject to NSPS JJJJ and per 40 CFR 64.2(b)(1)(i) can take credit for an emissions reductions. These units are therefore not subject to CAM. Units DEHY-805 and DEHY-1505 have uncontrolled VOC emissions > 100 tpy. The flash tank vapors from DEHY-805 are rerouted to the reboilers to be used as fuel and the still vent vapors are sent to a BTEX condenser. The flash tank vapors from DEHY-1505 are routed to the suction side of the compressor station and the still vent vapors are sent to a BTEX condenser. The VRU serves to collect any flash tank vapors not utilized as fuel, or routed to the compressor station suction and returns vapors to the process. Although these TEG units could potentially be subject to CAM, pursuant to 40 CFR 64.1, the reboiler and condenser are considered passive control measures which are process design features. As such, these reductions are not considered to be taken as a result of a control device, but rather as inherent to the dehydration process. Additionally, the dehydration units are subject to 40 CFR Part 63, Subpart HH.
40 CFR 68	Chemical Accident Prevention	Yes	Facility	The facility does have a material above a threshold quantity listed in 40 CFR 68.130; and therefore, is subject to 40 CFR Part 68.

FEDERAL REGULATIONS:

CITATION	TITLE	APPLIES?	UNITS/FACILITY	JUSTIFICATION:
Title IV – Acid Rain 40 CFR 72	Acid Rain	No	N/A	This part establishes the acid rain program. This facility is not an acid rain source. This regulation does not apply.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This facility is not an acid rain source. This regulation does not apply.
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No	N/A	This facility does not produce commercial electricity for sale; therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No	N/A	This regulation establishes an acid rain nitrogen oxides emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO ₂ . This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	This facility does not operate any equipment that releases CFCs; This regulation does not apply.

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.
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All required documentation is kept on site and will be made available to the department upon request.

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).

No alternate operating scenarios are being proposed with this application.

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.

New Mexico Environment Department Air Quality Bureau Modeling Section 525 Camino de Los Marquez - Suite 1 Santa Fe, NM 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/air-quality/		For Department use only: Approved by: Date: Sahil Kassanjee Digitally signed by Sahil Kassanjee Date: 2025.07.16 16:20:27 -06'00'
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Air Dispersion Modeling Waiver Request Form

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

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

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

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

Section 1 and Table 1: Contact and facility information:

Contact name	Alena Miro
E-mail Address:	alena.miro@energytransfer.com
Phone	713-865-6825
Facility Name	Willow Lake Gas Processing Plant
Air Quality Permit Number(s)	NSR 5142-M8
Agency Interest Number (if known)	
Latitude and longitude of facility (decimal degrees)	32.194983° -104.103308°

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

Crestwood New Mexico Pipeline LLC (Crestwood) intends submit a permit modification request to shut down/remove-from-service both Willow Lake 1 and Willow Lake 2 natural gas processing facilities and operate Willow Lake as a compressor station. Natural gas liquid (NGL) will no longer be produced at the site. Due to a change of SIC from 1321 to 4922, this permit modification request is considered significant. Subsequent to this shut down, there will be a net decrease in pph and tpy for all criteria/HAP pollutants. Crestwood is requesting a determination that no air quality impacts modeling will be required for this permit modification due to the net decrease in pollutants.

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

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

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

Pollutant	Pollutant is not emitted at the facility and modeling or waiver are not required.	Pollutant does not increase in emission rate at any emission unit (based on levels currently in the permit) and stack parameters are unchanged. Modeling or waiver are not required.	Stack parameters or stack location has changed.	Pollutant is new to the permit, but already emitted at the facility.	Pollutant is increased at any emission unit (based on levels currently in the permit).	A modeling waiver is being requested for this pollutant.	Modeling for this pollutant will be included in the permit application.
CO		X				X	
NO ₂		X				X	
VOC		X				X	
SO ₂		X				X	
PM10		X				X	
PM2.5		X				X	
H ₂ S		X				X	
Reduced S		X				X	
HAP		X				X	
Pb		NA				NA	

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

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

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

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

No waiver for very small emission rates is being requested.

