

February 10, 2025

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

RE: Air Permit No. 2656-M7 Revision Application Occidental Petroleum, Ltd. North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB) Hobbs, New Mexico

Attn: Air Quality Bureau - Permits Section

This application is submitted on behalf of Occidental Permian, Ltd. (Oxy) who is applying to the New Mexico Air Quality Bureau for a significant revision to permit 2656M7 in accordance with 20.2.72.219.D New Mexico Administrative Code (NMAC), to authorize changes to their North Hobbs Unit Reinjection Compression Facility and West Injection Battery. This submittal includes all equipment and processes to be authorized by the permit or exempt under 20.2.72.202.B.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

The permit application fee is submitted with this application. All requirements for the permit revision are included in this submittal per NMED guidelines.

If you have any questions, please email me at <u>miranda.cheatham@trinityconsultants.com</u> or call me at (512) 349-5800.

Sincerely,

TRINITY CONSULTANTS

Mil Z. Cut

Miranda Cheatham Principal Consultant

Mail Application To:

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

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



Universal Air Quality Permit Application

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

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

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

□ Updating an application currently under NMED review. Include this page and all pages that are being updated (no fee required). Construction Status: □ Not Constructed □ Existing Permitted (or NOI) Facility □ Existing Non-permitted (or NOI) Facility Minor Source: □ 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:

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

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

 \square Check No.: 660650 in the amount of \$500

 \square 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. \square 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/. \square 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

Sec	tion 1-A: Company Information	AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.): 2415	Updating Permit/NOI #: 2656-M7	
	Facility Name: North Hobbs Unit Reinjection Compression Facility (RCF) and West	Plant primary SIC Cod	e (4 digits): 1311	
1	Injection Battery (WIB)	Plant NAIC code (6 digits): 211120		
a	Facility Street Address (If no facility street address, provide directions from 2.75 miles west of Hobbs, NM, in Lea County and approx. 1.5 miles north	n a prominent landmark) of the intersection of Co	The facility is located to the facility is located to the facility is located to the facility of the facility	
2	Plant Operator Company Name: Occidental Permian, Ltd.	Phone/Fax: 713-215-70	000 / NA	
a	Plant Operator Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046	j		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 76-0528603			

3	Plant Owner(s) name(s): Occidental Permian, Ltd.	Phone/Fax: 713-215-7000 / NA					
а	Plant Owner(s) Mailing Address(s): 5 Greenway Plaza, Suite 110, Houston	n, TX 77046					
4	Bill To (Company): Occidental Permian, Ltd.	Phone/Fax: 713-215-7000 / NA					
а	Mailing Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046	E-mail:					
5	 Preparer: Consultant: Miranda Cheatham, Trinity Consultants 	Phone/Fax: 512-349-5800 / NA					
a	Mailing Address: 9737 Great Hills Trl, Ste 340, Austin, TX 78759	E-mail: miranda.cheatham@trinityconsultants.com					
6	Plant Operator Contact: Femi Serrano	Phone/Fax: 713-215-7000 / NA					
a	Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046	E-mail: EOR-Air-Quality@oxy.com@oxy.com					
7	Air Permit Contact: Femi Serrano	Title: Manager Air Quality - EOR					
a	E-mail: EOR-Air-Quality@oxy.com	Phone/Fax: 713-215-7000 / NA					
b	Mailing Address: 5 Greenway Plaza, Suite 110, Houston, TX 77046						
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? \square Yes \square 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):
4	Was this facility constructed before 8/31/1972 and continuously operated s	since 1972? □ Yes ☑ No
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMA) \Box Yes \Box No \boxtimes N/A	C) or the capacity increased since 8/31/1972?
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? □ Yes ☑ No	If yes, the permit No. is: P-
7	Has this facility been issued a No Permit Required (NPR)? □ Yes ☑ No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? \Box Yes \square No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☑ Yes □ No	If yes, the permit No. is: 2656-M7
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? □ Yes ☑ No	If yes, the register No. is:

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)									
а	Current	Hourly: 12.50 MMscf	Daily: 300 MMscf	Annually: 109,500 MMscf						
b	Proposed	Hourly: 12.50 MMscf	Daily: 300 MMscf	Annually: 109,500 MMscf						
2	What is the	facility's maximum production rate, sp	pecify units (reference here and list capacities in	Section 20, if more room is required)						
a	Current	Hourly: 12.50 MMscf; 145.8 bbl (NGL); 250 bbl (oil)/6416.67 bbl (water)	Daily: 300 MMscf 3500 bbl (NGL); 6000 bbl (oil)/154000 bbl (water)	Annually: 109,500 MMscf; 1,277,500 bbl (NGL); 2,190,000 bbl (oil)/56,210,000 bbl(water)						
b	Proposed	Hourly: 12.50 MMscf; 145.8 bbl (NGL); 250 bbl (oil)/6416.67 bbl (water)	Daily: 300 MMscf 3500 bbl (NGL); 6000 bbl (oil)/154,000 bbl (water)	Annually: 109,500 MMscf; 1,277,500 bbl (NGL); 2,190,000 bbl (oil)/56,210,000 bbl(water)						

Section 1-D: Facility Location Information

1	Section: 25	Range: 37E	Township: 18S	County: I	Lea	Elevation (ft): 3660			
2	UTM Zone:]12 or ⊠13		Datum: □ NAD 27 □ NAD 83 ☑ WGS 84					
a	UTM E (in meter	rs, to nearest 10 meter	s): 668702	UTM N (i	n meters, to neares	t 10 meters):	3621559		
b	AND Latitude	(deg., min., sec.):	32, 43, 08.0760	Longitude	e (deg., min., se	c.): 103, 1	1, 59.5752		
3	Name and zip c	code of nearest No	ew Mexico town: Hobbs, N	M 88240					
4	Detailed Drivin approx. 3.3 mi.	ng Instructions fro Turn right on N.	m nearest NM town (attack Robert Ln. Drive approx.	n a road ma 1/3 mi and t	p if necessary): turn left. The sit	From Hob te is approx	bbs, drive west on CR 65 x. 1 mi on the right.		
5	The facility is 2	2.75 miles West o	f Hobbs, NM.						
6	Status of land a	t facility (check of	one): 🗆 Private 🗆 Indian/Pu	ieblo 🗆 Fea	leral BLM 🛛 I	Federal For	rest Service ØOther (State)		
7	List all municip which the facili	palities, Indian tri	bes, and counties within a t be constructed or operated	en (10) mil : Hobbs, NI	e radius (20.2.7 M; Lea County,	2.203.B.2 NM; Gain	NMAC) of the property on thes County, TX		
8	20.2.72 NMAC than 50 km (31 publications/)? approx. 12 km	2 applications onl miles) to other st 2 ☑ Yes □ No	y: Will the property on wh ates, Bernalillo County, or (20.2.72.206.A.7 NMAC)	ich the faci a Class I ar If yes, list	lity is proposed ea (see <u>www.e</u> all with corresp	to be cons	structed or operated be closer /air-quality/modeling- stances in kilometers: Texas,		
9	Name nearest C	Class I area: Carls	bad Caverns National Park						
10	Shortest distant	ce (in km) from fa	acility boundary to the bour	ndary of the	e nearest Class l	area (to the	e nearest 10 meters): 124 km		
11	Distance (meter lands, including	rs) from the pering mining overbure	neter of the Area of Operati den removal areas) to neare	ions (AO is est residence	defined as the e, school or occ	plant site ir upied struc	nclusive of all disturbed sture: 550 m		
12	Method(s) used to delineate the Restricted Area: Fence "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								
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 one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job s Will this facility operate in conjunction with other air regulated partice on the same property?								
14	If yes, what is t	the name and perr	nit number (if known) of th	ne other fac	ility?	or only .			

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	(days): 7	$(\frac{\text{weeks}}{\text{year}}): 52$	$(\frac{\text{hours}}{\text{year}})$: 8760				
2	Facility's maximum daily operating schedule (if les	s than $24 \frac{\text{hours}}{\text{day}}$? Start:	□AM □PM	End:	□AM □PM			
3	Month and year of anticipated start of construction:	N/A						
4	Month and year of anticipated construction complet	ion: N/A						
5	Month and year of anticipated startup of new or modified facility: N/A							
6	Will this facility operate at this site for more than or	ne year? 🗹 Yes 🗆 No						

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? Yes No If yes, specify:						
a	If yes, NOV date or description of	issue:	NOV Tracking No:				

b	Is this application in response to any issue listed in 1-F, 1 or 1a above? \Box Yes \boxtimes No If Yes, provide the 1c & 1d info below:								
c	Document Title:	Date:	Requirement # (or page # and paragraph #):						
d	Provide the required text to be inserted in this permit:								
2	Is air quality dispersion modeling or modeling waiver bein	g submitted with this	application? \square Yes \square No						
3	Does this facility require an "Air Toxics" permit under 20.	2.72.400 NMAC & 2	0.2.72.502, Tables A and/or B? ☐ Yes ☑ No						
4	Will this facility be a source of federal Hazardous Air Poll	utants (HAP)? 🗹 Yes	s 🗆 No						
a	If Yes, what type of source? \Box Major ($\Box \ge 10$ tpy of anOR \boxdot Minor ($\boxdot < 10$ tpy of an	iy single HAP OR iy single HAP AN	$\Box \ge 25$ tpy of any combination of HAPS) D $\boxdot < 25$ tpy of any combination of HAPS)						
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? □ Yes ☑ No								
	If yes, include the name of company providing commercial electric power to the facility:								
a	Commercial power is purchased from a commercial utility site for the sole purpose of the user.	company, which spe	cifically does not include power generated on						

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

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

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

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

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC):	Phone:					
а	R.O. Title:						
b	R. O. Address:						
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC):		Phone:				
а	A. R.O. Title:	A. R.O. e-mail:					
b	A. R. O. Address:						
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):						
4	Name of Parent Company ("Parent Company" means the primary r permitted wholly or in part.):	name of the organiza	tion that owns the company to be				
a	Address of Parent Company:						
5	Names of Subsidiary Companies ("Subsidiary Companies" means of wholly or in part, by the company to be permitted.):	organizations, branc	hes, divisions or subsidiaries, which are				
6	Telephone numbers & names of the owners' agents and site contact	ts familiar with plan	t operations:				
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:						

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

Electronic files sent by (check one):

CD/DVD attached to paper application

☑ secure electronic transfer. Air Permit Contact Name: Miranda Cheatham

Email: miranda.cheatham@trinityconsultants.com Phone number: 512-922-5038.

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

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

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

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

- 1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word

electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

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

Table of Contents

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

					Manufact-	Requested Permitted	Date of Manufacture ²	Controlled by Unit #	Source		11 2	RICE Ignition		
Unit Number ¹	Source Description	Make	Model #	Serial #	Capacity ³ (Specify Units)	Capacity ³ (Specify Units)	Date of Construction/ Reconstruction ²	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of	Equipment, Check One	Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.	
FUG_LDAR	Fugitive Emissions subject to LDAR ^(A)	N/A	N/A	N/A	N/A	N/A	2006 2006	-		 Existing (unchanged) New/Additional To Be Modified 	 To be Removed Replacement Unit X To be Replaced 			
FUG	Fugitive Emissions (Non NSPS) ^(A)	N/A	N/A	N/A	N/A	N/A	N/A _	-		 Existing (unchanged) New/Additional To Be Modified 	 To be Removed Replacement Unit X To be Replaced 			
FUG-WIB	WIB Fugitives (A)	N/A	N/A	N/A	N/A	N/A	2003	-		 Existing (unchanged) New/Additional 	☐ To be Removed X Replacement Unit			
							2003	-		To Be Modified	To be Replaced			
FUG-RCF	RCF Fugitives (A)	N/A	N/A	N/A	N/A	N/A	2006	-	-	 Existing (unchanged) New/Additional 	X Replacement Unit			
							2006	-		To Be Modified	To be Replaced			
DEHY1	Glycol Dehydrator 1	Dickson & Tryer	MAF-	1598	90 MMscf	90 MMscf	90 MMscf	2002	(B)	-	X Existing (unchanged) New/Additional 	 To be Removed Replacement Unit 		
		Engineering	1040				2003	(B)		□ To Be Modified	To Be Modified	□ To be Replaced		
DELLY2	Chual Dahydratar 2	EVCO	MAF-	2128	00 MMcof	00 MMcof	2012	(B)		X Existing (unchanged)	X Existing (unchanged)	To be Removed Replacement Unit		
DEHTZ	Orycol Dellydratol 2	Inc.	1240	2120	90 IVIIVISCI	90 101101801	1/17/2013	(B)		 New/Additional To Be Modified 	 To be Replaced 			
	Glycol Dehydrator	EVCO	BBC-	0001 102	2.07	2.07	2002	-		X Existing (unchanged)	□ To be Removed			
REBUILERI	Reboiler 1	Inc.	3010	0991-102	MMBtu/hr	MMBtu/hr	2003	REBOILER 1		 New/Additional To Be Modified 	 Replacement Unit To be Replaced 			
	Glycol Dehydrator	Flameco	SB40/24-	2164	2.65	2.65	2012	-		X Existing (unchanged)	To be Removed Removed			
KEBUILER2	Reboiler 2	Industries Inc.	24	2104	MMBtu/hr	MMBtu/hr	1/17/2013	REBOILER 2		 New/Additional To Be Modified 	 To be Replaced 			
NGI HEATI	Natural gas-fired	Heater	HC15010-	Н 105 250	7.6	7.6	2006	-		X Existing (unchanged)	To be Removed Replacement Unit			
NOL HEATT	NGL train	ficatei	30-G	H-103-230	MMBtu/hr	MMBtu/hr	2006	NGLHEAT1		 New/Additional To Be Modified 	□ To be Replaced			
							2019	-						
RCFN-FLR RCFN-FLR-SSM RCFN-FLR-MALF	Reinjection Compression Facility (RCF) Flare ^(C)	Zeeco Inc.	40322	119802/02	300 MMscfd	300 MMscfd	2019	RCFN-FLR RCFN-FLR- SSM RCFN-FLR- MALF		 Existing (unchanged) New/Additional X To Be Modified 	 To be Removed Replacement Unit To be Replaced 			

Table 2-A: Regulated Emission Sources

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

					Manufact- urer's Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture ²	Controlled by Unit #	Source Classi-		RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.
Unit Number ¹	Source Description	Make	Model #	Serial #			Date of Construction/ Reconstruction ²	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of Equipment, Check One		
							2015	-				
WIB-FLR WIB-FLR-SSM WIB-FLR-MALF	West Injection Battery (WIB) Flare (D)	GBA Corona	190' OAH	CP14572	6 MMscfd	6 MMscfd	2015	WIB-FLR WIB-FLR- SSM WIB-FLR- MALF	•	 Existing (unchanged) To be Removed New/Additional Replacement Unit X To Be Modified To be Replaced 		
WID	West Injection Battery (WIB)	GemStar	NI/A	2462	160 MB-1/J	160 MB-1/J	2003	-		X Existing (unchanged)		
WID	Liquid/Gas Separation Facility ^(E)	Liquid/Gas Fabrication ation Facility ^(E)		2402	100 1000//d	160 Mbbl/d	2003	-		□ New/Additional □ Replacement Ont		
TNK HATCH SSM	WIB Faclity - SSM	N/A	N/A	N/A	N/A	N/A	N/A	(F)		X Existing (unchanged)		
INK-HAICH_55M	Repair	IN/A	1N/A	IN/A	IN/A	N/A	-	(F)		□ To Be Modified □ To be Replaced		

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, "Cl" means compression ignition, and "SI" means spark ignition

Notes:

(A) Unit IDs FUG_LDAR and FUG are being renamed as FUG-WIB and FUG-RCF. The fugitive units are not being constructed, reconstructed, or modified. Rather, the exising components are being reallocated into different Unit IDs that correspond to the plant process units.

(B) Glycol dehydrator vent emissions are normally routed back to process. During VRU SMSS or malfunction, glycol dehydrator vent emissions will be routed to the RCF Flare.

(C) The RCF flare (RCFN-FLR) has a design capacity of 300 MMscfd. Additional supplemental gas is added to this capacity to raise the Btu content of the gas flared and ensure combustion. The RCF flare has the following emissions: (i) pilot and purge considered normal operations, designated RCFN-FLR; (ii) SSM emissions, designated RCFN-FLR-SSM; and (iii) up to 10 tpy emissions/pollutant due to upset/malfunction, designated RCFN-FLR-MALF. Total upset malfuction emissions will not exceed 10 tpy and may include emissions from either flare.

(D) The WIB Flare (WIB-FLR) has the following emissions: (i) pilot and purge considered normal operations, designated WIB-FLR; (ii) SSM emissions, designated WIB-FLR-SSM; and (iii) up to 10 tpy emissions/pollutant due to upset/malfunction, designated WIB-FLR-Total upset malfuction emissions will not exceed 10 tpy and may include emissions from either flare.

(E) The WIB Liquid-Gas Separation Facility (WIB) includes the vessels listed in Tables 2K and 2L. These vessels are connected toVRUs (COM-VRU1_6) and there are no emissions from normal operations. The VRUs are not considered to be controls as they are integral to the process. During maintenance or upset events, when the VRUs are down, the emissions are sent to the WIB flare, which is the potential emission point and Stack ID for WIB. The one exception is SSM tank hatch repair-related SSM emissions, which cannot be sent to the flare. See (F) below.

(F) WIB tank hatch repair-related SSM emissions, cannot be sent to the flare. There are five vessels from which tank hatch SSM emissions may occur and 1 empty spillover tank. Only one vessel will emit in any one hour. The combined emissions are reported under Unit/Stack ID "TNK-HATCH-SSM," which includes: WIB_T1-OIL-SSM, WIB_T2-OIL-SSM, WIB_T4-WTR-SSM, WIB_T5-GB-SSM, and WIB_T6-GB-SSM. There is also an empty spillover tank at the site (WIB_T3-SPOVR).

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/apb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	Fau Fach Biose of Fauinment Charle One		
Unit Number	Source Description	Manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	רטו באנוו דוגני טו בקעוףווגווו, כווניג טוג		
COM-LP1	2 - LP electric driven compressors	Howden	MKBS/WRVITN/225	3.0 each	20.2.72.202 B(5)	2002 (pre-NGL plant)	X Existing (unchanged) □ To be Removed □ New/Additional □		
COM-LP2	(WIB)		614 & 569	MMscfd		2003	To Be Modified To be Replaced		
COM-LP3	2 - LP electric driven compressors	Howden	MK6BS WRVITN & MK6CS WRViHTN	3 (COM-LP3) 11 (COM-LP4)	20.2.72.202 B(5)	2022 (COM-LP3) 2017 (COM-LP4)	X Existing (unchanged)		
COM-LP4	(WIB)	nowden	255130/635 & 321165/50/913	MMscfd		2022 (COM-LP3) 2017 (COM-LP4)	To Be Modified To be Replaced		
COM-VRUL 3	3 - electric driven VRU	Hybon (1-2)	HB200W & 8DE(VRU5)	1 x 2 compressors; 0.4 x 1 compressor	20.2.72.202 B(5)	2002 (pre-NGL plant)	X Existing (unchanged)		
	Compressors (WIB)	Ro-Flo (3)	5119,4834, 4986, 5157 & 7776-2	MMscfd		2003	To Be Modified To be Replaced		
COM-VRU4_5	2 - electric driven VRU	Ro-Flo (2)	8DE	0.4 each	20.2.72.202 B(5)	2002 (pre-NGL plant)	X Existing (unchanged) □ To be Removed □ New/Additional □ Replacement Unit		
_	Compressors (WIB)		0175-1	MMScfd		2003	□ To Be Modified □ To be Replaced		
COM VPU6	1 - electric driven VRU	Po Flo	8DE	0.4	20.2.72.202 B(5)		X Existing (unchanged)		
COM-VRU0	Compressor (WIB)	К0-г10	77676-8	MMScfd		12/15/2012	To Be Modified To be Replaced		
COM-A	3 - electric driven compressors	Superior	WG76	28.0 each	20.2.72.202 B(5)	2002 (COM-A/B) 2000 (COM-C)	X Existing (unchanged)		
COM-D COM-C	(RCF)	Compressors	O2G1159, 02H1166 & 04G1318	MMscfd		2002 (COM-A/B) 2000 (COM-C)	To Be Modified To be Replaced		
COM-D	2 - electric engine driven	Superior	WG76	28.0 each	20.2.72.202 B(5)	2011	X Existing (unchanged)		
COM-E	compressors (RCF)	Compressors	11G1003 & 11G1010	MMscfd		2012	New/Additional Replacement Unit To Be Modified To be Replaced		
COME	1 - electric engine driven	Arial	KBZ/6	46.3	20.2.72.202 B(5)	2015	X Existing (unchanged)		
COM-F	reinjection compressor (RCF)	Anei	F-52633	MMscfd		2016	To Be Modified To be Replaced		
COM-G	3 - electric engine driven	TECO/	3471AA	46.3 each	20.2.72.202 B(5)	2015	X Existing (unchanged) To be Removed New(Additional Replacement Unit		
COM-II COM-I	reinjection compressor (RCF)	Westinghouse	3471AA-01,02,03	MMscfd		2015	To Be Modified To be Replaced		
DevPro	DePro Dehydration Unit	N/A	N/A	150	20.2.72.202 B(5)	2017	X Existing (unchanged) To be Removed New/Additional Replacement Unit		
Deniio	DePro Dehydration Unit N/A		H-5811	MMscfd		2017	□ To Be Modified □ To be Replaced		
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced		
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced		

Unit Number	Source Deceription	Manufaaturar	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 Fock Disco of Equipment Check One
Unit Number	Source Description	Manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	For Each riece of Equipment, Check One
COM-VRU-	1 - electric engine driven VRU	Ro-Flo	10-G	725	20.2.72.202 B(5)	2015	X Existing (unchanged) To be Removed New/Additional Replacement Unit
DEHY1	compressor (for DEHY1 at RCF)	K0-1 10	8950-1	Mscfd		2015	To Be Modified To be Replaced
COM-VRU-	2 - electric engine driven VRU	Ro-Flo	10-G	725	20.2.72.202 B(5)	2015	X Existing (unchanged) To be Removed New/Additional Replacement Unit
DEHY2	compressor (for DEHY2 at RCF)	K0-1 10	8831-2	Mscfd		2015	To Be Modified To be Replaced
COMPERIG	Refrigeration (screw type)	N/A	N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged) To be Removed Naw/Additional Replacement Unit
COM-REFRIC	compressor (NGL plant)	IN/A	N/A	N/A		2006	To Be Modified To be Replaced
	Corena K460 Oil Tank (RCF	NI/A	N/A	3700	20.2.72.202 B(2)	2002	X Existing (unchanged)
I-LOB-OILI	plant)	IN/A	N/A	gal		2003	To Be Modified To be Replaced
T-LUB-OIL2	Morlina 150 Oil Tank (RCF	N/A	N/A	1000	20.2.72.202 B(2)	2002	X Existing (unchanged) To be Removed Naw/Additional Replacement Unit
1-LOB-OIL2	plant)	IVA	N/A	gal		2003	To Be Modified To be Replaced
T-LUB-OIL3	Corena K460 Oil Tank (NGL	N/A	N/A	300	20.2.72.202 B(2)	2006	X Existing (unchanged) To be Removed New/Additional Replacement Unit
1-200-0125	plant)	IVA	N/A	gal		2006	To Be Modified To be Replaced
T-LUB-OUA	Morlina 150 Oil Tank (NGL	N/A	N/A	300	20.2.72.202 B(2)	2006	X Existing (unchanged) To be Removed New/Additional Replacement Unit
T LOD OIL1	plant)	1071	N/A	gal		2006	To Be Modified To be Replaced
T-LUB-OIL 5	Corena K460 Oil Tank (NGL	N/A	N/A	1000	20.2.72.202 B(2)	2015	X Existing (unchanged) To be Removed New/Additional Replacement Unit
1 202 0125	plant)		N/A	gal		2016	To Be Modified To be Replaced
T-LUB-OIL6	Morlina 150 Oil Tank (RCF	N/A	N/A	1000	20.2.72.202 B(2)	2015	X Existing (unchanged) To be Removed New/Additional Replacement Unit
T LOD OILO	plant)	1071	N/A	gal		2016	To Be Modified To be Replaced
T-LUB-OIL7	Corena K460 Oil Tank (RCF	N/A	N/A	1500	20.2.72.202 B(2)	2019	X Existing (unchanged) To be Removed New/Additional Replacement Unit
T LOD OIL	plant)	1071	N/A	gal		2020	To Be Modified To be Replaced
T-LUB-OIL8	Morlina 150 Oil Tank (RCF	N/A	N/A	1500	20.2.72.202 B(2)	2019	X Existing (unchanged) To be Removed New/Additional Replacement Unit
T LOD OILO	plant)	1071	N/A	gal		2020	To Be Modified To be Replaced
	<u> </u>	I					Existing (unchanged) To be Removed
Not	te: a luba ail tanks hava associats	d numps not inclu	dod in fugitivo comp	ononte bocqueo y	anor prossura is pagligible (20.01 mm)	- (<0.0002 psia)	
ITTE	s tube on tanks have associate	u pumps, not metu	ueu in iugitive comp		ahoi hiessnie is ließriginie (>0.01	is/>0.0005 haig) a	
							□ To Be Modified □ To be Replaced

			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	
Unit Number	Source Description	Manufacturer	Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	For Each Piece of Equipment, Check Onc
TRELOAD	Natural gas liquids (NGL) Truck		N/A	N/A	20.2.72.202 B(5)	N/A	X Existing (unchanged)
TIKK-LOAD	Loading		N/A	N/A		N/A	To Be Modified To be Replaced
TCLV	Glucol Storage		N/A	90	20.2.72.202 B(2)	2002	X Existing (unchanged)
I-OL I	Giycol Storage		N/A	gal		2003	□ To Be Modified □ To be Replaced
T METH	Mathemal Taula		N/A	21000	20.2.72.202 B(5)	2017	X Existing (unchanged)
I-MEIN	weutanoi Tank		N/A	gal		2017	To Be Modified To be Replaced
TNCI	NCL Starson		N/A	30000	(Not a source of regulated pollutants)	2006	X Existing (unchanged)
I-NGL	NGL Storage		N/A	gal		2006	To Be Modified To be Replaced
T-SUMP	Sump tank for liquids captured on the skid. Primarily rain water &		N/A	500	20.2.72.202 B(5)		X Existing (unchanged)
1-50101	some lube/oil from maintenance activities		N/A	gal			To Be Modified To be Replaced
WID TI OIL (1)	WID O'I Taala I		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
WIB_11-OIL(1)	WIB OII Tank T		N/A	N/A		2002 or later	To Be Modified To be Replaced
	WID O'I Taala 2		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
WIB_12-OIL (1)	WIB OII Tank 2		N/A	N/A		2002 or later	To Be Modified To be Replaced
WIB_T3-	WID Spillover Teals		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
SPOVR	wib Sphiover Talik		N/A	N/A		2002 or later	To Be Modified To be Replaced
WID TA WTD	WID Water Tenk		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
wib_14-wik	wib water rank		N/A	N/A		2002 or later	To Be Modified To be Replaced
WIR T5-GB	WIB Gunbarrel		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
wib_15-0b	wild Guildariei		N/A	N/A		2002 or later	To Be Modified To be Replaced
WID TO CD	WIP Gunbarral		N/A	N/A	20.2.72.202 B(5)		X Existing (unchanged)
WID_10-OD	wib Guilbarier		N/A	N/A		2002 or later	To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit To Be Modified To be Replaced

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) ¹	Efficiency (% Control by Weight)	Method used to Estimate Efficiency				
RCFN-FLR-SSM RCFN-FLR-MALF	nt Control Equipment Description Date Installed Controlled Pollutant(s) Controlling Emissions for Unit Number(s) ¹ Efficienc (% Control Weight Weight SSM & upset events) RCF flare to control emissions during SSM & upset events 2019 VOC, H2S RCF Facility-Wide (SSM & Upset) 98% WIB flare to control SSM & upset events 2015 VOC, H2S WIB Facility-Wide (SSM & Upset) 98% Notes regarding vapor recovery units (VRUs): Image: Control SSM & Upset (VRUs): Image: Control SSM & Upset (VRUs): Image: Control SSM & Upset (VRUs): There are eight (8) vapor recovery units (VRUs) at the facility, which are integral to the processes and not controls. These are depicted as COM-VRU1_6, which recovery units (VRUs) at the facility tanks, and COM-VRU-DEHY1 and COM-VRU-DEHY2 that recover the dehy vapors from DEHY1 and DEHY-2. The above VRUs have 100% recovery efficiency and there are no emissions from normal operations; however, during maintenance or upset event the normally recovered vapors are sent to flare. Image: Control SSM & Upset (Control SSM & Upset) Image: Control SSM & Upset) Image: Control SSM & Upset (Control SSM & Upset) Image: Control SSM & Upset) The above VRUs have 100% recovery efficiency and there are no emissions from normal operations; however, during maintenance or upset event the normally recovered vapors are sent to flare. Image: C		98%	N/A						
WIB-FLR-SSM WIB-FLR-MALF	WIB flare to control SSM & upset events	2015	VOC, H2S	WIB Facility-Wide (SSM & Upset)	98%	N/A				
	Notes regarding vapor recovery units (VRUs): There are eight (8) vapor recovery units (VRUs) at the fa /RU1_6 , which recover vapors from the WIB liquid gas teby vapors from DEHY1 and DEHY-2	acility, which s separation f	are integral to the processes an facility tanks, and COM-VRU-DEF	d not controls. These are depict HY1 and COM-VRU-DEHY2 that	ted as COM- recover the					
	The above VRUs have 100% recovery efficiency and the hormally recovered vapors are sent to flare.	ere are no en	nissions from normal operations	; however, during maintenance	or upset events					
	the normally recovered vapors are sent to flare.									
-										
¹ List each control dev	l vice on a separate line. For each control device, list all em	l ission units c	ontrolled by the control device.							

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	N	Dx	С	0	V	DC	S	Ox	P	M ¹	PM	[10 ¹	PM	2.5 ¹	Н	₂ S	Le	ad
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
								See	Table 2E									
									1									
Totals																		

¹Condensable 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 1.41E⁴).

Unit No	N	Ox	C	20	V	OC	S	Ox	Pl	M	PM	[10 ¹	PM	2.5 ¹	Н	$_2$ S	Le	ad
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-WIB	-	-	-	-	0.68	2.96	-	-	-	-	-	-	-	-	0.02	0.08	-	-
FUG-RCF	-	-	-	-	5.10	22.35	-	-	-	-	-	-	-	-	0.05	0.21	-	-
DEHY1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER1	0.20	0.89	0.17	0.75	0.011	0.049	0.029	0.13	0.015	0.068	0.015	0.068	0.015	0.068	-	-	-	-
REBOILER2	0.26	1.14	0.22	0.96	0.014	0.063	0.037	0.16	0.020	0.086	0.020	0.086	0.020	0.086	-	-	-	-
NGLHEAT1	0.75	3.26	0.63	2.74	0.041	0.18	0.11	0.47	0.06	0.25	0.06	0.25	0.06	0.25	-	-	-	-
WIB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR	3.81	16.68	15.17	66.45	1.03	4.49	0.40	1.75	-	-	-	-	-	-	4.3E-03	0.02	-	-
WIB-FLR	0.072	0.32	0.29	1.26	0.019	0.085	0.0076	0.033	-	-	-	-	-	-	8.1E-05	3.5E-04	-	-
Totals	5.09	22.29	16.47	72.15	6.89	30.18	0.58	2.54	0.092	0.40	0.092	0.40	0.092	0.40	0.069	0.30	-	-

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

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

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

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)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	Γ	NOx	С	0	VC)C	SC)x	PI	M ²	PM	I 10 ²	PM	2.5^2	Н	$_2S$	Le	ad
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TNK-HATCH-SSM	-	-	-	-	0.50	0.0018	-	-	-	-	-	-	-	-	0.017	6.4E-05	-	-
RCFN-FLR-SSM	64.55	1.08	553.45	9.22	338.06	5.63	3,384.89	56.41	-	-	-	-	-	-	36.01	0.60	-	-
WIB-FLR-SSM	13.00	0.33	111.47	2.79	67.74	1.69	1,056.51	26.41	-	-	-	-	-	-	11.24	0.28	-	-
RCFN-FLR-MALF	64.55	10.00	553.45	10.00	338.06	10.00	3,384.89	10.00	-	-	-	-	-	-	36.01	10.00	-	-
WIB-FLR-MALF	13.00	10.00	111.47	10.00	67.74	10.00	1,056.51	10.00	-	-	-	-	-	-	11.24	10.00	-	-
		Notes:																
		Simultanto	ous SSM f	laring fror	n hoth the	RCEN an	d WIR flar			and W/IR_		are not a	uthorized	to occur f	or more th	100 an		
	Simultanteous SSM flaring from both the RCFN and WIB flares (RCFN-FLR-SSM and WIB-FLR-SSM) are not authorized to occur for more than 100 hours per year.																	
	hours per year. SSM and Malfunction flaring emissions are not authorized to occur simultaneously. Total lb/hr values include the maximum lb/hr for SSM or																	
	SSM and Malfunction flaring emissions are not authorized to occur simultaneously. Total lb/hr values include the maximum lb/hr for SSM or Malfunction flaring.																	
	SSM and Malfunction flaring emissions are not authorized to occur simultaneously. Total lb/hr values include the maximum lb/hr for SSM or Malfunction flaring.																	
	SSM and Malfunction flaring emissions are not authorized to occur simultaneously. Total lb/hr values include the maximum lb/hr for SSM or Malfunction flaring.																	
		rotat toni yi	vatues in		54111 01 00	, runa ma		ermoorom	5101 44 41	110 10100	45070.							
Totals	77.55	11.40	664.92	22.01	406.31	17.33	4,441.40	92.83	0.00	0.00	0.00	0.00	0.00	0.00	47.27	10.88	0.00	0.00

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.

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

Table 2-H: Stack Exit Conditions

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

Stock Number	Serving Unit Number(s) from	Orientation	Rain Caps	Height Above	Temp.	Flow	Rate	Moisture by	Velocity	Incida Diamatan (ff)
Stack Number	Table 2-A	V=Vertical)	(Yes or No)	Ground (ft)	(F)	(acfs)	(dscfs)	Volume (%)	(ft/sec)	Inside Diameter (It)
REBOILER1	REBOILER1	V	No	43	600	19.88	-	-	2.3	3.30
REBOILER2	REBOILER2	V	No	43	600	25.07	-	-	2.9	3.30
NGL HEAT1	NGL HEAT1	V	No	> 20	500	40.64	-	-	23	1.5
RCFN-FLR	RCFN-FLR (pilots, purges)	V	No	194	1832	-	-	-	65.6	4.08 (eff. dia.)
RCFN-FLR-SSM	RCFN-FLR_SSM	V	No	194	1832	-	-	-	65.6	23.19 (eff. dia.)
RCFN-FLR-MALF	RCFN-FLR-MALF	V	No	194	1832	-	-	-	65.6	23.19 (eff. dia.)
WIB-FLR	WIB-FLR (pilots, purges)	V	No	190	1832	-	-	-	65.6	0.56 (eff. dia.)
WIB-FLR-SSM	WIB-FLR_SSM	V	No	190	1832	-	-	-	65.6	10.52 (eff. dia.)
WIB-FLR-MALF	WIB-FLR-MALF	V	No	190	1832	-	-	-	65.6	10.52 (eff. dia.)

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 top. 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 top 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	n-Ho X HAP o	exane or 🗆 TAP	Metl X HAP o	nanol or 🗆 TAP	Provide Name	Pollutant e Here or 🗆 TAP	Provide Name	Pollutant e Here or 🗆 TAP	Provide Nam	Pollutant e Here or 🗆 TAP	Provide Nam HAP (Pollutant e Here or 🗆 TAP	Provide Name	Pollutant e Here or 🗆 TAP	Unclassif X HAP o	ied HAPs 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
FUG-WIB	FUG-WIB	0.11	0.50	0.11	0.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG-RCF	FUG-RCF	0.59	2.59	0.17	0.75	0.41	1.80	-	-	-	-	-	-	-	-	-	-	-	-
DEXPROTM	DEXPROTM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY1	DEHY1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY2	DEHY2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER1	REBOILER1	0.004	0.02	0.004	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER2	REBOILER2	0.005	0.02	0.005	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLHEAT1	NGLHEAT1	0.01	0.06	0.01	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WIB	WIB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR	RCFN-FLR	0.05	0.22	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WIB-FLR	WIB-FLR	1E-03	4E-03	9E-04	4E-03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TNK-HATCH-SSM	TNK-HATCH-SSM	3E-02	1E-04	3E-02	9E-05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR-SSM	RCFN-FLR-SSM	12.02	0.20	11.40	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WIB-FLR-SSM	WIB-FLR-SSM	3.54	0.09	3.39	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR-MALF	RCFN-FLR-MALF	12.02	0.36	11.40	0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WIB-FLR-MALF	WIB-FLR-MALF	3.54	0.52	3.39	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
																	l		
	Notes	5:																	
	SSM a	and Malfu	nction flar	ring emiss	ions are r	ot author	ized to oc	cur simul	taneously	/. Total lb/	/hr values	include t	he mximu	m lb/hr fo	or SSM or				
	Malfu	nction fla	ring.																
	Total ton/yr values include the sum of all emissions for all units listed above.																		
Totals:		16.4	4.6	15.2	2.7	0.4	1.8	-	-	-	-	-	-	-	-	-	-	-	-

Table 2-J: Fuel

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

	Fuel Type (low sulfur Diesel,	Fuel Source: purchased commercial,		Speci	fy Units		
Unit No.	ultra low sulfur diesel, Natural Gas, Coal,)	raw/field natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
REBOILER1	Natural Gas	Purchased commercial	1000 Btu/scf	2029 scf/hr	18 MMscf/yr	Negligible	N/A
REBOILER2	Natural Gas	Purchased commercial	1000 Btu/scf	2598 scf/hr	23 MMscf/yr	Negligible	N/A
NGLHEAT1	Natural Gas	Purchased commercial	1000 Btu/scf	7451 scf/hr	65 MMscf/yr	Negligible	N/A
RCFN-FLR	Natural Gas	Purchased commercial	1000 Btu/scf	30 Mscf/hr	259 MMscf/yr	Negligible	N/A
WIB-FLR	Natural Gas	Purchased commercial	1000 Btu/scf	560 scf/hr	5 MMscf/yr	Negligible	N/A
RCFN-FLR-SSM	Natural Gas	Purchased commercial	1000 Btu/scf	500 Mscf/hr	4380 MMscf/yr	Negligible	N/A
WIB-FLR-SSM	Natural Gas	Purchased commercial	1000 Btu/scf	63 Mscf/hr	548 MMscf/yr	Negligible	N/A
RCFN-FLR- MALF	Natural Gas	Purchased commercial	1000 Btu/scf	500 Mscf/hr	4380 MMscf/yr	Negligible	N/A
WIB-FLR- MALF	Natural Gas	Purchased commercial	1000 Btu/scf	63 Mscf/hr	548 MMscf/yr	Negligible	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.

					Vanan	Average Stor	age Conditions	Max Storag	ge Conditions
Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
WIB_T1-OIL*		Oil	Oil	7.07	54.68	60.82	7.94	75.73	10.34
WIB_T2-OIL*		Oil	Oil	7.07	54.68	60.82	7.94	75.73	10.34
WIB_T3-SPOVR		Empty	Empty (Spillover tank)	N/A	N/A	N/A	N/A	N/A	N/A
WIB_T4-WTR*		Oily Water	Water with 50 ppm Oil	N/A	N/A	N/A	N/A	N/A	N/A
WIB_T5-GB*		Oily Water	15% Oil, 85% Water	N/A	N/A	N/A	N/A	N/A	N/A
WIB_T6-GB*		Oily Water	15% Oil, 85% Water	N/A	N/A	N/A	N/A	N/A	N/A
T-METH		Methanol	100% Methanol	6.6	32.04	64	1.70	95	4.05
T-GLY		Glycol Tank	Triethylene glycol	9.18	N/A	N/A	< 0.0002	N/A	< 0.0002
T-NGL		NGL pressurized tank	Natural gas liquids	N/A	N/A	N/A	N/A	N/A	N/A
T-LUB-OIL1		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL2		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL3		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL4		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL5		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL6		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL7		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-LUB-OIL8		Lube Oil	Lube Oil	7.3	N/A	N/A	< 0.0002	N/A	< 0.0002
T-SUMP		Sump tank	Sump liquids	N/A	N/A	N/A	< 0.0002	N/A	< 0.0002
* WIB vessel emi WIB flare. The W The tank hatch S WIB_T1-OIL-SSM	l nissions ar /IB tanks a SSM emiss M, WIB_T2-	e captured by vapor recovery uni ire represented by unit ID "WIB" ir sions are grouped together as uni -OIL-SSM, WIB_T4-WTR-SSM, WII	ts (VRUs), which are integral to the WIB n the permit, except for SSM emissions t t/stack "TNK-HATCH-SSM," and include B_T5-GB-SSM, and WIB_T6-GB-SSM.	l system. Whe from tank ha the following	l en the VRUs are tch maintenanc g:	down, the tank v	vapors are vente be vented to the	d to the flare.	

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-	Roof Type (refer to Table 2-	Сар	acity	Diameter (M)	Vapor Space	Co (from Ta	lor ble VI-C)	Paint Condition (from Table VI-	Annual Throughput	Turn- overs
			LK below)	LK below)	(bbl)	(M ³)		(NI)	Roof	Shell	C)	(gal/yr)	(per year)
WIB_T1-OIL	post 2002	Oil	N/A	FX	1,552	246,730	6.6	N/A	OT	OT	Good	46 MM	730
WIB_T2-OIL	post 2002	Oil	N/A	FX	1,552	246,730	6.6	N/A	OT	OT	Good	46 MM	730
WIB_T3-SPOVR	post 2002	Empty	N/A	FX	5,019	798,028	11.8	N/A	OT	OT	Good	N/A	N/A
WIB_T4-WTR	post 2002	Water	N/A	FX	10,156	1,614,620	16.8	N/A	OT	OT	Good	1226 MM	2919
WIB_T5-GB	post 2002	Oil, Water	N/A	FX	10,100	1,605,724	14.5	N/A	OT	OT	Good	613 MM	1460
WIB_T6-GB	post 2002	Oil, Water	N/A	FX	10,100	1,605,724	14.5	N/A	OT	OT	Good	613 MM	1460
T-METH	post 2002	Methanol	N/A	FX	500	80	15.5	N/A	OT	OT	Good	378,000	18
T-GLY	N/A	Glycol Tank	N/A	FX	N/A	N/A	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-NGL	2006	NGL Pressurized Tank	N/A	FX	N/A	N/A	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL1	2003	Lube Oil	N/A	FX	88	14	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL2	2006	Lube Oil	N/A	FX	7	1	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL3	2003	Lube Oil	N/A	FX	24	4	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL4	2006	Lube Oil	N/A	FX	7	1	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL5	2016	Lube Oil	N/A	FX	24	4	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL6	2016	Lube Oil	N/A	FX	24	4	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL7	est. 2020	Lube Oil	N/A	FX	36	6	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-LUB-OIL8	est. 2020	Lube Oil	N/A	FX	36	6	N/A	N/A	N/A	N/A	Good	N/A	N/A
T-SUMP	N/A	Sump Liquids	N/A	FX	N/A	N/A	N/A	N/A	N/A	N/A	Good	N/A	N/A

Roof Type	Seal Type, We	lded Tank Seal Type	Seal Type, Rive	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	
Note: 1.00 bbl = 0.159	$M^3 = 42.0$ gal				MG: Medium Gray BL: Black OT: Other (specify)	

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

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)											
		Mate	erial Processed		Ν	Iaterial Produced					
Description	Chemical Composition		Chemical Composition		Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)	
Mixed Liquids (WIB)	Produced Water / Oil Mixture		L	160 Mbbl/d*	High CO ₂ Produced Gas	See Analysis	G	300 MMscfd*			
Produced Gas (RCF)	See Attached Analysis		G	300 MMscfd*	Produced Water	Water	L	154 Mbbl/d*			
Produced Gas (WIB)	See Attached	Analysis	G	1.5 MMscfd*	Oil	Oil	L	6 Mbbl/d*			
					NGL	See Analysis	L	3.5 Mbbl/d*			
		* Approxi	l mate production rates -no enfor	l rceable limits are requested as	s emissions are not based on						
		throughp	hroughputs.								