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

Pollutant	Requested Allowable Emission Rate for Project (pounds/hour)	Release Type (select "all from stacks >20 m" or "other")	Waiver Threshold (from appendix 2) (lb/hr)
None			

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

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

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

Crestwood is asking for a waiver based on previously modeled pollutants.

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

Pollutant	Averaging period	Proposed emission rate (pounds/hour)	Previously modeled emission rate (pounds/hour)	Proposed minus modeled emissions (lb/hr)	Modeled percent of standard or increment	Year modeled
CO	8-HOUR (Significance)	285.023	292.68	(7.657)	17.1%	2021
CO	1-HOUR (Significance)	285.023	292.68	(7.657)	6.8%	2021
H2S	30-MIN. (Significance)	0.012	0.008	0.004	11.2%	2021
PM2.5	ANNUAL (NAAQS)	2.128	2.19	(0.062)	62.3%	2021
PM2.5	24-HOUR (NAAQS)	2.128	2.19	(0.062)	50.6%	2021
PM10	ANNUAL (PSD CLASS I, SIGNIFICANCE)	2.128	2.19	(0.062)	0.1%	2021
PM10	24-HOUR (PSD CLASS I, SIGNIFICANCE)	2.128	2.19	(0.062)	2.13%	2021
SO2	ANNUAL (PSD CLASS I, SIGNIFICANCE)	3.069	3.33	(0.261)	0.4%	2021
SO2	24-HOUR (PSD CLASS I, SIGNIFICANCE)	3.069	3.33	(0.261)	4.4%	2021
SO2	3-HOUR (PSD CLASS I, SIGNIFICANCE)	3.069	3.33	(0.261)	4.7%	2021
SO2	1-HOUR (NAAQS)	3.069	3.33	(0.261)	28.1%	2021
NO2	ANNUAL (NMAAQs)	165.083	169.49	(4.407)	16.5%	2021
NO2	1-HOUR (NAAQS)	165.083	169.49	(4.407)	91.2%	2021
NO2	ANNUAL (PSD CLASS II)	165.083	169.49	(4.407)	65.7%	2021
NO2	ANNUAL (PSD CLASS I, SIGNIFICANCE)	165.083	169.49	(4.407)	16.7%	2021

Section 4, Table 5: Questions about previous modeling:

Question	Yes	No
Was AERMOD used to model the facility?	X	
Did previous modeling predict concentrations less than 95% of each air quality standard and PSD increment?	X	
Were all averaging periods modeled that apply to the pollutants listed above?	X	
Were all applicable startup/shutdown/maintenance scenarios modeled?	X	
Did modeling include all sources within 1000 meters of the facility fence line that now exist?	X	
Did modeling include background concentrations at least as high as current background concentrations?	X	
If a source is changing or being replaced, is the following equation true for all pollutants for which the waiver is requested? (Attach calculations if applicable.)		X
<u>EXISTING SOURCE</u> $\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1}$ <u>REPLACEMENT SOURCE</u> $\frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$ Where		

g = gravitational constant = 32.2 ft/sec ² h1 = existing stack height, feet v1 = exhaust velocity, existing source, feet per second c = specific heat of exhaust, 0.28 BTU/lb-degree F T1 = absolute temperature of exhaust, existing source = degree F + 460 q1 = emission rate, existing source, lbs/hour h2 = replacement stack height, feet v2 = exhaust velocity, replacement source, feet per second T2 = absolute temperature of exhaust, replacement source = degree F + 460 q2 = emission rate, replacement source, lbs/hour		
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If you checked “no” for any of the questions, provide an explanation for why you think the previous modeling may still be used to demonstrate compliance with current ambient air quality standards.

There are no sources that are being modified. There are only sources that are being deleted/removed-from-service.

Since

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

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

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

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

Since there is a net decrease in pph/tpy of all criteria/HAP pollutants under the proposed permit revision, scaling is not applicable (note: there are no net emissions increases for some HAP pollutants under this proposed permit amendment/revision).

Section 6: New Mexico Toxic air pollutants – 20.2.72.400 NMAC

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

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

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

Crestwood does not request a NMTAP waiver.