Table 2-N: CEM Equipment

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

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

Table 2-O: Parametric Emissions Measurement Equipment

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

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
REBOILER1	Fuel usage	Meter	MMcf					
REBOILER2	Fuel usage	Meter	MMcf					
NGL HEAT1	Fuel usage	Meter	MMcf					
RCFN-FLR								
RCFN-FLR-SSM	Fuel / Flare gas	Meter	MMcf					
RCFN-FLR-MALF								
WIB-FLR								
WIB-FLR-SSM	Fuel / Flare gas	Meter	MMcf					
WIB-FLR-MALF								

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 **X** By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO ₂ ton/yr	N2O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²								Total GHG Mass Basis ton/yr ⁴	Total CO₂e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3									
	mass GHG														
	CO ₂ e				Site_wide (n 2020 omission	, le aro loce th	an 75 000 t	ons/vras do		n tha amiss	ion			
	mass GHG				calculation	Jations. The site is a minor source facility that is not a power plant, is not Title V, and									
	CO ₂ e				is not PSD										
	mass GHG				1011011 001										
	CO ₂ e					<u> </u>	-								
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
	mass GHG														
	CO ₂ e														
Total	mass GHG														
	CO ₂ e														

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.

Application Summary

The <u>Application Summary</u> shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be 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, debottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

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

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

Occidental Permian, Ltd. (Oxy) is applying to the New Mexico Air Quality Bureau for a significant revision to Permit 2656-M7 in accordance with 20.2.72.219.D.(1)(a) NMAC, to authorize changes to their North Hobbs Unit (NHU) Reinjection Compression Facility (RCF) and West Injection Battery (WIB). The function of the facility is to clean and compress CO₂ field gas to reinjection pressure, separate water/hydrocarbon field liquids, and process natural gas liquids. The majority of emissions from this site are routine or predictable emissions during startup, shutdown and maintenance (SSM).

The NHU RCF and WIB are linked processes. The RCF handles field gas, while the WIB handles field liquids. Liquids separated at the RCF are diverted to the WIB, and gases separated at the WIB are diverted to the RCF. Water and gas are reinjected, and the crude oil is separated and sold. There is a separate NGL processing train where the distillation separation of CO_2 and NGL occurs. The NGLs are sent to the sales pipeline.

Oxy is submitting this permit modification application to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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.







Plot Plan Drawn To Scale

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



			-							
NOTES:		REFERENCE DRAWINGS	REVISIONS						ENGINE	ZERING CONSULTANT:
~~~~~	ND.	TITLE	ND.	DATE	DESCRIPTION	BY	CHK.	APP. A	.PP. 🔻	
<pre>{</pre>			A	15JUN18	ISSUED FOR REVIEW	DCM	YL	SB	`	
			В	15MAR19	ISSUED FOR REVIEW	AP	KL	MA		VV TEXAS REGISTERED ENGIN PROJECT NO: 242
			С		ISSUED FOR DESIGN	AP	KL	MA		
										BY
									DESIG	GNED A. PONCE
									DRAW	/N A. PONCE
									CHECH	KED K. LUCAS
									APPRI	OVED M. ADAM



# **All Calculations**

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

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

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

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

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

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

#### **Significant Figures:**

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

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

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

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

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

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

**Malfunction Calculations**: Malfunction emissions (MALF) are included in this application. The hourly flare MALF emission rates (lbs/hr) are equivalent to the SSM emissions listed for the same flare source. The yearly emissions (tpy) are set at 10 tons per year according to NMED Air Quality Permits for Malfunction emissions.
#### Occidental Permian Ltd. - North Hobbs Unit RCF & WIB UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0 Emissions Summary

#### **Controlled Emissions**

		NC	) _x	cc	)	V	C	SC	<b>D</b> ₂	Т	ISP	PI	1 ₁₀	PM	2.5	H;	₂S	Tota	l HAP	CO ₂	CH₄	N ₂ O	CO2e
Unit ID	Equipment Description	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	ton/yr	ton/yr	ton/yr	ton/yr
FUG_LDAR	Fugitive Emissions Subject to LDAR	This Unit ID is	being remove	ed from the pe	rmit and rep	laced by Unit	IDs FUG_WIE	and FUG_RCF															
FUG	Fugitive Emissions (Non NSPS)	This Unit ID is	being remove	ed from the pe	rmit and rep	laced by Unit	IDs FUG_WIE	and FUG_RCF															
FUG-WIB	WIB Fugitives	-	-	-	-	0.68	2.96	-	-	-	-	-	-	-	-	0.02	0.08	0.11	0.50	2.65	1.66	-	49
FUG-RCF	RCF Fugitives	-	-	-	-	5.10	22.35	-	-	-	-	-	-	-	-	0.05	0.21	0.59	2.59	17.93	5.85	-	182
DEXPRO [™]	DexPro [™] Dehydration Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY1	Glycol Dehydrator 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY2	Glycol Dehydrator 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER1	Glycol Dehydrator Reboiler 1	0.20	0.89	0.17	0.75	0.01	0.05	0.03	0.13	0.02	0.07	0.02	0.07	0.02	0.07	-	-	0.004	0.02	1,061	0.20	0.02	1,071
REBOILER2	Glycol Dehydrator Reboiler 2	0.26	1.14	0.22	0.96	0.01	0.06	0.04	0.16	0.02	0.09	0.02	0.09	0.02	0.09	-	-	0.005	0.02	1,358	0.26	0.03	1,372
NGLHEAT1	Natural Gas-Fired Process Heater for NGL Train	0.75	3.26	0.63	2.74	0.04	0.18	0.11	0.47	0.06	0.25	0.06	0.25	0.06	0.25	-	-	0.01	0.06	3,894	0.73	0.07	3,934
WIB	Water Injection Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR	Routine RCF Flare	3.81	16.68	15.17	66.45	1.03	4.49	0.40	1.75	-	-	-	-	-	-	0.004	0.02	0.05	0.22	15,693	97.85	0.04	18,442
WIB-FLR	Routine WIB Flare	0.07	0.32	0.29	1.26	0.02	0.09	0.01	0.03	-	-	-	-	-	-	8E-05	4E-04	0.001	0.004	297	1.85	0.001	349
TNK-HATCH-SSM	Tank Hatch Maintenance	-	-	-	-	0.50	0.002	-	-	-	-	-	-	-	-	0.02	6E-05	0.03	1E-04	-	-	-	-
RCFN-FLR-SSM	SSM RCFN Flare	64.55	1.08	553.45	9.22	338.06	5.63	3,384.89	56.41	-	-	-	-	-	-	36.01	0.60	12.02	0.20	5,411	8.75	0.011	5,659
WIB-FLR-SSM	SSM WIB Flare	13.00	0.33	111.47	2.79	67.74	1.69	1,056.51	26.41	-	-	-	-	-	-	11.24	0.28	3.54	0.09	1,077	2.65	0.002	1,151
RCFN-FLR-MALF	RCFN Flare Malfunction	64.55	10.00	553.45	10.00	338.06	10.00	3,384.89	10.00	-	-	-	-	-	-	36.01	10.00	12.02	0.36				
WIB-FLR-MALF	WIB Flare Malfunction	13.00	10.00	111.47	10.00	67.74	10.00	1,056.51	10.00	-	-	-	-	-	-	11.24	10.00	3.54	0.52				
	Totals		33.69	681.39	94.16	413.20	47.51	4,441.97	95.37	0.09	0.40	0.09	0.40	0.09	0.40	47.34	11.19	16.37	4.58	28,811	120	0.17	32,210
То	otals without SSM/Malfunction	5.09	22.29	16.47	72.15	6.89	30.18	0.58	2.54	0.09	0.40	0.09	0.40	0.09	0.40	0.07	0.30	0.78	3.42	22,323	108	0.15	25,399

#### Exempt Sources

		NO	x	C	D	V	0C	S	02	٦	ISP	PM	₁₀	PM	2.5	Н	₂ S	Tota	l HAP	CO ₂	CH ₄	N ₂ O	CO2e
Unit ID	Equipment Description	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr										
TRK-LOAD	Truck Loading	-	-	-	-	0.19	0.02	-	-	-	-	-	-	-	-	-	-	0.19	0.02	-	-	-	-
T-METH	Methanol Tank	-	-	-	-	17.50	0.45	-	-	-	-	-	-	-	-	-	-	17.50	0.45	-	-	-	-
	Totals	0	0	0	0	17.70	0.47	0	0	0	0	0	0	0	0	0	0	17.70	0.47	0	0	0	0

#### **Controlled Emissions**

		Total H	IAPs	Formald	ehyde	n-Hex	ane	Benze	ene	Tol	uene	Ethylb	enzene	Xyl	enes
Unit ID	Equipment Description	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
FUG_LDAR	Fugitive Emissions Subject to LDAR	This Unit ID is b	being remove	d from the peri	mit and repla	ced by Unit IDs	FUG_WIB ar	nd FUG_RCF							
FUG	Fugitive Emissions (Non NSPS)	This Unit ID is b	peing remove	d from the peri	mit and repla	ced by Unit IDs	FUG_WIB ar	d FUG_RCF							
FUG-WIB	WIB Fugitives	0.11	0.50	-	-	0.11	0.48	0.0004	0.002	0.002	0.007	0.001	0.004	0.002	0.008
FUG-RCF	RCF Fugitives	0.59	2.59	-	-	0.17	0.75	0.0010	0.004	0.003	0.011	0.001	0.006	0.004	0.016
DEXPRO TM	DexPro [™] Dehydration Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY1	Glycol Dehydrator 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY2	Glycol Dehydrator 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER1	Glycol Dehydrator Reboiler 1	0.004	0.017	2E-04	7E-04	0.004	0.02	4E-06	2E-05	7E-06	3E-05	-	-	-	-
REBOILER2	Glycol Dehydrator Reboiler 2	0.005	0.021	2E-04	9E-04	0.005	0.02	5E-06	2E-05	9E-06	4E-05	-	-	-	-
NGLHEAT1	Natural Gas-Fired Process Heater for NGL Train	0.014	0.061	6E-04	2E-03	0.013	0.06	2E-05	7E-05	3E-05	1E-04	-	-	-	-
WIB	Water Injection Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR	Routine RCF Flare	0.05	0.22	2E-03	9E-03	0.05	0.21	6E-05	2E-04	9E-05	4E-04	-	-	-	-
WIB-FLR	Routine WIB Flare	0.001	0.004	4E-05	2E-04	9E-04	4E-03	1E-06	5E-06	2E-06	8E-06	-	-	-	-
TNK-HATCH-SSM	Tank Hatch Maintenance	0.03	1E-04	-	-	0.03	9E-05	9E-05	3E-07	4E-04	1E-06	2E-04	8E-07	4E-04	2E-06
RCFN-FLR-SSM	SSM RCFN Flare	12.02	0.20	-	-	11.40	0.19	8E-02	1E-03	0.22	0.004	0.08	0.001	0.25	0.004
WIB-FLR-SSM	SSM WIB Flare	3.54	0.09	-	-	3.39	0.08	0.01	3E-04	0.05	0.001	0.03	0.001	0.06	0.001
RCFN-FLR-MALF	RCFN Flare Malfunction	12.02	0.36	-	-	11.40	0.34	0.08	0.002	0.22	0.007	0.08	0.002	0.25	0.007
WIB-FLR-MALF	WIB Flare Malfunction	3.54	0.52	-	-	3.39	0.50	0.01	0.002	0.05	0.007	0.03	0.004	0.06	0.009
	Totals	31.93	4.58	0.003	0.01	29.95	2.65	0.18	0.01	0.55	0.04	0.21	0.02	0.62	0.05

#### Occidental Permian Ltd. - North Hobbs Unit RCF & WIB UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0 TAPs Emissions Summary

#### **Controlled Emissions**

		Stack Height	Correction Factor ¹	Cyclohexane	Octane	Nonane	Dichloroben zene	Barium	Cadmium	Chromium	Cobalt	Copper	Mangane se	Molybden um	Nickel	Selenium	Vanadiu m	Zinc
Unit ID	Equipment Description	ft		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
FUG_LDAR	Fugitive Emissions Subject to LDAR			This Unit ID is I	being removed f	rom the permi	t and replaced b	y Unit IDs F	UG_WIB and F	UG_RCF								
FUG	Fugitive Emissions (Non NSPS)			This Unit ID is I	peing removed f	rom the permi	t and replaced b	y Unit IDs F	UG_WIB and F	UG_RCF								
FUG-WIB	WIB Fugitives		1	0.04	0.004	0.0007	-	-	-	-	-	-	-	-	-	-	-	-
FUG-RCF	RCF Fugitives		1	0.08	0.007	0.001	-	-	-	-	-	-	-	-	-	-	-	-
DEXPRO [™]	DexPro [™] Dehydration Unit			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY1	Glycol Dehydrator 1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEHY2	Glycol Dehydrator 2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REBOILER1	Glycol Dehydrator Reboiler 1	43	71	-	-	-	2.4E-06	8.9E-06	2.2E-06	2.8E-06	1.7E-07	1.7E-06	7.7E-07	2.2E-06	4.3E-06	4.9E-08	4.7E-06	5.9E-05
REBOILER2	Glycol Dehydrator Reboiler 2	43	71	-	-	-	3.1E-06	1.1E-05	2.9E-06	3.6E-06	2.2E-07	2.2E-06	9.9E-07	2.9E-06	5.5E-06	6.2E-08	6.0E-06	7.5E-05
NGLHEAT1	Natural Gas-Fired Process Heater for NGL Train	20	19	-	-	-	8.9E-06	3.3E-05	8.2E-06	1.0E-05	6.3E-07	6.3E-06	2.8E-06	8.2E-06	1.6E-05	1.8E-07	1.7E-05	2.2E-04
WIB	Water Injection Battery			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR	Routine RCF Flare	194	1066	-	-	-	3.5E-05	1.3E-04	3.3E-05	4.1E-05	2.5E-06	2.5E-05	1.1E-05	3.3E-05	6.2E-05	7.1E-07	6.8E-05	8.6E-04
WIB-FLR	Routine WIB Flare	190	1066	-	-	-	6.7E-07	2.5E-06	6.2E-07	7.8E-07	4.7E-08	4.8E-07	2.1E-07	6.2E-07	1.2E-06	1.3E-08	1.3E-06	1.6E-05
TNK-HATCH-SSM	Tank Hatch Maintenance		1	0.01	0.001	0.0002	-	-	-	-	-	-	-	-	-	-	-	-
RCFN-FLR-SSM	SSM RCFN Flare	194	1066	5.04	0.24	0.02	6.0E-04	2.2E-03	5.5E-04	7.0E-04	4.2E-05	4.3E-04	1.9E-04	5.5E-04	1.1E-03	1.2E-05	1.2E-03	1.5E-02
WIB-FLR-SSM	SSM WIB Flare	190	1066	1.34	0.12	0.02	7.5E-05	2.8E-04	6.9E-05	8.8E-05	5.3E-06	5.3E-05	2.4E-05	6.9E-05	1.3E-04	1.5E-06	1.4E-04	1.8E-03
RCFN-FLR-MALF	RCFN Flare Malfunction	194	1066	6.67	0.61	0.10	6.0E-04	2.2E-03	5.5E-04	7.0E-04	4.2E-05	4.3E-04	1.9E-04	5.5E-04	1.1E-03	1.2E-05	1.2E-03	1.5E-02
WIB-FLR-MALF	WIB Flare Malfunction	190	1066	1.34	0.12	0.02	6.0E-04	2.2E-03	5.5E-04	7.0E-04	4.2E-05	4.3E-04	1.9E-04	5.5E-04	1.1E-03	1.2E-05	1.2E-03	1.5E-02
			Total:	14.51	1.11	0.16	0.002	0.01	0.002	0.002	0.0001	0.001	0.001	0.002	0.003	4E-05	0.004	0.05
		т	AP Threshold ² :	70.00	96.70	70.00	20.000	0.03	0.003	0.033	0.0067	0.013	0.067	0.333	0.067	1E-02	0.003	0.07
		Corrected TA	Ps Threshold ³ :	73,954.16	101,954.61	73,781.03	21,165.386	35.24	3.52	35.24	7.06	14.07	70.59	352.40	70.59	14.07	3.52	70.59
		Excee	ds Threshold?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

¹ Sources may choose to use a correction factor for the release height of emissions for the purpose of determining whether a permit is necessary for the emission of a toxic air pollutant. To apply the correction, find the minimum height of release for the toxic air pollutant and select the correction factor (CF) which corresponds to the list provided in NMAC 20.2.72.202 Table C. If the height of release is between two values, the lower number shall be selected, as per NMAC 20.2.72.202 Table C.

 2  Toxic Air Pollutant threshold in lb/hr as per NMAC 20.2.72.202 Table A and Table B.

³ In the event of multiple releases of the same substance from different release heights, the source may choose to use a weighted average CF, weighted by the emission rate at each, Per NMAC 20.2.72.200 Table C.

Pollutant	TAP Screening Level	Weighted Average CF ¹	TAP Screening Level * CF
Cyclohexane ²	70.00000	1,056.49	73,954.16
Octane	96.70000	1,054.34	101,954.61
Nonane	70.00000	1,054.01	73,781.03
Dichlorobenzene	20.00000	1,058.27	21,165.39
Barium	0.03330	1,058.27	35.24
Cadmium (fume)	0.00333	1,058.27	3.52
Chromium	0.03330	1,058.27	35.24
Cobalt	0.00667	1,058.27	7.06
Copper (fume)	0.01330	1,058.27	14.07
Manganese (fume)	0.06670	1,058.27	70.59
Molybdenum (soluble)	0.33300	1,058.27	352.40
Nickel	0.06670	1,058.27	70.59
Selenium	0.01330	1,058.27	14.07
Vanadium	0.00333	1,058.27	3.52
Zinc Chloride Fume	0.06670	1,058.27	70.59

¹In the event of multiple releases of the same substance from different release heights, the source may choose to use a weighted average CF, weighted by the emission rate at each, Per NMAC 20.2.72.200 Table C. ² Weighted average correction factors were calculated using only emission rates and stack heights at sources that emit each respective pollutant.

### **Fugitive Emissions**

### EPN: FUG-WIB

Source description: WIB Fugitives

Total Operating Hours:

8760 hr/yr

						WIB Gas						V	VIB Liquids			
Componen	t	Emission factor ¹	Component	Pre-C Emis	ontrol sions	LDA	R	Post-C Emiss	ontrol sions	Component	Pre-Co Emiss	ontrol sions	LDA	R	Post-Co Emiss	ontrol ions
Componen		(lb/hr/source)	Count ³	lb/hr	tpy	Program ^a	% Reduction	lb/hr	tpy	Count ³	lb/hr	tpy	Program ^a	% Reduction	lb/hr	tpy
	Gas	9.92E-03	192	1.90	8.34	28M + flanges	75%	0.48	2.09	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Valves	Light Oil	5.51E-03	0	0.00	0.00	28M + flanges	75%	0.00	0.00	120	0.66	2.90	28M + flanges	75%	0.17	0.72
	Heavy Oil	1.85E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	8.60E-04	504	0.43	1.90	28M + flanges	75%	0.11	0.47	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Flanges	Light Oil	2.43E-04	0	0.00	0.00	28M + flanges	75%	0.00	0.00	490	0.12	0.52	28M + flanges	75%	0.03	0.13
	Heavy Oil	8.60E-07	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	4.41E-04	179	0.08	0.35	28M + flanges	75%	0.02	0.09	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Connectors	Light Oil	4.63E-04	0	0.00	0.00	28M + flanges	75%	0.00	0.00	62	0.03	0.13	28M + flanges	75%	0.01	0.03
	Heavy Oil	1.65E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	4.41E-03	26	0.11	0.50	28M + flanges	75%	0.03	0.13	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Open-ended Lines	Light Oil	3.09E-03	0	0.00	0.00	28M + flanges	75%	0.00	0.00	28	0.09	0.38	28M + flanges	75%	0.02	0.09
	Heavy Oil	3.09E-03	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	5.29E-03	14	0.07	0.32	28M + flanges	75%	0.02	0.08	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Pump Seals	Light Oil	2.87E-02	0	0.00	0.00	28M + flanges	75%	0.00	0.00	18	0.52	2.26	28M + flanges	75%	0.13	0.56
	Heavy Oil	2.87E-02	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	1.94E-02	34	0.66	2.89	28M + flanges	75%	0.16	0.72	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Other	Light Oil	1.65E-02	0	0.00	0.00	28M + flanges	75%	0.00	0.00	2	0.03	0.14	28M + flanges	75%	0.01	0.04
	Heavy Oil	7.05E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
			Subtotal	3.27	14.30			0.82	3.58		1.44	6.33			0.36	1.58
			Safety Factor	10%	10%			10%	10%		10%	10%			10%	10%
			Total	3.59	15.73			0.90	3.93		1.59	6.96			0.40	1.74

#### Speciation

				WIB Gas						٧	VIB Liquids					Tot	al	
Component	W+ 0( b	Pre-C	ontrol	Blank	Blank	Post-C	ontrol	W/+ 0/ C	Pre-Co	ontrol	Blank	Blank	Post-Co	ontrol	Pre-Co	ontrol	Post-C	ontrol
Component	VV L. %	lb/hr	tpy	DIGIIK	Dlaiik	lb/hr	tpy	VVI. %	lb/hr	tpy	Dialik	Dialik	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
VOC	31.02	1.11	4.88			0.28	1.22	100.00	1.59	6.96			0.40	1.74	2.70	11.84	0.68	2.96
H2S	1.95	0.07	0.31			0.02	0.08	0.00	0.00	0.00			0.00	0.00	0.07	0.31	0.02	0.08
CO2	67.50	2.42	10.62			0.61	2.65	0.00	0.00	0.00			0.00	0.00	2.42	10.62	0.61	2.65
CH4 (Methane)	42.19	1.52	6.64			0.38	1.66	0.00	0.00	0.00			0.00	0.00	1.52	6.64	0.379	1.66
Total HAPs	5.23	0.19	0.82			0.05	0.21	17.08	0.27	1.19			0.07	0.30	0.46	2.01	0.11	0.50
Methanol	0	0.00	0.00			0.00	0.00	0	0.00	0.00			0.00	0.00	0.00	0.00	0	0
n-Hexane	5.008	0.18	0.79			0.04	0.20	16.359	0.26	1.14			0.06	0.28	0.440	1.926	0.110	0.482
Benzene	0.018	0.00	0.00			0.00	0.00	0.058	0.00	0.00			0.00	0.00	0.002	0.007	0.0004	0.002
Toluene	0.074	0.00	0.01			0.00	0.00	0.241	0.00	0.02			0.00	0.00	0.006	0.028	0.002	0.007
Ethylbenzene	0.042	0.00	0.01			0.00	0.00	0.136	0.00	0.01			0.00	0.00	0.004	0.016	0.001	0.004
Xylenes	0.088	0.00	0.01			0.00	0.00	0.287	0.00	0.02			0.00	0.00	0.008	0.034	0.002	0.008
Cyclohexane	1.973	0.07	0.31			0.02	0.08	6.445	0.10	0.45			0.03	0.11	0.173	0.759	0.043	0.190
Octane	0.181	0.01	0.03			0.00	0.01	0.590	0.01	0.04			0.00	0.01	0.016	0.070	0.004	0.017
Nonane	0.030	0.00	0.00			0.00	0.00	0.099	0.00	0.01			0.00	0.00	0.003	0.012	0.0007	0.003

Notes

^a In accordance with 20.2.50.116, equipment will be monitored at least quarterly with OGI or Method 21, and weekly AVO inspections will be conducted.

^b Composition is from WIB VRU Gas; VOC and hydrocarbon constituents are conservatively adjusted to 100% TOC

^c Composition is from WIB Tank Vapor at VRU, Normalized to 100% Hexanes+

### Occidental Permian Ltd. - North Hobbs Unit RCF & WIB UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0

### Fugitive Emissions

EPN: FUG-RCF

Source description: RCF Fugitives

Total Operating Hours: 8760 hr/yr

	RCF Gas										RCF NGL						RC	CF Methanol					
		Emission factor ¹	Component	Pre-Co Emiss	ontrol sions	LD	AR	Post-C Emis	control sions	Component	Pre-Co Emiss	ontrol sions	LDA	IR	Post-Co Emiss	ontrol ions	Component	Pre-Co Emiss	ntrol ions	LDAI	R	Post-C Emiss	ontrol sions
Componer	nt	(lb/hr/source)	Count ³	lb/hr	tpy	Program ^a	% Reduction	lb/hr	tpy	Count ³	lb/hr	tpy	Program ^a	% Reduction	lb/hr	tpy	Count ³	lb/hr	tpy	Program ^a	% Reductio n	lb/hr	tpy
Valves	Gas Light Oil	9.92E-03 5.51E-03	989 0	9.81 0.00	42.98 0.00	28M + flanges 28M + flanges	75% 75%	2.45 0.00	10.74 0.00	146 412	1.45 2.27	6.34 9.95	28M + flanges 28M + flanges	75% 75%	0.36 0.57	1.59 2.49	114 0	1.13 0.00	4.95 0.00	28M + flanges 28M + flanges	75% 75%	0.28 0.00	1.24 0.00
	Heavy Oil	1.85E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	8.60E-04	2851	2.45	10.74	28M + flanges	75%	0.61	2.68	621	0.53	2.34	28M + flanges	75%	0.13	0.58	28	0.02	0.11	28M + flanges	75%	0.01	0.03
Flanges	Light Oil	2.43E-04	0	0.00	0.00	28M + flanges	75%	0.00	0.00	770	0.19	0.82	28M + flanges	75%	0.05	0.20	0	0.00	0.00	28M + flanges	75%	0.00	0.00
	Heavy Oil	8.60E-07	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	4.41E-04	440	0.19	0.85	28M + flanges	75%	0.05	0.21	16	0.01	0.03	28M + flanges	75%	0.00	0.01	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Connectors	Light Oil	4.63E-04	0	0.00	0.00	28M + flanges	75%	0.00	0.00	166	0.08	0.34	28M + flanges	75%	0.02	0.08	0	0.00	0.00	28M + flanges	75%	0.00	0.00
	Heavy Oil	1.65E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	4.41E-03	82	0.36	1.58	28M + flanges	75%	0.09	0.40	0	0.00	0.00	28M + flanges	75%	0.00	0.00	0	0.00	0.00	28M + flanges	75%	0.00	0.00
Open-ended Lines	Light Oil	3.09E-03	0	0.00	0.00	28M + flanges	75%	0.00	0.00	75	0.23	1.01	28M + flanges	75%	0.06	0.25	0	0.00	0.00	28M + flanges	75%	0.00	0.00
	Heavy Oil	3.09E-03	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	5.29E-03	30	0.16	0.70	28M + flanges	75%	0.04	0.17	5	0.03	0.12	28M + flanges	75%	0.01	0.03	6	0.03	0.14	28M + flanges	75%	0.01	0.03
Pump Seals	Light Oil	2.87E-02	0	0.00	0.00	28M + flanges	75%	0.00	0.00	51	1.46	6.40	28M + flanges	75%	0.37	1.60	0	0.00	0.00	28M + flanges	75%	0.00	0.00
	Heavy Oil	2.87E-02	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
	Gas	1.94E-02	222	4.31	18.86	28M + flanges	75%	1.08	4.72	1	0.02	0.08	28M + flanges	75%	0.00	0.02	16	0.31	1.36	28M + flanges	75%	0.08	0.34