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

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

Pollutant	Requested Allowable Emission Rate (pounds/hour)	Release Height (Meters)	Correction Factor	Allowable Emission Rate Divided by Correction Factor	Emission Rate Screening Level (pounds/hour)
Ammonia					1.20
Asphalt (petroleum) fumes					0.333
Carbon black					0.233
Chromium metal					0.0333
Glutaraldehyde					0.0467
Nickel Metal					0.0667
Wood dust (certain hard woods as beech & oak)					0.0667
Wood dust (soft wood)					0.333
(add additional toxics if they are present)					

Section 7: Approval or Disapproval of Modeling Waiver

The AQB air dispersion modeler should list each pollutant for which the modeling waiver is approved, the reasons why, and any other relevant information. If not approved, this area may be used to document that decision.

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

Release Height in Meters	Correction Factor
0 to 9.9	1
10 to 19.9	5
20 to 29.9	19
30 to 39.9	41
40 to 49.9	71
50 to 59.9	108
60 to 69.9	152
70 to 79.9	202
80 to 89.9	255
90 to 99.9	317
100 to 109.9	378
110 to 119.9	451
120 to 129.9	533
130 to 139.9	617
140 to 149.9	690
150 to 159.9	781
160 to 169.9	837
170 to 179.9	902
180 to 189.9	1002
190 to 199.9	1066
200 or greater	1161

Appendix 2. Very small emission rate modeling waiver requirements (updated 3/4/2024 to correct feet to meters)

Modeling is waived if emissions of a pollutant for the project are below the amount:

Pollutant	If all emissions come from stacks 20 meters or greater in height and there are no horizontal stacks or raincaps (lb/hr)	If not all emissions come from stacks 20 meters or greater in height, or there are horizontal stacks, raincaps, volume, or area sources (lb/hr)
CO	16.037	2.580
H ₂ S (Pecos-Permian Basin)	0.114	0.015
H ₂ S (Not in Pecos-Permian Basin)	0.022	0.003
Lead	0.005	0.001
NO ₂	0.189	0.024
PM _{2.5} – Point Sources	0.056	0.009
PM _{2.5} – Volume Sources		0.003
PM ₁₀ – Point Sources	0.255	0.039
PM ₁₀ – Volume Sources		0.015
SO ₂	0.179	0.023
Reduced sulfur (Pecos-Permian Basin)	0.033	No waiver
Reduced sulfur (Not in Pecos-Permian Basin)	No waiver	No waiver

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

To save paper and to standardize the application format, delete this sentence and the samples in the Compliance Test History Table, and begin your submittal for this attachment on this page.

Compliance Test History Table

Unit No.	Test Description	Test Date
C-1100	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	5/23/18 4/8/19 2/10/20 11/01/2024
C-1200	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ. (note: this engine has not been used on a continuous basis)	5/22/18 4/8/19 2/10/20 12/07/2022
C-2300	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	4/3/18 4/9/19 2/10/20 11/30/2022 12/17/2024
C-2400	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	4/3/18 4/9/19 2/11/20 01/01/2023 11/01/2024
C-1110	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	10/25/2024
C-1120	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	10/25/2024
C-1130	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	10/24/2024
C-1140	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	10/24/2024
C-1150	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	10/23/2024
C-1160	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	01/11/2019 10/23/2024
C-1170	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	01/05/2019 10/23/2024
C-1180	Tested in accordance with EPA test methods for NOX, CO, and VOC every three (3) years or every 8,760 hours pursuant to NSPS JJJJ.	03/13/2025

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.

No additional relevant information is being reported in this application.

Section 22: Certification

Company Name: Energy Transfer

I, Alena Miro, 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 21 day of August, 2025 upon my oath or affirmation, before a notary of the State of

Alm
*Signature

8/21/25
Date

Alena Miro
Printed Name

Sr. Manager
Title

Scribed and sworn before me on this 21st day of August, 2025

My authorization as a notary of the State of NM expires on the

28th day of March, 2028

Mary Ann Murillo Dearing
Notary's Signature

08/21/2025
Date

Mary Ann Murillo Dearing
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.