Other	Light Oil	1.65E-02	0	0.00	0.00	28M + flanges	75%	0.00	0.00	6	0.10	0.43	28M + flanges	75%	0.02	0.11	0	0.00	0.00	28M + flanges	75%	0.00	0.00
	Heavy Oil	7.05E-05	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00	0	0.00	0.00	28M + flanges	0%	0.00	0.00
			Subtotal	17.28	75.70			4.32	18.93		6.36	27.87			1.59	6.97		1.50	6.56			0.37	1.64
			Safety Factor	10%	10%			10%	10%		10%	10%			10%	10%		10%	10%			10%	10%
			Total	19.01	83.28			4.75	20.82		7.00	30.65			1.75	7.66		1.65	7.21			0.41	1.80

#### Speciation

		RCF Gas									RCF NGL						RC	F Methanol					Tot	al	
Component		Pre-Co	ontrol	Plank	Plank	Post-Co	ntrol	have or b	Pre-Co	ntrol	Plank	Plank	Post-Co	ontrol	<b>\\/</b> + 0/	Pre-Co	ntrol	Plank	Plank	Post-Co	ntrol	Pre-Co	ntrol	Post-Co	ontrol
Component	VVT. %	lb/hr	tpy	DIGIIK	DIGIIK	lb/hr	tpy	VV t. %	lb/hr	tpy	DIGIIK	DLAIIK	lb/hr	tpy	<b>VVI.</b> %	lb/hr	tpy	DIGIIK	DIGIIK	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
VOC	61.89	11.77	51.54			2.94	12.89	99.99	7.00	30.65			1.75	7.66	100	1.65	7.21			0.41	1.80	20.41	89.41	5.10	22.35
H2S	1.00	0.19	0.83			0.05	0.21	0	0.00	0.00			0.00	0.00	0	0.00	0.00			0.00	0.00	0.19	0.83	0.05	0.21
CO2	86.11	16.37	71.71			4.09	17.93	0	0.00	0.00			0.00	0.00	0	0.00	0.00			0.00	0.00	16.37	71.71	4.09	17.93
CH4 (Methane)	28.09	5.34	23.39			1.34	5.85	0	0.00	0.00			0.00	0.00	0	0.00	0.00			0.00	0.00	5.34	23.39	1.34	5.85
Total HAPs	2.20	0.42	1.83			0.10	0.46	4.24	0.30	1.30			0.07	0.33	100	1.65	7.21			0.41	1.80	2.36	10.35	0.59	2.59
Methanol	0	0.00	0.00			0.00	0.00	0	0.00	0.00			0.00	0.00	100	1.65	7.21			0.41	1.80	1.65	7.21	0.41	1.80
n-Hexane	2.086	0.40	1.74			0.10	0.43	4.056	0.28	1.24			0.07	0.31	0	0.00	0.00			0.00	0.00	0.680	2.981	0.170	0.745
Benzene	0.014	0.00	0.01			0.00	0.00	0.018	0.00	0.01			0.00	0.00	0	0.00	0.00			0.00	0.00	0.004	0.017	0.0010	0.004
Toluene	0.041	0.01	0.03			0.00	0.01	0.038	0.00	0.01			0.00	0.00	0	0.00	0.00			0.00	0.00	0.010	0.046	0.003	0.011
Ethylbenzene	0.014	0.00	0.01			0.00	0.00	0.044	0.00	0.01			0.00	0.00	0	0.00	0.00			0.00	0.00	0.006	0.025	0.001	0.006
Xylenes	0.045	0.01	0.04			0.00	0.01	0.087	0.01	0.03			0.00	0.01	0	0.00	0.00			0.00	0.00	0.015	0.064	0.004	0.016
Cyclohexane	0.923	0.18	0.77			0.04	0.19	1.863	0.13	0.57			0.03	0.14	0	0.00	0.00			0.00	0.00	0.306	1.339	0.076	0.335
Octane	0.044	0.01	0.04			0.00	0.01	0.296	0.02	0.09			0.01	0.02	0	0.00	0.00			0.00	0.00	0.029	0.127	0.007	0.032
Nonane	0.003	0.00	0.00			0.00	0.00	0.049	0.00	0.02			0.00	0.00	0	0.00	0.00			0.00	0.00	0.004	0.018	0.001	0.004

Notes

^a In accordance with 20.2.50.116, equipment will be monitored at least quarterly with OGI or Method 21, and weekly AVO inspections will be conducted.

^b Composition is from RCF/Plant Inlet; VOC and hydrocarbon constituents are conservatively adjusted to 100% TOC

^c Composition is from NGL Vessel

#### **Reboiler Emissions**

#### **EPN: REBOILER1**

Maximum Duty:	2.07	MMBtu/hr	
Hours of Operation:	8760	hr/yr	
Sulfur Content in Fuel:	5	gr/100 dscf	
Fuel Heating Value:	1020	Btu/scf	(HHV basis)
Fuel F-Factor:	8710	dscf/MMBtu	40 CFR Part 60, Appendix A, Table 19-2 value for natural gas

Annual Capacity Factor: 1

Dollutant	E	mission Facto	or		Emis	sions
Follutant	lb/MMscf	kg/MMBtu	lb/MMBtu	Source	lb/hr	(ton/yr)
VOC	5.5			AP-42 Table 1.4-2	0.01	0.05
NO _X	100			AP-42 Table 1.4-1	0.20	0.89
СО	84			AP-42 Table 1.4-1	0.17	0.75
SO ₂				Sulfur Content	0.03	0.13
PM/PM ₁₀ /PM _{2.5}	7.6			AP-42 Table 1.4-2	0.02	0.07
Formaldehyde	0.075			AP-42 Table 1.4-3	2E-04	7E-04
n-Hexane	1.8			AP-42 Table 1.4-3	0.004	0.016
Benzene	0.0021			AP-42 Table 1.4-3	4E-06	2E-05
Toluene	0.0034			AP-42 Table 1.4-3	7E-06	3E-05
CO ₂		53.06	117.0	40 CFR Part 98, Table C-1	242	1061
$CH_4$ (Methane)		0.01	0.022	40 CFR Part 98, Table C-2	0.05	0.2
N ₂ O		0.001	0.0022	40 CFR Part 98, Table C-2	0.005	0.02

Sample Calculations (VOC):

Hourly Emissions = (5.5 lb/MM scf) (MM scf/1,000,000 scf) / (1020 Btu/scf) (1,000,000 Btu/MMBtu) (2.1 MM Btu/hr) = 0.011 lb/hr Annual Emissions = (0.01 lbs/hr) (1 ton / 2,000 lbs) (8760 hrs/yr) = 0.049 tpy

Sample Calculations (SO2):

Hourly Emissions =  $(5 \text{ gr}/100 \text{ dscf})(2.1 \text{ MM Btu/hr}) / (1020 \text{ Btu/dscf})(10^6 \text{ Btu/MM Btu})(1 \text{ lb S}/7000 \text{ gr S})(2 \text{ lb SO2}/1 \text{ lb S}) = 0.029 \text{ lb/hr}$ Annual Emissions = (0.03 lbs/hr)(1 ton / 2,000 lbs)(8760 hrs/yr) = 0.13 tpy

#### **Reboiler Emissions**

#### **EPN: REBOILER2**

Maximum Duty:	2.65	MMBtu/hr	
Hours of Operation:	8760	hr/yr	
Sulfur Content in Fuel:	5	gr/100 dscf	
Fuel Heating Value:	1020	Btu/scf	(HHV basis)
Fuel F-Factor:	8710	dscf/MMBtu	40 CFR Part 60, Appendix A, Table 19-2 value for natural gas

Annual Capacity Factor: 1

Dollutant	E	mission Facto	or		Emissions	
Follutant	lb/MMscf	kg/MMBtu	lb/MMBtu	Source	lb/hr	(ton/yr)
VOC	5.5			AP-42 Table 1.4-2	0.01	0.06
NO _X	100			AP-42 Table 1.4-1	0.26	1.14
СО	84			AP-42 Table 1.4-1	0.22	0.96
SO ₂				Sulfur Content	0.04	0.16
PM/PM ₁₀ /PM _{2.5}	7.6			AP-42 Table 1.4-2	0.02	0.09
Formaldehyde	0.075			AP-42 Table 1.4-3	2E-04	9E-04
n-Hexane	1.8			AP-42 Table 1.4-3	0.005	0.020
Benzene	0.0021			AP-42 Table 1.4-3	5E-06	2E-05
Toluene	0.0034			AP-42 Table 1.4-3	9E-06	4E-05
CO ₂		53.06	117.0	40 CFR Part 98, Table C-1	310	1358
$CH_4$ (Methane)		0.01	0.022	40 CFR Part 98, Table C-2	0.06	0.3
N ₂ O		0.001	0.0022	40 CFR Part 98, Table C-2	0.006	0.03

Sample Calculations (VOC):

Hourly Emissions = (5.5 lb/MM scf) (MM scf/1,000,000 scf) / (1020 Btu/scf) (1,000,000 Btu/MMBtu) (2.7 MM Btu/hr) = 0.014 lb/hr Annual Emissions = (0.01 lbs/hr) (1 ton / 2,000 lbs) (8760 hrs/yr) = 0.063 tpy

Sample Calculations (SO2):

Hourly Emissions =  $(5 \text{ gr}/100 \text{ dscf})(2.7 \text{ MM Btu/hr}) / (1020 \text{ Btu/dscf})(10^6 \text{ Btu/MM Btu})(1 \text{ lb S}/7000 \text{ gr S})(2 \text{ lb SO2/1 lb S}) = 0.037 \text{ lb/hr}$ Annual Emissions = (0.04 lbs/hr)(1 ton / 2,000 lbs)(8760 hrs/yr) = 0.16 tpy

#### **Heater Emissions**

#### **EPN: NGLHEAT1**

Maximum Duty:	7.6	MMBtu/hr	
Hours of Operation:	8760	hr/yr	
Sulfur Content in Fuel:	5	gr/100 dscf	
Fuel Heating Value:	1020	Btu/scf	(HHV basis)
Fuel F-Factor:	8710	dscf/MMBtu	40 CFR Part 60, Appendix A, Table 19-2 value for natural gas

Annual Capacity Factor: 1

Pollutant	E	mission Facto	or		Emissions	
Pollulant	lb/MMscf	kg/MMBtu	lb/MMBtu	Source	lb/hr	(ton/yr)
VOC	5.5			AP-42 Table 1.4-2	0.04	0.18
NO _X	100			AP-42 Table 1.4-1	0.75	3.26
СО	84			AP-42 Table 1.4-1	0.63	2.74
SO ₂				Sulfur Content	0.11	0.47
PM/PM ₁₀ /PM _{2.5}	7.6			AP-42 Table 1.4-2	0.06	0.25
Formaldehyde	0.075			AP-42 Table 1.4-3	6E-04	2E-03
n-Hexane	1.8			AP-42 Table 1.4-3	0.013	0.059
Benzene	0.0021			AP-42 Table 1.4-3	2E-05	7E-05
Toluene	0.0034			AP-42 Table 1.4-3	3E-05	1E-04
CO ₂		53.06	117.0	40 CFR Part 98, Table C-1	889	3894
$CH_4$ (Methane)		0.01	0.022	40 CFR Part 98, Table C-2	0.17	0.7
N ₂ O		0.001	0.0022	40 CFR Part 98, Table C-2	0.017	0.07

Sample Calculations (VOC):

Hourly Emissions = (5.5 lb/MM scf) (MM scf/1,000,000 scf) / (1020 Btu/scf) (1,000,000 Btu/MMBtu) (7.6 MM Btu/hr) = 0.041 lb/hr Annual Emissions = (0.04 lbs/hr) (1 ton / 2,000 lbs) (8760 hrs/yr) = 0.18 tpy

Sample Calculations (SO2):

Hourly Emissions =  $(5 \text{ gr}/100 \text{ dscf}) (7.6 \text{ MM Btu/hr}) / (1020 \text{ Btu/dscf}) (10^6 \text{ Btu/MM Btu}) (1 \text{ lb S}/7000 \text{ gr S}) (2 \text{ lb SO2/1 lb S}) = 0.11 \text{ lb/hr}$ Annual Emissions = (0.11 lbs/hr) (1 ton / 2,000 lbs) (8760 hrs/yr) = 0.47 tpy

#### Occidental Permian Ltd. - North Hobbs Unit RCF & WIB UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0 Natural Gas Combustion - Toxic Air Pollutants

				Na	itural Gas Fuel Usage				
	REBOILER1	REBOILER2	NGLHEAT1	RCFN-FLR	WIB-FLR	RCFN-FLR-SSM	WIB-FLR-SSM	RCFN-FLR-MALF	WIB-FLR-MALF
Heat Input (MMBTU/hr)	2.07	2.65	7.60						
Fuel Usage (MMScf/hr)	0.002	0.003	0.007	0.03	0.001	0.50	0.06	0.50	0.50
Pollutant ¹				Toxic Air Po	ollutant Emission Rat	e (lb/hr) ²			
Dichlorobenzene	2.44E-06	3.12E-06	8.94E-06	3.55E-05	6.72E-07	6.00E-04	7.50E-05	6.00E-04	6.00E-04
Barium	8.93E-06	1.14E-05	3.28E-05	1.30E-04	2.46E-06	2.20E-03	2.75E-04	2.20E-03	2.20E-03
Cadmium	2.23E-06	2.86E-06	8.20E-06	3.25E-05	6.16E-07	5.50E-04	6.88E-05	5.50E-04	5.50E-04
Chromium	2.84E-06	3.64E-06	1.04E-05	4.14E-05	7.84E-07	7.00E-04	8.75E-05	7.00E-04	7.00E-04
Cobalt	1.70E-07	2.18E-07	6.26E-07	2.48E-06	4.70E-08	4.20E-05	5.25E-06	4.20E-05	4.20E-05
Copper	1.73E-06	2.21E-06	6.33E-06	2.51E-05	4.76E-07	4.25E-04	5.31E-05	4.25E-04	4.25E-04
Manganese	7.71E-07	9.87E-07	2.83E-06	1.12E-05	2.13E-07	1.90E-04	2.38E-05	1.90E-04	1.90E-04
Molybdenum	2.23E-06	2.86E-06	8.20E-06	3.25E-05	6.16E-07	5.50E-04	6.88E-05	5.50E-04	5.50E-04
Nickel	4.26E-06	5.46E-06	1.56E-05	6.21E-05	1.18E-06	1.05E-03	1.31E-04	1.05E-03	1.05E-03
Selenium	4.87E-08	6.24E-08	1.79E-07	7.10E-07	1.34E-08	1.20E-05	1.50E-06	1.20E-05	1.20E-05
Vanadium	4.67E-06	5.98E-06	1.71E-05	6.80E-05	1.29E-06	1.15E-03	1.44E-04	1.15E-03	1.15E-03
Zinc	5.89E-05	7.53E-05	2.16E-04	8.57E-04	1.62E-05	1.45E-02	1.81E-03	1.45E-02	1.45E-02

¹Emission factors for toxic air pollutants are from AP-42 Chapter 1.4 *Natural Gas Combustion* Table 1.4-3 and 1.4-4. List of Toxic Air Pollutants as indicated in NMAC 20.2.72.502 Table A was compared to AP-42 Chapter 1.4 to determine appropriate constituents to evaluate. Since emissions are gaseous, it was assumed that all toxic air pollutants were fumes.

² Emission rate in lb/hr was determined with the following equation: Emission factor (lb/MMscf) * Fuel Usage (MMscf/hr)

Pollutant	TAP Screening Level ¹ (lb/hr)	Emission Factor ² (lb/MMscf)
Dichlorobenzene	20.00000	1.20E-03
Barium	0.03330	4.40E-03
Cadmium (fume)	0.00333	1.10E-03
Chromium	0.03330	1.40E-03
Cobalt	0.00667	8.40E-05
Copper (fume)	0.01330	8.50E-04
Manganese (fume)	0.06670	3.80E-04
Molybdenum (soluble and insoluble)	0.33300	1.10E-03
Nickel	0.06670	2.10E-03
Selenium	0.01330	2.40E-05
Vanadium	0.00333	2.30E-03
Zinc Chloride Fume ³	0.06670	2.90E-02

¹ Toxic Air Pollutant threshold in lb/hr as per NMAC 20.2.72.502 Table A.

²Emission factors for toxic air pollutants are from AP-42 Chapter 1.4 *Natural Gas Combustion* Table 1.4-3 and 1.4-4.

³ Zinc emissions from heaters and reboilers were conservatively assumed to be zinc chloride.

## Occidental Permian Ltd. - North Hobbs Unit RCF & WIB UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0

### Tank Hatch Maintenance and Repair - SSM Emissions Summary

#### EPN: TNK-HATCH-SSM

		VO	C1	н	₂ S
Stack ID	Unit ID	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
WIB_T1-OIL-SSM	WIB_T1-OIL	0.50	5E-04	0.017	2E-05
WIB_T2-OIL-SSM	WIB_T2-OIL	0.50	5E-04	0.017	2E-05
WIB_T4-WTR-SSM	WIB_T4-WTR	0.03	3E-05	0.001	1E-06
WIB_T5-GB-SSM	WIB_T5-GB	0.40	4E-04	0.014	1E-05
WIB_T6-GB-SSM	WIB_T6-GB	0.40	4E-04	0.01	1E-05
Max Hourly / Total Annual:		0.50	0.002	0.017	6E-05

¹VOC emissions permit limit is 0.002 tpy only as "hourly emission limits are not appropriate for this situation".

#### **HAPs and TAPs**

Dollutont	VOC	Emi	ssions
Pollulani	Wt. Frac. ²	lb/hr	(ton/yr)
n-Hexane	0.0501	0.0250	9E-05
Benzene	0.0002	0.0001	3E-07
Toluene	0.0007	0.0004	1E-06
Ethylbenzene	0.0004	0.0002	8E-07
Xylenes	0.0009	0.0004	2E-06
Cyclohexane	0.0197	0.0099	4E-05
Octane	0.0018	0.0009	3E-06
Nonane	0.0003	0.0002	6E-07

² HAPs and TAPs composition is from WIB Tank Vapor at VRU sample dated 05/12/2014

UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0

# Tank Hatch Maintenance and Repair - SSM Emissions

### Stack ID: WIB_T1-OIL-SSM or WIB_T2-OIL-SSM

### Tank Inputs for Standing Losses¹

Parameter	Value	Units	Description
D	21.5	ft	Tank diameter
Hs	24	ft	Height of the vertical tank
D _E	21.5	ft	Same as tank diameter for a vertical tank
HL	12	ft	Assumed to be at the half-full level
Ц	10.00	£4	vapor space outage
п _{V0}	12.22	π	Equation 1-16: $H_{VO} = H_{S} - H_{L} + H_{RO}$
W	1138	f+3	vapor space volume
vv	4450	11	Equation 1-3: $Vv = ((pi/4)*D^2)*H_{VO}$
T _{AX}	75.8	°F	Average daily maximum ambient temperature Table 7.1-7 (Roswell, NM)
T _{AN}	47.6	°F	Average daily minimum ambient temperature Table 7.1-7 (Roswell, NM)
T _{AX}	535.5	°R	Average daily maximum ambient temperature
T _{AN}	507.3	٩R	Average daily minimum ambient temperature
$\Delta T_a$	28.20	°R	Daily ambient temperature range
ΔT _v	54.54	٩R	Daily vapor temperature range
-			Daily maximum liquid surface temperature
l _{lx}	543.35	°R	Figure 7.1-13b.
т	E1C 00	0D	Daily minimum liquid surface temperature
ln	510.08	°K	Figure 7.1-13b.
т	520 71	оD	Average daily liquid surface temperature
'LA	529.71	n	Equation 1-30: $T_{LA} = 0.4 T_{AA} + 0.6 T_{B} + 0.005 a^{1}$
RVP	5.00	psia	Crude Oil Reid Vapor Pressure
P _a	12.88	psia	Atmospheric pressure Table 7.1-7
P _{VX}	4.48	psia	Average daily maximum ambient pressure
P _{VN}	2.68	psia	Average daily minimum ambient pressure
ΔP _v	1.81	psia	Average daily vapor pressure range Equation 1-9: $\Delta P_v = P_{vx} - P_{vN}$
P _B	0.06	psig	Breather vent pressure setting range, psig Equation 1-10: $\Delta P_B = P_{BP} - P_{BV}$
α	0.71		Average tank surface solar absorptance, dimensionless; assuming the same as tank shall solar absorptance ( $\alpha_s$ ) - Medium gray (average condition)
1	1722	Btu/(ft ² day)	Average daily total insolation factor
K _E	0.29	/day	Vapor space expansion factor Equation 1-5: $K_r = \Delta T_v (T_{rec} + f(\Delta P_{rec} \Delta P_{rec})/(P_{rec} - P_{rec})]$
P _{VA}	3.49	psia	Vapor pressure at average daily liquid surface temperature for crude oil
К _s	0.31		Vented vapor saturation factor, dimensionless Equation 1-21: $K = 1/(1+0.053*P_{1}*H_{1})$
Mv	50	lb/lb-mole	Vapor molecular weight for crude oil
B	10 73	nsia ft ³ /lb molo ^o P	The ideal gas constant
	10.75		Average daily ambient temperature
T _{AA}	521.40	°R	Equation 1-32: $T_{AA} = (T_{AX} + T_{AN})/2$
Т _в	525.07	°R	Equation 1-31: $T_B = T_{AA} + 0.003 \times \alpha \times I$
T _v	533.50	°R	Average vapor temperature, assuming as an uninsulated tank Equation 1-33: $T_v = 0.7 T_{AA} + 0.3 T_B + 0.009 a^1$
Wv	0.0305	lb/ft ³	Vapor density Equation 1-22: W _v = Mv*P _{vA} /(R*Tv)
	4074.07		Standing losses per year
LS	43/4.67	נס/yr	Equation 1-2: $L_s = 365 * V_v * W_v * K_e * K_s$

#### Tank Hatch Maintenance Emissions Summary

VOC Emissions			
Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
Hourly Standing Loss			$1 \circ 10760 \text{ br/s}$
Emissions:	0.50	lbs/hr	LS / 8/80 11/91
Event Emissions:	0.50	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	5E-04	tpy	Event Emissions x Number of Events x ton/2,000 lb

### H₂S Emissions

Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
H ₂ S Content in VOCs:	3.5	%	
Hourly Standing Loss			VOC Hourly Standing Loss Emissions x H2S
Emissions:	0.02	lbs/hr	Content in VOCs
Event Emissions:	0.02	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	2E-05	tpy	Event Emissions x Number of Events x ton/2,000 lb

# Tank Hatch Maintenance and Repair - SSM Emissions

### Unit ID: WIB_T4-WTR-SSM

### Tank Inputs for Standing Losses¹

Parameter	Value	Units	Description
D	55.1	ft	Tank diameter
Hs	24	ft	Height of the vertical tank
D _E	55.1	ft	Same as tank diameter for a vertical tank
HL	12	ft	Assumed to be at the half-full level
	10 57	4	vapor space outage
Π _{VO}	12.57	π	Equation 1-16: $H_{VO} = H_{S} - H_{L} + H_{RO}$
167	20002	<i>4</i> ,3	vapor space volume
vv	29982	π	Equation 1-3: $Vv = ((pi/4)*D^2)*H_{VO}$
T _{AX}	75.8	°F	Average daily maximum ambient temperature
			Table 7.1-7 (Roswell, NM)
T _{AN}	47.6	°F	Table 7.1.7 (Poswell, NM)
т	505 5		
I _{AX}	535.5	°K	Average daity maximum amplent temperature
T _{AN}	507.3	°R	Average daily minimum ambient temperature
ΔT _a	28.20	°R	Daily ambient temperature range
ΔT _v	54.54	°R	Daily vapor temperature range
T _{lx}	543.35	°R	Daily maximum liquid surface temperature
T _{ln}	516.08	°R	Daily minimum liquid surface temperature
т	500 71	٥D	Average daily liquid surface temperature
'LA	529.71	۳K	Equation 1-30: $T_{LA} = 0.4 T_{AA} + 0.6 T_{B} + 0.005 a^{1}$
RVP	5.00	psia	Crude Oil Reid Vapor Pressure
D	10.00	noio	Atmospheric pressure
Pa	12.88	psia	Table 7.1-7
P	1 18	nsia	Daily maximum liquid surface temperature
· vx	0	polu	Figure 7.1-13b.
P _{VN}	2.68	psia	Daily minimum liquid surface temperature
			Figure 7.1-13b.
ΔP _v	1.81	psia	Average daily vapor pressure range
			Equation 1-9. $\Delta P_V = P_{VX} - P_{VN}$
P _B	0.06	psig	Formation 1-10: $AP_{a} = P_{aa} - P_{aa}$
			Average tank surface solar absorptance, dimensionless; assuming the same as
α	0.71		tank shall solar absorptance ( $\alpha_s$ ) - Medium gray (average condition)
			Table 7.1-6
		2	Average daily total insolation factor
1	1722	Btu/(ft ² day)	Table 7.1-7 (Roswell, NM)
K _E	0.29	/day	Vapor space expansion factor
			Equation 1-5: $K_E = \Delta I_V / I_{LA} + [(\Delta P_V - \Delta P_B) / (P_A - P_{VA})]$
Pva	3.49	psia	Vapor pressure at average daily liquid surface temperature for crude oil
VA			Figure 7.1-13b.
Ks	0.30		Vented vapor saturation factor, dimensionless
			Equation 1-21: $K_s = 1/(1+0.053*P_{VA}*H_{VO})$
Mv	50	lb/lb-mole	Vapor molecular weight for crude oil
D	10 72	nois ft ³ /lb mala 9D	The ideal gas constant
	10.73		Average daily ambient temperature
T _{AA}	521.40	°R	Equation 1-32: $T_{AA} = (T_{AX} + T_{AN})/2$
-			Liquid bulk temperature
I _В	525.07	°R	Equation 1-31: $T_B = T_{AA} + 0.003 \times \alpha \times I$
-	500 50		Average vapor temperature, assuming as an uninsulated tank
1 _V	533.50	[∼] K	Equation 1-33: $T_V = 0.7 * T_{AA} + 0.3 * T_B + 0.009 * \alpha * I$
\A/	0.0205	1b /# ³	Vapor density
vvV	0.0305		Equation 1-22: $W_v = Mv^*P_{VA}/(R^*Tv)$
	20070 04	lb/ur	Standing losses per year
►s	203/3.04		Equation 1-2: $L_s = 365 * V_v * W_v * K_F * K_s$

#### Tank Hatch Maintenance Emissions Summary

Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
Vapor VOC Content:	1.0	%	
Hourly Standing Loss			Le / 9760 hr/yr y Vapar VOC Contant
Emissions:	0.03	lbs/hr	
Event Emissions:	0.03	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	3E-05	tpy	Event Emissions x Number of Events x ton/2,000 lb

#### **VOC Emissions**

### H₂S Emissions

Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
H ₂ S Content in VOCs:	3.5	%	
Hourly Standing Loss			VOC Hourly Standing Loss Emissions x H2S
Emissions:	0.001	lbs/hr	Content in VOCs
Event Emissions:	0.001	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	1E-06	tpy	Event Emissions x Number of Events x ton/2,000 lb

Updating@ermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0

# Tank Hatch Maintenance and Repair - SSM Emissions

### Unit ID: WIB_T5-GB-SSM or WIB_T6-SSM

### Tank Inputs for Standing Losses¹

Parameter	Value	Units	Description
D	47.6	ft	Tank diameter
H _s	32	ft	Height of the vertical tank
 D₌	47.6	ft	Same as tank diameter for a vertical tank
- <u>c</u>			
HL	16	ft	Assumed to be at the half-full level
H _{vo}	16.50	ft	vapor space outage Equation 1-16: $H_{VO} = H_S - H_L + H_{RO}$
			vapor space volume
Vv	29355	ft ³	Equation 1-3: $Vy = ((pi/4)*D^2)*H_{VO}$
			Average daily maximum ambient temperature
T _{AX}	75.8	°F	Table 7.1-7 (Roswell, NM)
			Average daily minimum ambient temperature
T _{AN}	47.6	°F	Table 7.1-7 (Roswell, NM)
T _{AX}	535.5	I°R	Average daily maximum ambient temperature
ΤΔΝ	507.3	°R	Average daily minimum ambient temperature
ΔN ΔT	28.20	٥B	Daily ambient temperature range
	54 54	٥p	Daily vanor temperature range
т	54.54		Daily vapor temperature range
l lx	543.35	⁻ К	Daity maximum ilquid surface temperature
T _{ln}	516.08	°R	Daily minimum liquid surface temperature
т	500 71	0.0	Average daily liquid surface temperature
LA	529.71	°К	Equation 1-30: $T_{LA} = 0.4 T_{AA} + 0.6 T_{B} + 0.005 \alpha^{1}$
RVP	5.00	psia	Crude Oil Reid Vapor Pressure
			Atmospheric pressure
Pa	12.88	psia	Table 7 1-7
			Daily maximum liquid surface temperature
P _{VX}	4.48	psia	Eigure 7 1-13b
			Daily minimum liquid surface temperature
P _{VN}	2.68	psia	
			Average daily vapor pressure range
ΔP _V	1.81	psia	Fountion 1-9: $AP_{v} = P_{vv} - P_{vv}$
			Breather yent pressure setting range $psig$
P _B	0.06	psig	Equation 1-10: $\Lambda P_{a} = P_{aa} - P_{aa}$
			Average tank surface solar absorptance, dimensionless; assuming the same as
a	0.71		tank shall solar absorptance $(q_{a})$ - Medium grav (average condition)
	• · · -		Table 7 1-6
			Average deily total insolation factor
I	1722	Btu/(ft ² day)	Table 7.1.7 (Deswell, NM)
			Vapor space expansion factor
К _Е	0.29	/day	Equation 1-5: $K_E = \Delta T_V / T_{LA} + [(\Delta P_V - \Delta P_B) / (P_A - P_{VA})]$
P _{VA}	3.49	psia	Figure 7.1.12b
			Figure 7.1-130.
К _S	0.25		Vented vapor saturation factor, dimensionless Equation 1.21: $K = 1/(1+0.052*D + 14)$
			Equation 1-21. $K_{S} = 1/(1+0.053^{\circ}P_{VA}^{\circ}H_{VO})$
Mv	50	lb/lb-mole	vapor molecular weight for crude oil
	10 70	·	Oxy mysys Report, rounted up to be conservative
К	10.73	psia ft [×] /lb-mole °R	
T _{AA}	521.40	°R	Average daily ambient temperature
			Equation 1-32: $I_{AA} = (I_{AX} + I_{AN})/2$
T _B	525.07	°R	Liquid bulk temperature
			Equation 1-31: $I_B = I_{AA} + 0.003 \times \alpha \times I$
Τv	533.50	°R	Average vapor temperature, assuming as an uninsulated tank
·			Equation 1-33: $T_V = 0.7 T_{AA} + 0.3 T_B + 0.009 \alpha^{1}$
W.,	0 0305	lb/ft ³	Vapor density
· · v	5.0000		Equation 1-22: $W_V = Mv^*P_{VA}/(R^*Tv)$
	22202 22	lb/yr	Standing losses per year
►s	23233.33	(D/ y)	Equation 1-2: $L_s = 365*V_v*W_v*K_F*K_s$

#### Tank Hatch Maintenance Emissions Summary

VOC Emissions			
Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
Vapor VOC Content:	15.0	%	
Hourly Standing Loss			Ls / 9760 hr/yr y Vapar VOC Contant
Emissions:	0.40	lbs/hr	
Event Emissions:	0.40	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	4E-04	tpy	Event Emissions x Number of Events x ton/2,000 lb

### 

#### H₂S Emissions

Number of Events:	2	events/yr	
Event Duration:	1	hr/event	
H ₂ S Content in VOCs:	3.5	%	
Hourly Standing Loss			VOC Hourly Standing Loss Emissions x H2S
Emissions:	0.014	lbs/hr	Content in VOCs
Event Emissions:	0.014	lbs/event	Hourly Standing Loss Emissions x Event Duration
Annual Emissions:	1E-05	tpy	Event Emissions x Number of Events x ton/2,000 lb

### Flare Emissions Summary

#### Flare Emission Rates for Modeling

		NOx		C	CO		VOC		SO ₂		H ₂ S	
Scenario	EPN	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(m)
Routine	RCFN-FLR	3.81	16.68	15.17	66.45	1.03	4.49	0.40	1.75	0.004	0.02	1.24
SMSS	RCFN-FLR-SSM	64.55	1.08	553.45	9.22	338.06	5.63	3384.89	56.41	36.01	0.60	7.07
Routine	WIB-FLR	0.07	0.32	0.29	1.26	0.02	0.09	0.01	0.03	0.0001	0.0004	0.17
SMSS	WIB-FLR-SSM	13.00	0.33	111.47	2.79	67.74	1.69	1056.51	26.41	11.24	0.28	3.21
Malfunction*	RCFN-FLR-MALF	64.55	10.00	553.45	10.00	338.06	10.00	3384.89	10.00	36.01	40.00	N/A
Malfunction*	WIB-FLR-MALF	13.00	. 10.00	111.47	67.74	1056.51	10.00 -	11.24	10.00 —	N/A		

* SMSS and Malfunction emissions will not occur simultaneously

#### **Emission Factors**

	Pilot/Purge Gas	RCF Flare Gas	WIB Flare Gas
HAP/TAP	lb/MMBtu	Wt % of VOC	Wt % of VOC
n-Hexane	1.76E-03	3.37	5.01
Benzene	2.06E-06	0.02	0.02
Toluene	3.33E-06	0.07	0.07
Ethylbenzene		0.02	0.04
Xylenes		0.07	0.09
Cyclohexane		1.49	1.97
Octane		0.07	0.18
Nonane		0.01	0.03
Formaldehyde	7.35E-05		
Methanol			
Data Source	1	2	3

Input Data												
		Pilot/Pi	urge Gas	VOC Emission Rate								
Stack No.	Unit No.	(MMBtu/hr)	(MMBtu/yr)	(lb/hr)	(ton/yr)							
RCFN-FLR	RCFN-FLR	27.60	241,806									
RCFN-FLR-SSM	RCFN-FLR-SSM			338.06	5.63							
WIB-FLR	WIB-FLR	0.52	4,580									
WIB-FLR-SSM	WIB-FLR-SSM			67.74	1.69							
RCFN-FLR-MALF	RCFN-FLR-MALF			338.06	10							
WIB-FLR-MALF	WIB-FLR-MALF			67.74	10							

¹From AP-42 Table 1.4-3, divided by 1,020 Btu/scf to convert to lb/MMBtu

 $^2\text{C6+}$  speciation proportions derived from RCF/Plant Inlet sample dated 06/24/13

³C6+ speciation proportions derived from WIB Tank Vapor at VRU sample dated 05/12/14

#### HAPsCalculation

			Total H	IAPs	n-He	exane	Benz	ene	Tolu	iene	Ethylbe	enzene	Xyle	enes	Formalo	dehyde
Stack No.	Unit No.	Stream	(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)
RCFN-FLR	RCFN-FLR	Pilot/Purge Gas	0.05	0.22	4.87E-02	2.13E-01	5.68E-05	2.49E-04	9.20E-05	4.03E-04 -					2.03E-03	8.89E-03
RCFN-FLR-SSM	RCFN-FLR-SSM	RCF Flare Gas	12.02	0.20	11.40	0.19	7.59E-02	1.27E-03	2.24E-01	3.73E-03	7.65E-02	1.28E-03	2.47E-01	4.12E-03		
WIB-FLR	WIB-FLR	Pilot/Purge Gas	0.001	0.004	9.23E-04	4.04E-03	1.08E-06	4.71E-06	1.74E-06	7.63E-06 ·					3.84E-05	1.68E-04
WIB-FLR-SSM	WIB-FLR-SSM	WIB Flare Gas	3.54	0.09	3.39	0.08	1.21E-02	3.03E-04	4.99E-02	1.25E-03	2.82E-02	7.05E-04	5.96E-02	1.49E-03		
RCFN-FLR-MALF	RCFN-FLR-MALF	RCF Flare Gas	12.02	0.36	11.40	0.34	7.59E-02	2.25E-03	2.24E-01	6.62E-03	7.65E-02	2.26E-03	2.47E-01	7.31E-03		
WIB-FLR-MALF	WIB-FLR-MALF	WIB Flare Gas	3.54	0.52	3.39	0.50	1.21E-02	1.79E-03	4.99E-02	7.36E-03	2.82E-02	4.16E-03	5.96E-02	8.80E-03		

### **RCF Flare Routine Pilot & Purge Gas Emissions**

#### **EPN: RCFN-FLR**

Inputs*		Emission Factors	Emission Factors			
Waste Gas Feed Rate (scf/hr)	0	C3 Destruction Efficiency (%)	98%			
Waste Gas Feed Rate (scf/yr)	0	C4+ Destruction Efficiency (%)	98%			
Assist Gas Feed Rate (scf/hr)	29,567	H2S Destruction Efficiency (%)	98%			
Assist Gas Feed Rate (scf/yr)	259,004,000	NOx Emission Factor (lb/MMBtu)	0.138			
		CO Emission Factor (lb/MMBtu)	0.5496			

* Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

#### Waste Gas Analysis

Waste			Mole		Molecular	Adjusted	Weight	Component	Waste Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	8.69	0.0869	16.04	1.39	3.33	911	79.2
Ethane	C2H6	2	1.65	0.0165	30.07	0.50	1.19	1622	26.8
Propane	C3H8	3	2.29	0.0229	44.09	1.01	2.42	2322	53.2
n-Butane	C4H10	4	0.98	0.0098	58.12	0.57	1.36	3018	29.5
Isobutane	C4H10	4	0.41	0.0041	58.12	0.24	0.57	3009	12.4
n-Pentane	C5H12	5	0.44	0.0044	72.15	0.32	0.76	3717	16.5
Isopentane	C5H12	5	0.44	0.0044	72.15	0.32	0.76	3708	16.4
Hexanes+	C6H14	6	0.68	0.0068	86.17	0.59	1.40	4415	30.1
Hydrogen Sulfide	H2S	0	1.00	0.0100	34.08	0.34	0.82	595	5.95
Carbon Dioxide	CO2	1	81.61	0.8161	44.01	35.92	85.92	0	0
Nitrogen	N2	0	2.03	0.0203	28.01	0.57	1.36	0	0
TOTAL			100	1		41.8	99.9		270.1
VOC			5.25				7.28		
* Composition is for		06/24/13 Plant Inl	et Sample, with co	nservative 1 mol%	H2S specified				

06/24/13 Plant Inlet Sample, with conservative 1 mol% H2S specified

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### **Assist Gas Analysis**

Waste			Mole		Molecular	Adjusted	Weight	Component	Assist Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	89.25	0.8925	16.04	14.32	80.88	911	813
Ethane	C2H6	2	5.31	0.0531	30.07	1.60	9.02	1622	86.1
Propane	C3H8	3	1.10	0.0110	44.09	0.49	2.75	2322	25.6
n-Butane	C4H10	4	0.14	0.0014	58.12	0.08	0.47	3018	4.29
Isobutane	C4H10	4	0.08	0.0008	58.12	0.05	0.26	3009	2.41
n-Pentane	C5H12	5	0.02	0.0002	72.15	0.01	0.07	3717	0.632
Isopentane	C5H12	5	0.02	0.0002	72.15	0.02	0.09	3708	0.779
Hexanes+	C6H14	6	0.02	0.0002	86.17	0.01	0.08	4415	0.751
Hydrogen Sulfide	H2S	0	0.01	0.0001	34.08	0.00	0.02	595	0.0476
Carbon Dioxide	CO2	1	0.16	0.0016	44.01	0.07	0.40	0	0
Nitrogen	N2	0	3.90	0.0390	28.01	1.09	6.17	0	0
TOTAL			100	1		17.7	100		933.6
VOC			1.38				3.72		

* Composition is for

Northern Natural Gas, sampled 2010, with conservative 5 gr S/100 scf (80 ppmv) H2S added

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as

modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### Average Gas Composition

	Molecular		Volume	Volume	Average	Average
	Weight (MW)	LHV	Flared	Fraction	MW	LHV
Component	(lb/lb-mol)	(Btu/scf)	(scf/hr)	()	(lb/lb-mol)	(Btu/scf)
Flare Waste Gas	41.8	270.1	0	0.00	0.00	0.00
Assist Gas	17.7	933.6	29,567	1.00	17.70	933.60
			29,567	1	17.70	933.60
Constants						
Standard Gas Vol	ume (scf/lb-mol)			379.5		
Carbon MW (lb/lb	-mol)			12.01		
S MW (lb/lb-mol)				32.1		
H2S MW (lb/lb-mo	ol)			34.1		
SO2 MW (lb/lb-mo	ol)			64.1		
Calculations						
Flared Gas LHV (N	1MBtu/hr)			28		
Flared Gas LHV (N	1MBtu/yr)		241,806			
Gas to Flare (lb/hi	r)			1,379		
Gas to Flare (ton/	yr)			6,040		

	VOC		NOx		CO		SO ₂		H ₂ S	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Flare Emissions	1.03	4.49	3.81	16.68	15.17	66.45	0.40	1.75	0.004	0.02

#### **VOC Emission Rate Calculation**

	Waste Gas to	Assist Gas to			Waste Gas to	Assist Gas to	Emission
	Flare	Flare	Destruction Eff.	Emission Estimate	Flare	Flare	Estimate
Component	(lb/hr)	(lb/hr)	(%)	(lb/hr)	(ton/yr)	(ton/yr)	(tons/yr)
Propane	0	38	98%	0.76	0	166	3.32
n-Butane	0	6	98%	0.13	0	28	0.56
Isobutane	0	4	98%	0.07	0	16	0.32
n-Pentane	0	1	98%	0.02	0	4	0.08
Isopentane	0	1	98%	0.02	0	5	0.10
Hexanes+	0	1	98%	0.02	0	5	0.10
Total VOC	0	51		1.03	0	224	4.49

#### Flare Effective Stack Diameter Calculation

Deff = 1E-3 * sqrt ( Qn) Qn = Q ( 1 - 0.048 * sqrt ( MW ))

#### Where:

Q =	28 MMBtu / Hr	
	1,933,501 cal/sec	
MW =	17.70 lb/lb-mol vent ga	s
Qn =	1,543,045 cal/sec	
Deff =	1.24 m	

#### **GHG Emission Rate Calculations**

From 40 CFR Part 98 Subpart W - Calculating GHG Flare Stack Emissions for Petroleum and Natural Gas Systems, modified for English units This calculation does not account for any emissions for gas sent to an un-lit flare. That would be an upset condition.

								GWF IIUIII	
					Emission		Annual	Table A-1 to 40	Annual $CO_{2e}$
	Waste Gas	Assist Gas	Total		Factor	Default HHV	Emissions	CFR 98	Emissions
Component	Es (ft ³ /yr)	Es (ft ³ /yr)	Es (ft ³ /yr)	Density (kg/ft ³ )	(kg/MMBtu)	(MMBtu/scf)	(ton/yr)	Subpart A	(ton/yr)
CO ₂	0	270,656,590	270,656,590	0.0526			15,693	1	15,693
CH4	0	4,623,221	4,623,221	0.0192			98	28	2,740
N ₂ O					0.0001	0.001235	0.035	265	9

Total CO_{2e} 18,442

CO₂ and CH₄ flow from the flare stack are calculated using equations W-19 and W-20:

 $E_{s,CH4} = V_s * X_{CH4} * ((1-\eta) * Z_L + Z_U)$ 

 $E_{s,CO2} = V_s * X_{CO2} + sum (\eta * V_s * Y_j * R_j * Z_L)$ 

#### Where:

 $E_{s,CH4}$  = Annual CH₄ emissions from flare stack in cubic feet, at standard conditions.

 $E_{s,CO2}$  = Annual CO₂ emissions from flare stack in cubic feet, at standard conditions.

V_s = Volume of gas sent to flare in standard cubic feet

 $\eta$  = Flare combustion efficiency, expressed as fraction of gas combusted by a burning flare (default is 0.98).

Note that  $\eta = 1$  in these calculations for  $E_{S,CO2}$  to establish a worst-case flare emission rate.

 $X_{CH4}$  = Mole fraction of CH₄ in the feed gas to the flare

 $X_{CO2}$  = Mole fraction of CO₂ in the feed gas to the flare

 $Z_{U}$  = Fraction of the feed gas sent to an un-lit flare.

Note that  $Z_U = 0$  in these calculations to establish a worst-case flare emission rate.

 $Z_L$  = Fraction of the feed gas sent to a burning flare (equal to 1 –  $Z_U$ ).

Note that  $Z_L = 1$  in these calculations to establish a worst-case flare emission rate.

Yj = Mole fraction of hydrocarbon constituents j (such as methane, ethane, propane, butane, and pentanes-plus) in the feed gas to the flare.

Rj = Number of carbon atoms in the hydrocarbon constituent j in the feed gas to the flare: 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes-plus).

CO₂ and CH₄ mass emissions from the flare stack are calculated using equation W-36, modified for English units:

Mass_i =  $E_{s,i} * \rho_i * 2.2046 \text{ lb/kg} * \text{ton/2000 lb}$ 

Where:

 $Mass_i = GHG_i$  (either  $CH_4$ ,  $CO_2$ , or  $N_2O$ ) mass emissions in English tons.

 $E_{s,i} = GHG_i$  (either CH₄, CO₂, or N₂O) volumetric emissions at standard conditions, in cubic feet.

 $\rho_i$  = Density of GHG_i. Use 0.0526 kg/ft³ for CO₂ and N₂O, and 0.0192 kg/ft³ for CH₄ at 60 °F and 14.7 psia.

N₂O mass emissions from the flare stack are calculated using equation W-40, modified for English units:

Mass_{N20} = Fuel * HHV * EF * 2.2046 lb/kg * ton/2000 lb

Where:

 $Mass_{N2O}$  = Annual N₂O emissions from the combustion of a particular type of fuel (English tons).

Fuel = Annual mass or volume of the fuel combusted (scf/yr).

HHV = Higher heating value of fuel (mmBtu/scf).

These calculations use the default higher heating value of 1.235 × 10−3 mmBtu/scf to establish a worst-case flare emission rate.

 $EF = Use 1.0 \times 10^{-4} kg N_2O/mmBtu.$ 

#### **RCF Flare SMSS Emissions**

#### **EPN: RCFN-FLR-SSM**

Inputs*		Emission Factors				
Waste Gas Feed Rate (scf/hr)	2,000,000	C3 Destruction Efficiency (%)	98%			
Waste Gas Feed Rate (scf/yr)	66,666,667	C4+ Destruction Efficiency (%)	98%			
Assist Gas Feed Rate (scf/hr)	500,000	H2S Destruction Efficiency (%)	98%			
Assist Gas Feed Rate (scf/yr)	16,666,667	NOx Emission Factor (lb/MMBtu)	0.0641			
		CO Emission Factor (lb/MMBtu)	0.5496			

* Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

#### Waste Gas Analysis

Waste			Mole		Molecular	Adjusted	Weight	Component	Waste Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	8.69	0.0869	16.04	1.39	3.33	911	79.2
Ethane	C2H6	2	1.65	0.0165	30.07	0.50	1.19	1622	26.8
Propane	C3H8	3	2.29	0.0229	44.09	1.01	2.42	2322	53.2
n-Butane	C4H10	4	0.98	0.0098	58.12	0.57	1.36	3018	29.5
Isobutane	C4H10	4	0.41	0.0041	58.12	0.24	0.57	3009	12.4
n-Pentane	C5H12	5	0.44	0.0044	72.15	0.32	0.76	3717	16.5
Isopentane	C5H12	5	0.44	0.0044	72.15	0.32	0.76	3708	16.4
Hexanes+	C6H14	6	0.68	0.0068	86.17	0.59	1.40	4415	30.1
Hydrogen Sulfide	H2S	0	1.00	0.0100	34.08	0.34	0.82	595	5.95
Carbon Dioxide	CO2	1	81.61	0.8161	44.01	35.92	85.92	0	0
Nitrogen	N2	0	2.03	0.0203	28.01	0.57	1.36	0	0
TOTAL			100	1		41.8	99.9		270.1
VOC			5.25				7.28		
* Composition is for		06/24/13 Plant Inl	et Sample, with co	nservative 1 mol%	H2S specified				

06/24/13 Plant Inlet Sample, with conservative 1 mol% H2S specified

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### **Assist Gas Analysis**

Waste			Mole		Molecular	Adjusted	Weight	Component	Assist Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	89.25	0.8925	16.04	14.32	80.88	911	813
Ethane	C2H6	2	5.31	0.0531	30.07	1.60	9.02	1622	86.1
Propane	C3H8	3	1.10	0.0110	44.09	0.49	2.75	2322	25.6
n-Butane	C4H10	4	0.14	0.0014	58.12	0.08	0.47	3018	4.29
Isobutane	C4H10	4	0.08	0.0008	58.12	0.05	0.26	3009	2.41
n-Pentane	C5H12	5	0.02	0.0002	72.15	0.01	0.07	3717	0.632
Isopentane	C5H12	5	0.02	0.0002	72.15	0.02	0.09	3708	0.779
Hexanes+	C6H14	6	0.02	0.0002	86.17	0.01	0.08	4415	0.751
Hydrogen Sulfide	H2S	0	0.01	0.0001	34.08	0.00	0.02	595	0.0476
Carbon Dioxide	CO2	1	0.16	0.0016	44.01	0.07	0.40	0	0
Nitrogen	N2	0	3.90	0.0390	28.01	1.09	6.17	0	0
TOTAL			100	1		17.7	100		933.6
VOC			1.38				3.72		

* Composition is for

Northern Natural Gas, sampled 2010, with conservative 5 gr S/100 scf (80 ppmv) H2S added

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as

modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### Average Gas Composition

	Molecular		Volume	Volume	Average	Average
	Weight (MW)	LHV	Flared	Fraction	MW	LHV
Component	(lb/lb-mol)	(Btu/scf)	(scf/hr)	()	(lb/lb-mol)	(Btu/scf)
Flare Waste Gas	41.8	270.1	2,000,000	0.80	33.44	216.08
Assist Gas	17.7	933.6	500,000	0.20	3.54	186.72
			2,500,000	1	36.98	402.80
Constants						
Standard Gas Vol	ume (scf/lb-mol)			379.5		
Carbon MW (lb/lb	-mol)			12.01		
S MW (lb/lb-mol)				32.1		
H2S MW (lb/lb-mo	ol)			34.1		
SO2 MW (lb/lb-mo	ol)			64.1		
Calculations						
Flared Gas LHV (N	1MBtu/hr)			1,007		
Flared Gas LHV (N	1MBtu/yr)			33,567		
Gas to Flare (lb/hi	r)			243,610		
Gas to Flare (ton/	yr)			4,060		

	VOC		NOx		CO		SO ₂		H ₂ S	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Flare Emissions	338.06	5.63	64.55	1.08	553.45	9.22	3384.89	56.41	36.01	0.60

#### **VOC Emission Rate Calculation**

	Waste Gas to	Assist Gas to			Waste Gas to	Assist Gas to	Emission
	Flare	Flare	Destruction Eff.	Emission Estimate	Flare	Flare	Estimate
Component	(lb/hr)	(lb/hr)	(%)	(lb/hr)	(ton/yr)	(ton/yr)	(tons/yr)
Propane	5,331	641	98%	119.45	89	11	1.99
n-Butane	2,996	109	98%	62.09	50	2	1.03
Isobutane	1,263	61	98%	26.49	21	1	0.44
n-Pentane	1,683	16	98%	33.99	28	0	0.57
Isopentane	1,679	20	98%	33.98	28	0	0.57
Hexanes+	3,084	19	98%	62.07	51	0	1.03
Total VOC	16,036	867		338.06	267	14	5.63

#### Flare Effective Stack Diameter Calculation

Deff = 1E-3 * sqrt ( Qn) Qn = Q ( 1 - 0.048 * sqrt ( MW ))

#### Where:

Q =	1007 MMBtu / Hr
	70,535,987 cal/sec
MW =	36.98 lb/lb-mol vent gas
Qn =	49,946,978 cal/sec
Deff =	7.07 m

#### **GHG Emission Rate Calculations**

From 40 CFR Part 98 Subpart W - Calculating GHG Flare Stack Emissions for Petroleum and Natural Gas Systems, modified for English units This calculation does not account for any emissions for gas sent to an un-lit flare. That would be an upset condition.

								GWF IIUIII	
					Emission		Annual	Table A-1 to 40	Annual $CO_{2e}$
	Waste Gas	Assist Gas	Total		Factor	Default HHV	Emissions	CFR 98	Emissions
Component	Es (ft ³ /yr)	Es (ft ³ /yr)	Es (ft ³ /yr)	Density (kg/ft ³ )	(kg/MMBtu)	(MMBtu/scf)	(ton/yr)	Subpart A	(ton/yr)
CO ₂	75,911,200	17,416,500	93,327,700	0.0526			5,411	1	5,411
CH₄	115,861	297,500	413,361	0.0192			9	28	245
N ₂ O					0.0001	0.001235	0.011	265	3

Total CO_{2e} 5,659

CO₂ and CH₄ flow from the flare stack are calculated using equations W-19 and W-20:

 $E_{s,CH4} = V_s * X_{CH4} * ((1-\eta) * Z_L + Z_U)$ 

 $E_{s,CO2} = V_s * X_{CO2} + sum (\eta * V_s * Y_j * R_j * Z_L)$ 

#### Where:

 $E_{s,CH4}$  = Annual CH₄ emissions from flare stack in cubic feet, at standard conditions.

 $E_{s,CO2}$  = Annual CO₂ emissions from flare stack in cubic feet, at standard conditions.

V_s = Volume of gas sent to flare in standard cubic feet

 $\eta$  = Flare combustion efficiency, expressed as fraction of gas combusted by a burning flare (default is 0.98).

Note that  $\eta = 1$  in these calculations for  $E_{s,CO2}$  to establish a worst-case flare emission rate.

 $X_{CH4}$  = Mole fraction of CH₄ in the feed gas to the flare

 $X_{CO2}$  = Mole fraction of CO₂ in the feed gas to the flare

 $Z_{U}$  = Fraction of the feed gas sent to an un-lit flare.

Note that  $Z_U = 0$  in these calculations to establish a worst-case flare emission rate.

 $Z_L$  = Fraction of the feed gas sent to a burning flare (equal to 1 –  $Z_U$ ).

Note that  $Z_L = 1$  in these calculations to establish a worst-case flare emission rate.

Yj = Mole fraction of hydrocarbon constituents j (such as methane, ethane, propane, butane, and pentanes-plus) in the feed gas to the flare.

Rj = Number of carbon atoms in the hydrocarbon constituent j in the feed gas to the flare: 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes-plus).

CO₂ and CH₄ mass emissions from the flare stack are calculated using equation W-36, modified for English units:

Mass_i =  $E_{s,i} * \rho_i * 2.2046 \text{ lb/kg} * \text{ton/2000 lb}$ 

Where:

 $Mass_i = GHG_i$  (either  $CH_4$ ,  $CO_2$ , or  $N_2O$ ) mass emissions in English tons.

 $E_{s,i} = GHG_i$  (either CH₄, CO₂, or N₂O) volumetric emissions at standard conditions, in cubic feet.

 $\rho_i$  = Density of GHG_i. Use 0.0526 kg/ft³ for CO₂ and N₂O, and 0.0192 kg/ft³ for CH₄ at 60 °F and 14.7 psia.

N₂O mass emissions from the flare stack are calculated using equation W-40, modified for English units:

Mass_{N20} = Fuel * HHV * EF * 2.2046 lb/kg * ton/2000 lb

Where:

 $Mass_{N2O}$  = Annual N₂O emissions from the combustion of a particular type of fuel (English tons).

Fuel = Annual mass or volume of the fuel combusted (scf/yr).

HHV = Higher heating value of fuel (mmBtu/scf).

These calculations use the default higher heating value of 1.235 × 10−3 mmBtu/scf to establish a worst-case flare emission rate.

 $EF = Use 1.0 \times 10^{-4} kg N_2O/mmBtu.$ 

### WIB Flare Routine Pilot & Purge Gas Emissions

#### EPN: WIB-FLR

Inputs*		Emission Factors			
Waste Gas Feed Rate (scf/hr)	0	C3 Destruction Efficiency (%)	<mark>98</mark> %		
Waste Gas Feed Rate (scf/yr)	0	C4+ Destruction Efficiency (%)	<mark>98</mark> %		
Assist Gas Feed Rate (scf/hr)	560	H2S Destruction Efficiency (%)	98%		
Assist Gas Feed Rate (scf/yr)	4,905,600	NOx Emission Factor (lb/MMBtu)	0.138		
		CO Emission Factor (lb/MMBtu)	0.5496		

* Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

#### Waste Gas Analysis

Waste			Mole		Molecular	Adjusted	Weight	Component	Waste Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	27.73	0.2773	16.04	4.45	12.02	911	253
Ethane	C2H6	2	3.31	0.0331	30.07	1.00	2.69	1622	53.7
Propane	C3H8	3	2.08	0.0208	44.09	0.92	2.47	2322	48.2
n-Butane	C4H10	4	0.88	0.0088	58.12	0.51	1.38	3018	26.5
Isobutane	C4H10	4	0.33	0.0033	58.12	0.19	0.51	3009	9.84
n-Pentane	C5H12	5	0.46	0.0046	72.15	0.33	0.90	3717	17.2
Isopentane	C5H12	5	0.45	0.0045	72.15	0.32	0.88	3708	16.6
Hexanes+	C6H14	6	3.14	0.0314	86.17	2.70	7.31	4415	138
Hydrogen Sulfide	H2S	0	2.50	0.0250	34.08	0.85	2.30	595	14.9
Carbon Dioxide	CO2	1	56.77	0.5677	44.01	24.99	67.53	0	0
Nitrogen	N2	0	2.74	0.0274	28.01	0.77	2.07	0	0
TOTAL			100	1		37	100		577.9
VOC			7.33				13.5		

* Composition is for 09/01/13 WIB VRU Sample, with conservative 2.5 mol % H2S specified.

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### Assist Gas Analysis

Waste			Mole		Molecular	Adjusted	Weight	Component	Assist Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	89.25	0.8925	16.04	14.32	80.88	911	813
Ethane	C2H6	2	5.31	0.0531	30.07	1.60	9.02	1622	86.1
Propane	C3H8	3	1.10	0.0110	44.09	0.49	2.75	2322	25.6
n-Butane	C4H10	4	0.14	0.0014	58.12	0.08	0.47	3018	4.29
Isobutane	C4H10	4	0.08	0.0008	58.12	0.05	0.26	3009	2.41
n-Pentane	C5H12	5	0.02	0.0002	72.15	0.01	0.07	3717	0.632
Isopentane	C5H12	5	0.02	0.0002	72.15	0.02	0.09	3708	0.779
Hexanes+	C6H14	6	0.02	0.0002	86.17	0.01	0.08	4415	0.751
Hydrogen Sulfide	H2S	0	0.01	0.0001	34.08	0.00	0.02	595	0.0476
Carbon Dioxide	CO2	1	0.16	0.0016	44.01	0.07	0.40	0	0
Nitrogen	N2	0	3.90	0.0390	28.01	1.09	6.17	0	0
TOTAL			100	1		17.7	100		933.6
VOC			1.38				3.72		

* Composition is for

Northern Natural Gas, sampled 2010, with conservative 5 gr S/100 scf (80 ppmv) H2S added

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as

modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### Average Gas Composition

	Molecular		Volume	Volume	Average	Average
	Weight (MW)	LHV	Flared	Fraction	MW	LHV
Component	(lb/lb-mol)	(Btu/scf)	(scf/hr)	()	(lb/lb-mol)	(Btu/scf)
Flare Waste Gas	37	577.9	0	0.00	0.00	0.00
Assist Gas	17.7	933.6	560	1.00	17.70	933.60
			560	1	17.70	933.60
Constants						
Standard Gas Volu	ume (scf/lb-mol)			379.5		
Carbon MW (lb/lb	-mol)			12.01		
S MW (lb/lb-mol)				32.1		
H2S MW (lb/lb-mo	ol)			34.1		
SO2 MW (lb/lb-mo	วไ)			64.1		
Calculations						
Flared Gas LHV (M	1MBtu/hr)			1		
Flared Gas LHV (M	1MBtu/yr)			4,580		
Gas to Flare (lb/hr	⁻ )			26		
Gas to Flare (ton/	yr)			114		

	VOC		NOx		(	CO		SO ₂		H ₂ S	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	
Flare Emissions	0.02	0.09	0.07	0.32	0.29	1.26	0.01	0.03	0.0001	0.0004	

#### **VOC Emission Rate Calculation**

	Waste Gas to	Assist Gas to			Waste Gas to	Assist Gas to	Emission
	Flare	Flare	Destruction Eff.	Emission Estimate	Flare	Flare	Estimate
Component	(lb/hr)	(lb/hr)	(%)	(lb/hr)	(ton/yr)	(ton/yr)	(tons/yr)
Propane	0	1	98%	0.01	0	3	0.06
n-Butane	0	0	98%	0.00	0	1	0.01
Isobutane	0	0	98%	0.00	0	0	0.01
n-Pentane	0	0	98%	0.00	0	0	0.00
Isopentane	0	0	98%	0.00	0	0	0.00
Hexanes+	0	0	98%	0.00	0	0	0.00
Total VOC	0	1		0.02	0	4	0.09

#### Flare Effective Stack Diameter Calculation

Deff = 1E-3 * sqrt ( Qn) Qn = Q ( 1 - 0.048 * sqrt ( MW ))

#### Where:

Q =	1 MMBtu / Hr
	36,621 cal/sec
MW =	17.70 lb/lb-mol vent gas
Qn =	29,226 cal/sec
Deff =	0.17 m

#### **GHG Emission Rate Calculations**

From 40 CFR Part 98 Subpart W - Calculating GHG Flare Stack Emissions for Petroleum and Natural Gas Systems, modified for English units This calculation does not account for any emissions for gas sent to an un-lit flare. That would be an upset condition.

								GVVF HOIH	
					Emission		Annual	Table A-1 to 40	Annual CO _{2e}
	Waste Gas	Assist Gas	Total		Factor	Default HHV	Emissions	CFR 98	Emissions
Component	Es (ft ³ /yr)	Es (ft ³ /yr)	Es (ft ³ /yr)	Density (kg/ft ³ )	(kg/MMBtu)	(MMBtu/scf)	(ton/yr)	Subpart A	(ton/yr)
CO ₂	0	5,126,303	5,126,303	0.0526			297	1	297
CH₄	0	87,565	87,565	0.0192			2	28	52
N ₂ O					0.0001	0.001235	0.001	265	0

Total CO_{2e} 349

CO₂ and CH₄ flow from the flare stack are calculated using equations W-19 and W-20:

 $E_{s,CH4} = V_s * X_{CH4} * ((1-\eta) * Z_L + Z_U)$ 

 $E_{s,CO2} = V_s * X_{CO2} + sum (\eta * V_s * Y_i * R_i * Z_L)$ 

Where:

 $E_{s,CH4}$  = Annual CH₄ emissions from flare stack in cubic feet, at standard conditions.

 $E_{s,CO2}$  = Annual CO₂ emissions from flare stack in cubic feet, at standard conditions.

V_s = Volume of gas sent to flare in standard cubic feet

 $\eta$  = Flare combustion efficiency, expressed as fraction of gas combusted by a burning flare (default is 0.98).

Note that  $\eta = 1$  in these calculations for  $E_{S,CO2}$  to establish a worst-case flare emission rate.

 $X_{CH4}$  = Mole fraction of CH₄ in the feed gas to the flare

 $X_{CO2}$  = Mole fraction of CO₂ in the feed gas to the flare

 $Z_{U}$  = Fraction of the feed gas sent to an un-lit flare.

Note that  $Z_U = 0$  in these calculations to establish a worst-case flare emission rate.

 $Z_L$  = Fraction of the feed gas sent to a burning flare (equal to  $1 - Z_U$ ).

Note that  $Z_L = 1$  in these calculations to establish a worst-case flare emission rate.

Yj = Mole fraction of hydrocarbon constituents j (such as methane, ethane, propane, butane, and pentanes-plus) in the feed gas to the flare.

Rj = Number of carbon atoms in the hydrocarbon constituent j in the feed gas to the flare: 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes-plus).

CO₂ and CH₄ mass emissions from the flare stack are calculated using equation W-36, modified for English units:

Mass_i =  $E_{s,i} * \rho_i * 2.2046 \text{ lb/kg} * \text{ton/2000 lb}$ 

Where:

 $Mass_i = GHG_i$  (either CH₄, CO₂, or N₂O) mass emissions in English tons.

 $E_{s,i} = GHG_i$  (either CH₄, CO₂, or N₂O) volumetric emissions at standard conditions, in cubic feet.

 $\rho_i$  = Density of GHG_i. Use 0.0526 kg/ft³ for CO₂ and N₂O, and 0.0192 kg/ft³ for CH₄ at 60 °F and 14.7 psia.

N₂O mass emissions from the flare stack are calculated using equation W-40, modified for English units:

Mass_{N20} = Fuel * HHV * EF * 2.2046 lb/kg * ton/2000 lb

Where:

 $Mass_{N2O}$  = Annual N₂O emissions from the combustion of a particular type of fuel (English tons).

Fuel = Annual mass or volume of the fuel combusted (scf/yr).

HHV = Higher heating value of fuel (mmBtu/scf).

These calculations use the default higher heating value of 1.235 × 10−3 mmBtu/scf to establish a worst-case flare emission rate.

 $EF = Use 1.0 \times 10^{-4} kg N_2O/mmBtu.$ 

#### **WIB Flare SMSS Emissions**

#### **EPN: WIB-FLR-SSM**

Inputs*		Emission Factors			
Waste Gas Feed Rate (scf/hr)	250,000	C3 Destruction Efficiency (%)	98%		
Waste Gas Feed Rate (scf/yr)	12,500,000	C4+ Destruction Efficiency (%)	98%		
Assist Gas Feed Rate (scf/hr)	62,500	H2S Destruction Efficiency (%)	98%		
Assist Gas Feed Rate (scf/yr)	3,125,000	NOx Emission Factor (lb/MMBtu)	0.0641		
		CO Emission Factor (lb/MMBtu)	0.5496		

* Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

#### Waste Gas Analysis

Waste			Mole		Molecular	Adjusted	Weight	Component	Waste Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	27.73	0.2773	16.04	4.45	12.02	911	253
Ethane	C2H6	2	3.31	0.0331	30.07	1.00	2.69	1622	53.7
Propane	C3H8	3	2.08	0.0208	44.09	0.92	2.47	2322	48.2
n-Butane	C4H10	4	0.88	0.0088	58.12	0.51	1.38	3018	26.5
Isobutane	C4H10	4	0.33	0.0033	58.12	0.19	0.51	3009	9.84
n-Pentane	C5H12	5	0.46	0.0046	72.15	0.33	0.90	3717	17.2
Isopentane	C5H12	5	0.45	0.0045	72.15	0.32	0.88	3708	16.6
Hexanes+	C6H14	6	3.14	0.0314	86.17	2.70	7.31	4415	138
Hydrogen Sulfide	H2S	0	2.50	0.0250	34.08	0.85	2.30	595	14.9
Carbon Dioxide	CO2	1	56.77	0.5677	44.01	24.99	67.53	0	0
Nitrogen	N2	0	2.74	0.0274	28.01	0.77	2.07	0	0
TOTAL			100	1		37	100		577.9
VOC			7.33				13.5		
* Composition is for		09/01/13 WIB VRU	J Sample, with con	servative 2.5 mol 9	% H2S specified.				

09/01/13 WIB VRU Sample, with conservative 2.5 mol % H2S specified.

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### **Assist Gas Analysis**

Waste			Mole		Molecular	Adjusted	Weight	Component	Assist Gas
Gas	Component	Number of	Percent *	Mole	Weight (MW)	MW	Percent	LHV **	LHV
Components	Formula	Carbons (N)	(%)	Fraction	(lb/lb-mol)	(lb/lb-mol)	(%)	(Btu/scf)	(Btu/scf)
Methane	CH4	1	89.25	0.8925	16.04	14.32	80.88	911	813
Ethane	C2H6	2	5.31	0.0531	30.07	1.60	9.02	1622	86.1
Propane	C3H8	3	1.10	0.0110	44.09	0.49	2.75	2322	25.6
n-Butane	C4H10	4	0.14	0.0014	58.12	0.08	0.47	3018	4.29
Isobutane	C4H10	4	0.08	0.0008	58.12	0.05	0.26	3009	2.41
n-Pentane	C5H12	5	0.02	0.0002	72.15	0.01	0.07	3717	0.632
Isopentane	C5H12	5	0.02	0.0002	72.15	0.02	0.09	3708	0.779
Hexanes+	C6H14	6	0.02	0.0002	86.17	0.01	0.08	4415	0.751
Hydrogen Sulfide	H2S	0	0.01	0.0001	34.08	0.00	0.02	595	0.0476
Carbon Dioxide	CO2	1	0.16	0.0016	44.01	0.07	0.40	0	0
Nitrogen	N2	0	3.90	0.0390	28.01	1.09	6.17	0	0
TOTAL			100	1		17.7	100		933.6
VOC			1.38				3.72		

* Composition is for

Northern Natural Gas, sampled 2010, with conservative 5 gr S/100 scf (80 ppmv) H2S added

Stream composition, operating hours and flow rates may vary, but emission rates are not expected to be exceeded.

** LHV data are from "Steam, Its Generation and Use" (Babcock & Wilcox, 1972); originally from "Fuel Flue Gases" (American Gas Association, 1941) as

modified with data from "Gas Engineers Handbook" (The Industrial Press, 1965).

#### Average Gas Composition

	Molecular		Volume	Volume	Average	Average
	Weight (MW)	LHV	Flared	Fraction	MW	LHV
Component	(lb/lb-mol)	(Btu/scf)	(scf/hr)	()	(lb/lb-mol)	(Btu/scf)
Flare Waste Gas	37	577.9	250,000	0.80	29.60	462.32
Assist Gas	17.7	933.6	62,500	0.20	3.54	186.72
			312,500	1	33.14	649.04
Constants						
Standard Gas Vol	ume (scf/lb-mol)			379.5		
Carbon MW (lb/lb	-mol)			12.01		
S MW (lb/lb-mol)				32.1		
H2S MW (lb/lb-mo	ol)			34.1		
SO2 MW (lb/lb-mo	ol)			64.1		
Calculations						
Flared Gas LHV (N	1MBtu/hr)			203		
Flared Gas LHV (N	1MBtu/yr)			10,141		
Gas to Flare (lb/h	r)			27,289		
Gas to Flare (ton/	yr)			682		
Sulfur to Flare (LT	PD)			5.67		

	VOC		NOx		CO		SO ₂		H ₂ S	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Flare Emissions	67.74	1.69	13.00	0.33	111.47	2.79	1056.51	26.41	11.24	0.28

#### **VOC Emission Rate Calculation**

	Waste Gas to	Assist Gas to			Waste Gas to	Assist Gas to	Emission
	Flare	Flare	Destruction Eff.	Emission Estimate	Flare	Flare	Estimate
Component	(lb/hr)	(lb/hr)	(%)	(lb/hr)	(ton/yr)	(ton/yr)	(tons/yr)
Propane	602	80	98%	13.64	15	2	0.34
n-Butane	336	14	98%	7.00	8	0	0.17
Isobutane	125	8	98%	2.66	3	0	0.07
n-Pentane	220	2	98%	4.44	6	0	0.11
Isopentane	213	2	98%	4.32	5	0	0.11
Hexanes+	1,782	2	98%	35.68	45	0	0.89
Total VOC	3,279	108		67.74	82	3	1.69

#### Flare Effective Stack Diameter Calculation

Deff = 1E-3 * sqrt ( Qn) Qn = Q ( 1 - 0.048 * sqrt ( MW ))

#### Where:

Q =	203 MMBtu / Hr
	14,207,012 cal/sec
MW =	33.14 lb/lb-mol vent gas
Qn =	10,281,284 cal/sec
Deff =	3.21 m

#### **GHG Emission Rate Calculations**

From 40 CFR Part 98 Subpart W - Calculating GHG Flare Stack Emissions for Petroleum and Natural Gas Systems, modified for English units This calculation does not account for any emissions for gas sent to an un-lit flare. That would be an upset condition.

								GWF HUIH	
					Emission		Annual	Table A-1 to 40	Annual $CO_{2e}$
	Waste Gas	Assist Gas	Total		Factor	Default HHV	Emissions	CFR 98	Emissions
Component	Es (ft ³ /yr)	Es (ft ³ /yr)	Es (ft ³ /yr)	Density (kg/ft ³ )	(kg/MMBtu)	(MMBtu/scf)	(ton/yr)	Subpart A	(ton/yr)
CO ₂	15,303,000	3,265,594	18,568,594	0.0526			1,077	1	1,077
CH ₄	69,323	55,781	125,104	0.0192			3	28	74
N ₂ O					0.0001	0.001235	0.002	265	1

Total CO_{2e} 1,151

CO₂ and CH₄ flow from the flare stack are calculated using equations W-19 and W-20:

 $E_{s,CH4} = V_s * X_{CH4} * ((1-\eta) * Z_L + Z_U)$ 

 $E_{s,CO2} = V_s * X_{CO2} + sum (\eta * V_s * Y_j * R_j * Z_L)$ 

#### Where:

 $E_{s,CH4}$  = Annual CH₄ emissions from flare stack in cubic feet, at standard conditions.

 $E_{s,CO2}$  = Annual CO₂ emissions from flare stack in cubic feet, at standard conditions.

V_s = Volume of gas sent to flare in standard cubic feet

 $\eta$  = Flare combustion efficiency, expressed as fraction of gas combusted by a burning flare (default is 0.98).

Note that  $\eta = 1$  in these calculations for  $E_{s,CO2}$  to establish a worst-case flare emission rate.

 $X_{CH4}$  = Mole fraction of CH₄ in the feed gas to the flare

 $X_{CO2}$  = Mole fraction of CO₂ in the feed gas to the flare

 $Z_{U}$  = Fraction of the feed gas sent to an un-lit flare.

Note that  $Z_U = 0$  in these calculations to establish a worst-case flare emission rate.

 $Z_L$  = Fraction of the feed gas sent to a burning flare (equal to  $1 - Z_U$ ).

Note that  $Z_L = 1$  in these calculations to establish a worst-case flare emission rate.

Yj = Mole fraction of hydrocarbon constituents j (such as methane, ethane, propane, butane, and pentanes-plus) in the feed gas to the flare.

Rj = Number of carbon atoms in the hydrocarbon constituent j in the feed gas to the flare: 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes-plus).

CO₂ and CH₄ mass emissions from the flare stack are calculated using equation W-36, modified for English units:

Mass_i =  $E_{s,i} * \rho_i * 2.2046 \text{ lb/kg} * \text{ton/2000 lb}$ 

Where:

 $Mass_i = GHG_i$  (either  $CH_4$ ,  $CO_2$ , or  $N_2O$ ) mass emissions in English tons.

 $E_{s,i} = GHG_i$  (either CH₄, CO₂, or N₂O) volumetric emissions at standard conditions, in cubic feet.

 $\rho_i$  = Density of GHG_i. Use 0.0526 kg/ft³ for CO₂ and N₂O, and 0.0192 kg/ft³ for CH₄ at 60 °F and 14.7 psia.

N₂O mass emissions from the flare stack are calculated using equation W-40, modified for English units:

Mass_{N20} = Fuel * HHV * EF * 2.2046 lb/kg * ton/2000 lb

Where:

 $Mass_{N2O}$  = Annual N₂O emissions from the combustion of a particular type of fuel (English tons).

Fuel = Annual mass or volume of the fuel combusted (scf/yr).

HHV = Higher heating value of fuel (mmBtu/scf).

These calculations use the default higher heating value of 1.235 × 10−3 mmBtu/scf to establish a worst-case flare emission rate.

 $EF = Use 1.0 \times 10^{-4} kg N_2O/mmBtu.$ 

# **RCF Inlet Gas Analysis**

North Hobbs - RCF/Plant Inlet Date: 06/24/13 Analysis to C6+

### **RCF Inlet Gas Analysis - HAPs and TAPs**

### WIB VRU Gas Analysis - Used for Fug & Flaring

North Hobbs - RCF/Plant Inlet Date: 06/24/13 Speciation of C6+ Constituents North Hobbs - WIB VRU Date: 09/01/2013 Analysis to C6+

Components	Mol %	Wt. %	Wt. Fr. of TOC	Component	S	Wt. %	Wt. Fr. of TOC	Wt. Fr. of VOC	Components	Mol %	Wt. %
Nitrogen	2.03	1.36		n-Hexane		0.2482	0.0209	0.0337	Nitrogen	2.74	2
Carbon Dioxide	81.61	86.11		Benzene		0.0017	0.0001	0.0002	Carbon Dioxide	56.77	67
Hydrogen Sulfide	0.77	0.63		Toluene		0.0049	0.0004	0.0007	Hydrogen Sulfide	2.12	1
Methane	8.69	3.34	0.28	Ethylbenzene		0.0017	0.0001	0.0002	Methane	27.73	12
Ethane	1.65	1.19	0.10	Xylenes		0.0054	0.0005	0.0007	Ethane	3.31	2
Propane	2.29	2.42	0.20	Cyclohexane		0.1098	0.0092	0.0149	Propane	2.08	2
Iso-Butane	0.41	0.57	0.05	Octane		0.0052	0.0004	0.0007	Iso-Butane	0.33	0
n-Butane	0.98	1.36	0.11	Nonane		0.0004	0.00003	0.0001	n-Butane	0.88	1
Iso-Pentane	0.44	0.76	0.06						Iso-Pentane	0.45	0
n-Pentane	0.44	0.77	0.06						n-Pentane	0.46	0
Hexanes+	0.68	1.47	0.12						Hexanes+	3.14	7
Total:	100	100	1						Total:	100	1
H ₂ S*:	1.00 r	nol %			HAPs:	0.26	0.02	0.04	H ₂ S*:	2.50	
VOC(C3+):	7.36 \	Nt %	62%		TAPs:	0.12	0.01	0.02			

* Specified conservative H2S value for RCF Plant Inlet gas to account for variability

06/24/13 Plant Inlet Sample, with conservative 1 mol% H2S specified

#### $\star$ Specified conservative H2S value for WIB VRU gas to account for variability

09/01/13 WIB VRU Sample, with conservative 2.5 mol % H2S specified.

t. %	Wt. Fr. of TOC
2.07	
67.50	
1.95	
12.02	0.42
2.69	0.09
2.47	0.09
0.51	0.02
1.38	0.05
0.88	0.03
0.90	0.03
7.63	0.27
100	1
	31%

# WIB VRU Gas Analysis - Used for C6+

North Hobbs - WIB Tank Vapor at VRU Date: 05/12/2014 Analysis to C6+

# WIB VRU Gas Analysis - HAPs and TAPs

North Hobbs - WIB Tank Vapor at VRU Date: 05/12/2014 Speciation of C6+ Constituents

Components	Mol %	Wt. %	Normalized to 100% Hexanes+	Components		Wt. %	Wt. Fr. of VOC	Normalized to 100% Hexanes+
Nitrogen	1.89	1.13		n-Hexane		1.2467	0.0501	16.3592
Carbon Dioxide	77.15	72.21		Benzene		0.0045	0.0002	0.0585
Hydrogen Sulfide	1.20	0.87		Toluene		0.0183	0.0007	0.2405
Methane	1.47	0.50		Ethylbenzene		0.0104	0.0004	0.1359
Ethane	0.62	0.40		Xylenes		0.0219	0.0009	0.2874
Propane	3.64	3.41		Cyclohexane		0.4911	0.0197	6.4448
Iso-Butane	1.33	1.65		Octane		0.0450	0.0018	0.5903
n-Butane	4.06	5.02		Nonane		0.0075	0.0003	0.0987
Iso-Pentane	2.42	3.72						
n-Pentane	2.26	3.47						
Hexanes+	3.95	7.62	100.00					
Total:	100	100	100					
H ₂ S:	0.87 V	Vt %	0.00	HA	APs:	1.3017	0.0523	17.0815
VOC(C3+):	24.89 V	Vt %	100.00	TA	APs:	0.5436	0.0218	7.1338

<b>NGL Stora</b> North Hobbs - NGL V Date: 06/01/2023 Analysis to C6+	a <b>ge Analys</b> Tessel	sis	NGL Storage Analysis - HAPs and TAPs North Hobbs - RCF/Plant Inlet Date: 6/1/2023 Speciation of C6+ Constituents		<b>Methanol</b> North Hobbs - Methan	Tank Analys nol Storage	<b>Plant Fuel Gas Analysis</b> Northern Natural Gas Date: Dec 2010 Analysis to C6+			
Components	Mol %	Wt. %	Components	Wt. %	Wt. Fr. of VOC	Components	Mol %	Wt. %	Components	Mol %
Nitrogen	0.02	0.01	n-Hexane	4.0560	0.0406	Methanol	100	100	Nitrogen	3.90
Carbon Dioxide	0.00	0.00	Benzene	0.0177	0.0002				Carbon Dioxide	0.16
Hydrogen Sulfide	0.00	0.00	Toluene	0.0381	0.0004				Hydrogen Sulfide	0.008
Methane	0.00	0.00	Ethylbenzene	0.0436	0.0004				Methane	89.25
Ethane	0.00	0.00	Xylenes	0.0866	0.0009				Ethane	5.31
Propane	16.11	12.99	Cyclohexane	1.8629	0.0186				Propane	1.10
Iso-Butane	11.24	10.76	Octane	0.2957	0.0030				Iso-Butane	0.08
n-Butane	29.42	27.14	Nonane	0.0494	0.0005				n-Butane	0.14
Iso-Pentane	12.04	12.89							Iso-Pentane	0.02
n-Pentane	9.97	10.58							n-Pentane	0.02
Neo-Pentane	0.16	0.18							Neo-Pentane	
Hexanes+	21.04	25.46							Hexanes+	0.02
Total:	100	100							Total:	100.007
H ₂ S:	0.00 \	Vt %	HAPs:	4.2420	Nt%	H₂S:	0.00	Nt %		
VOC(C3+):	99.99 N	Vt %	TAPs:	2.2080	Nt%	VOC(C3+):	100.00	Nt %		

# NCI Storago Analysis UADs and TADs

# **Plant Eucl Gas Analysis**

added

Northern Natural Gas, sampled 2010, with conservative 5 gr S/100 scf (80 ppmv) H2S

#### EPN: TRK-LOAD

Truck Capacity:	8400	gal/truck
Yearly Vehicles:	240	trucks/yr
Time to Vent Hose:	1	hr/yr
Vapor Molecular Weight:	70	lb/lb-mole
Hose Hook-up Diameter:	0.33	ft
Hose Hook-up Length:	12	ft
Volume Lost Per Truck:	1.05	ft ³
Total Volume Lost:	251.33	ft ³

Pollutant			MW *	Vapor	Vapor	Loading E	missions ¹
Fottutant	MW	Mole %	Mole %	Wt. Frac.	MW	lb/hr	(ton/yr)
Propane	44.09	16	710	0.11	4.75	0.031	0.004
Butanes	58.12	41	2363	0.36	20.81	0.078	0.009
Pentanes	72.15	22	1600	0.24	17.49	0.043	0.005
Hexanes+	91.54	21	1926	0.29	26.72	0.041	0.005
Total NGLs	NA	100	6598.99	1.00	69.76	0.19	0.02

HAPs and TAPs

Dellutent	Diank	Plank	Blank	Vapor	Blank	Loading	Loading Emissions		
Pottutant	втацк			Wt. Frac. ²	віапк	lb/hr	(ton/yr)		
n-Hexane				0.0406		8E-03	9E-04		
Benzene				0.0002		3E-05	4E-06		
Toluene				0.0004		7E-05	9E-06		
Ethylbenzene				0.0004		8E-05	1E-05		
Xylenes				0.0009		2E-04	2E-05		
Cyclohexane				0.0186		4E-03	4E-04		
Octane				0.0030		6E-04	7E-05		
Nonane				0.0005		1E-04	1E-05		

Note: 1. Natural Gas Liquids (NGLs) are stored and shipped under pressure and in a closed ssytem with no emissions to the atmosphere. The emissions calculated above are for any potential losses from the hose connection during the truck loading process.

2. Composition of HAPs and TAPs from NGL Vessel sample dated 06/01/2023

Sample Calculations (Propane):

Volume Lost Per Truck Connection = ((0.33^2) ft) / (4) (12 ft) = 1.05 ft^3

Hourly Emissions =  $(1.05 \text{ ft}^3)$  (1 lb-mole / 379 ft^3) (70 lb/lb-mole) (1 truck hose venting / 1 hr) (16 / 100) = 0.031 lb/hr Annual Emissions = (0.031 lbs/hr) (1 ton / 2,000 lbs) (240 hrs/yr) = 0.004 tpy

### **Methanol Tank Emissions - Exempt Source**

EPN: T-METH

### Tank Inputs for Standing Losses ¹

Parameter		Units	Description
D	15.5	ft	Tank diameter
Hs	16	ft	Height of the vertical tank
D _E	16	ft	Same as tank diameter for a vertical tank
HL	8.00	ft	Assumed to be at the half-full level
ц	0 16	f+	vapor space outage
I IVO	0.10		Equation 1-16: $H_{VO} = H_S - H_L + H_{RO}$
Vv	1540	ft ³	vapor space volume Equation 1-3: Vv = ((pi/4)*D^2)*H _{vo}
T _{AX}	75.8	°F	Average daily maximum ambient temperature Table 7.1-7 (Roswell, NM)
T _{AN}	47.6	°F	Average daily minimum ambient temperature Table 7.1-7 (Roswell, NM)
T _{AX}	535.5	°R	Average daily maximum ambient temperature
T _{AN}	507.3	°R	Average daily minimum ambient temperature
∆T _a	28.20	°R	Daily ambient temperature range
ΔT _v	32.36	°R	Daily vapor temperature range
T _{lx}	532.42	°R	Daily maximum liquid surface temperature
T _{ln}	516.24	°R	Daily minimum liquid surface temperature
т	524 22	٥D	Average daily liquid surface temperature
'LA	524.55	n	Equation 1-30: $T_{LA} = 0.4 T_{AA} + 0.6 T_{B} + 0.005 \alpha H$
А	8.079		Antoine's coefficient for methyl alcohol
			Table 7.1-3
В	1581.3	°C	Antoine's coefficient for methyl alcohol Table 7.1-3
0	220.65	°C	Antoine's coefficient for methyl alcohol
C	239.65	°C	Table 7.1-3
Pa	12.88	psia	Atmospheric pressure
	0.47		Average daily maximum ambient pressure
P _{VX}	2.17	psia	Table 7.1-3 (Note b)
P _{VN}	1.33	psia	Table 7.1-3 (Note b)
ΔP _v	0.84	psia	Average daily vapor pressure range Equation 1-9: $\Delta P_V = P_{VX} - P_{VN}$
P _B	0.06	psig	Breather vent pressure setting range, psig Equation 1-10: $\Delta P_B = P_{BP} - P_{BV}$
α	0.25		Average tank surface solar absorptance, dimensionless; assuming the same as tank shall solar absorptance ( $\alpha_s$ ) - White (average condition) Table 7.1-6
1	1722	Btu/(ft ² day)	Average daily total insolation factor Table 7.1-7 (Roswell, NM)
K _E	0.13	/day	Vapor space expansion factor Equation 1-5: $K_E = \Delta T_V / T_{LA} + [(\Delta P_V - \Delta P_B) / (P_A - P_{VA})]$
P _{VA}	1.704	psia	Vapor pressure at average daily liquid surface temperature for methyl alcohol Table 7.1-3 (Note b)
K _S	0.58		Vented vapor saturation factor, dimensionless Equation 1-21: $K_s = 1/(1+0.053*P_{VA}*H_{VO})$
Mv	32.04	lb/lb-mole	Vapor molecular weight for methyl alcohol Table 7.1-3
R	10.73	psia ft ³ /lb-mole °R	The ideal gas constant
T _{AA}	521.40	°R	Average daily ambient temperature Equation 1-32: $T_{AA} = (T_{AX}+T_{AN})/2$
Т _в	522.69	°R	Liquid bulk temperature
			Equation 1-33: $T_B = T_{AA} + 0.003 \times \alpha \times I$
T _v	525.66	°R	Average vapor temperature, assuming as an uninsulated tank
			Equation 1-35: $T_V = 0.7 * T_{AA} + 0.3 * T_B + 0.009 * \alpha * I$
Wv	0.0097	lb/ft ³	Equation 1-24: W _V = Mv*P _{VA} /(R*Tv)
Ls	412.98	lb/yr	Standing losses per year
Ĩ		·	Equation 1-2: $L_s = 365 * V_v * W_v * K_E * K_s$

Tank Inputs for Working Losses ¹

Parameter		Units	Description
			Working loss turnover (saturation) factor,
K _N	1		dimensionless
			For turnovers $\leq$ 36, K _N = 1
K _p	1		Working los product factor, dimensionless
Wv	0.01	lb/ft ³	Vapor density, see details in standing loss table.
K _B	1		Vent setting correction factor, dimensionless
Q	378,000	gal/yr	Annual net throughput, in gallons
Q	9,000	bbl/yr	Annual net throughput, in barrels
V	50 500	<b>4</b> ³ (	Net working loss throughput
۷Q	50,526	π /yr	Equation 1-41: V _Q = 5.614*Q
1	w 488.94 lb/yr	lb/yr	Working losses per year
LM		(b/y)	Equation 1-37: $L_W = V_Q * K_N * K_p * W_V * K_B$

¹ Based on U.S. EPA AP 42, Chapter 7.1, Organic Liquid Storage Tanks

**Tank Emission Summary** 

L _T	0.45	tpy	Total routine losses Equation 1-1: L _T = L _S +L _W Conversion factor: 1 ton = 2,000 lb
L _T	17.50	lb/hr	

¹ Based on U.S. EPA AP 42, Chapter 7.1, Organic Liquid Storage Tanks.

#### **Maximum Short-Term Emissions**

Short-term emissions are calculated according to TCEQ guidance document "Estimating Short Term Emission Rates from Fixed Roof Tanks", APDG 6250v3, 02/20. This guidance applies to vertical fixed roof tanks and horizontal tan <a href="https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emissrates-tanks6250.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emissrates-tanks6250.pdf</a>

Symbol	Parameter	Symbol	Value	Data Source or TCEQ APDG 6250v3 Reference
Mv	Vapor Molecular Weight	Mv	32.04 lb/lb-mole	User Entered
P _{VX}	Vapor Pressure at Worst-case Liquid Temp	P _{VX}	<b>4.05</b> psia	AP-42, Ch. 7, Equation 1-26 (for Organic Liquids)
F _{RM}	Maximum Filling Rate	F _{RM}	6,000 gal/hr	User Entered
R	Ideal Gas Constant	R	80.273 psia gal/lb-mole °R	User Entered
T Maximum Liquid Surface Temperatur	Maximum Liquid Surface Temperature	Т	95.00 °F	Use higher of actual temperature or 95 $^\circ$ F
			554.67 °R	
L _{MAX}	Maximum Short-Term Emissions	L _{MAX}	17.5 lb/hr	$L_{MAX} = \frac{M_V P_{VA}}{R T} x F_{RM}$

UpdatingPermit/NOI #: 2656-M7; Submitted Jan 2025; Rev #0

Methanol Tank Hatch Maintenance and Repair - SSM Emissions - Exempt Source

Stack ID: T-METH-SSM

### Tank Inputs for Standing Losses¹

Parameter	Value	Units	Description	
D	15.5	ft	Tank diameter	
H _s	16	ft	Height of the vertical tank	
D _E	16	ft	Same as tank diameter for a vertical tank	
H	8.00	ft	Assumed to be at the half-full level	
			vapor space outage	
H _{vo}	8.16	ft	Equation 1-16: $H_{VO} = H_s - H_L + H_{RO}$	
Vv	1540	ft ³	vapor space volume Equation 1-3: Vv = ((pi/4)*D^2)*H _{vo}	
T _{AX}	75.8	°F	Average daily maximum ambient temperature Table 7.1-7 (Roswell, NM)	
T _{AN}	47.6	°F	Average daily minimum ambient temperature Table 7.1-7 (Roswell, NM)	
T _{AX}	535.5	°R	Average daily maximum ambient temperature	
T _{AN}	507.3	°R	Average daily minimum ambient temperature	
$\Delta T_a$	28.20	°R	Daily ambient temperature range	
ΔT _v	32.36	°R	Daily vapor temperature range	
T _{lx}	532.42	°R	Average daily maximum ambient pressure	
			Average daily minimum ambient pressure	
T _{ln}	516.24	°R	Table 7.1-3 (Note b)	
			Average daily liquid surface temperature	
T _{LA}	524.33	°R	Equation 1-30: $T_{I_A} = 0.4 T_{A_A} + 0.6 T_B + 0.005 T_A T_A$	
			Antoine's coefficient for methyl alcohol	
A	8.079		Table 7.1-3	
			Antoine's coefficient for methyl alcohol	
В	1581.3	°C	Table 7.1-3	
			Antoine's coefficient for methyl alcohol	
С	239.65	٥ _C	Table 7.1-3	
Pa	12.88	psia	Atmospheric pressure	
			Table 7.1-7	
P _{vx}	2.17	psia	Table 7.1-3 (Note b)	
_			Average daily minimum ambient pressure	
P _{VN}	1.33	psia	Table 7.1-3 (Note b)	
			Average daily vapor pressure range	
$\Delta P_V$	0.84	psia	Equation 1-9: $\Delta P_V = P_{VX} - P_{VN}$	
-			Breather vent pressure setting range, psig	
P _B	0.06	psig	Equation 1-10: $\Delta P_B = P_{BP} - P_{BV}$	
			Average tank surface solar absorptance, dimensionless; assuming the same as	
α	0.25		tank shall solar absorptance ( $\alpha_s$ ) - White (average condition)	
			Table 7.1-6	
	1700	$\mathbf{D}$	Average daily total insolation factor	
I	1722	Btu/(ft day)	Table 7.1-7 (Roswell, NM)	
V	0.12	(day	Vapor space expansion factor	
ν _E	0.13	/udy	Equation 1-5: $K_E = \Delta T_V / T_{LA} + [(\Delta P_V - \Delta P_B) / (P_A - P_{VA})]$	
D	1 704	ncia	Vapor pressure at average daily liquid surface temperature for methyl alcohol	
	1.704	psia	Table 7.1-3 (Note b)	
K.	0.58		Vented vapor saturation factor, dimensionless	
NS .	0.00		Equation 1-21: $K_s = 1/(1+0.053*P_{VA}*H_{VO})$	
Mv	32.04	lb/lb-mole	Vapor molecular weight for methyl alcohol	
D	10.72	noio ft ³ /lb molo 9D	Table 7.1-3	
ĸ	10.73	psiant /lb-mole °R	Average daily embient temperature	
T _{AA}	521.40	°R	Equation 1-32: $T_{AA} = (T_{AX} + T_{AN})/2$	
Ŧ	500.00		Liquid bulk temperature	
I B	522.69	I~K	Equation 1-31: $T_B = T_{AA} + 0.003 * \alpha * I$	
<b>.</b>	F.0.5. 0.0		Average vapor temperature, assuming as an uninsulated tank	
١v	525.66	I~K	Equation 1-33: $T_v = 0.7 T_{AA} + 0.3 T_B + 0.009 \alpha^1$	
۱۸/	0.0007	11- 14-3	Vapor density	
vv _V	0.0097	דזאמו 'דו	Equation 1-22: $W_V = Mv^* P_{VA}/(R^*Tv)$	
	440.00		Standing losses per year	
L _S	412.98	២/yr	Equation 1-2: $L_s = 365 * V_v * W_v * K_F * K_s$	

Tank Hatch Maintenance Emissions Summary

Number of Events:	2	events/yr		
Event Duration:	1	hr/event		
Hourly Standing			La ( 9700 br/)	
Loss Emissions:	0.047	lbs/hr	LS / 8/80 11/91	
Event Emissions:	0.047	lbs/event	Hourly Standing Loss Emissions x Event Duration	
Annual Emissions:	5E-05	tpy	Event Emissions x Number of Events x ton/2,000 lb	

# Section 6.a

# **Green House Gas Emissions**

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

**Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC)** applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide ( $CO_2$ ), nitrous oxide ( $N_2O$ ), methane ( $CH_4$ ), 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 <u>Mandatory Greenhouse Gas Reporting</u>.

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

**4.** Report GHG mass and GHG CO₂e emissions in Table 2-P of this application. Emissions are reported in <u>short</u> tons per year and represent each emission unit's Potential to Emit (PTE).

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

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

#### Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at http://www.epa.gov/ttn/chief/ap42/index.html
- EPA's Internet emission factor database WebFIRE at http://cfpub.epa.gov/webfire/
- 40 CFR 98 <u>Mandatory Green House Gas Reporting</u> except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.

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

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

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

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

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

#### Metric to Short Ton Conversion:

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

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions) Greenhouse gas emission calculations are included in Section 6.
## **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 <u>and</u> control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
- □ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
- □ If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
- $\Box$  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.
- $\sqrt{}$  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.

#### Attached:

- Analytical Data
  - o RCF Inlet Gas
  - o WIB VRU Gas
  - o WIB Tank Vapor at VRU Gas
  - o NGL
  - o Fuel Gas
- Emissions Factor References
  - $\circ$  Fugitives
  - o Heaters
  - o Greenhouse gases
  - Flares
- Representative Flare Specifications
  - RCF Flare



RCF Gas / Speciated C6+

806-797-4325 P.O. BOX 64489 LUBBOCK, TX 79464-4489 806-669-6821 P.O. BOX 2439 PAMPA, TX 79066-2439

#### **GAS / VAPOR EXTENDED FRACTIONAL ANALYSIS**

#### SAMPLE ID

Customer..... Occidental Permian Ltd.

Station No.... 1013 Operator..... Occidental Permian Ltd. Plant..... North Hobbs RCF Sample Of..... Plant Inlet Gas

Pressure..... 300 psig Temperature... N/A Atm. Temp..... 98 F Sample Date... 06/24/13 Sample Time... 3:05 PM Sampled By.... Pantechs/CJC Analysis Date. 07/15/13 Analysis By... JSH, DCB Sample Cyl.No. PL2299

#### **CALCULATIONS / METHODS**

Real Gas, 14.65 psia & 60 F Applicable current GPA methods, procedures, and constants are used.

#### DISTRIBUTION

Occidental Permian Ltd.

- Krishna Chokkarapu; Houston, TX (krishna_chokkarapu@oxy.com)
- Brittany Talley; Houston, TX (brittany_talley@oxy.com)

COMPONEN	IT	Mol %	Wt.%	GPM
Nitrogen	N2	2.0290	1.3627	0.223
Carbon D.	CO2	81.6080	86.1082	13.918
Field	H2S	0.7731	0.6317	0.104
Oxygen	02			
Helium	He			
Hydrogen	H2			
Argon	Ar			
Methane	C1	8.6896	3.3423	1.474
Ethane	C2	1.6525	1.1913	0.442
Propane	C3	2.2924	2.4236	0.632
i-Butane	iC4	0.4124	0.5747	0.135
n-Butane	nC4	0.9776	1.3623	0.308
i-Pentane	iC5	0.4416	0.7639	0.162
n-Pentane	nC5	0.4427	0.7658	0.160
* Hexanes+	C6+	0.6811	1.4735	0.277
Т	otals:	100.0000	100.0000	17.835

#### GASOLINE CONTENT (GPM)

Ethane & Heavier	2.116
Propane & Heavier	1.674
Butanes & Heavier	1.042
Pentanes & Heavier	0.599
26# Gasoline	0.913

#### **HEATING VALUE (Gross Btu/CF)**

Water	Vapor	Saturated	290.4
Dry			294.5

#### SPECIFIC GRAVITY

Water	Va	por	S	atu	ira	ιte	ed		•	•	 	•	•	•	1	.434	6
Dry							-				 				1	.448	3

#### **COMPRESSIBILITY FACTOR (Z)**

Water	Vapor	Saturated	 0.99352
Dry			 0.99396

* Hexanes+ Composition On Page 2

#### **REMARKS / COMMENTS / OTHER**

#### Field H2S Determination by Tutweiler Method

Hydrogen	Sulfide:	0.7731	Mol%	
		7,805.8	ppmv	
		490.93	grains/100	SCF



RCF Gas / Speciated C6+

806-797-4325 P.O. BOX 64489 LUBBOCK, TX 79464-4489 806-669-6821 P.O. BOX 2439 PAMPA, TX 79066-2439

	Hexanes+ Fractional Analysis								
Pla	nt	North Hobbs RCF	Sample Date	0 06/24/13	No	nan	es (C9s)	Mol %	Wt.%
Sa	nple	Of Plant Inlet Gas	Sample Cyl.	No. PL2299	50	A	Isopropylbenzene	0.000073	0.000211
			Mal 9/	18/4 0/	51	A	n-Propyidenzene	0.000044	0.000127
пe.	kane	S (COS)		0.001654	52	A	n-Ethylloluene	0.000022	0.000002
-	- M	2 3-Dimethylbutane + Cyclopentane	0.000885	0.086168	53	- <u>A</u>	o-Ethyltoluene	0.000040	0.000112
4	-7/N	Methylcyclonentane	0.070561	0 142374	55		1 3 5-Trimethylbenzene	0.000029	0.000082
4	N	Cyclohexane	0.054403	0.109771	56	A	1.2.4-Trimethylbenzene	0.000020	0.000058
5	P	2.2-Dimethylbutane	0.004483	0.009262	57	A	1.2.3-Trimethylbenzene	0.000014	0.000040
6	P	2-Methylpentane	0.112248	0.231911	58	N	1.1.4-Trimethylcyclohexane	0.000547	0.001655
7	P	3-Methylpentane	0.078995	0.165103	59	N	1.c-3.c-5-Trimethylcyclohexane	0.000161	0.000489
8	Р	n-Hexane (nC6)	0.117414	0.248211	60	N	1,1,2-Trimethylcyclohexane	0.000094	0.000284
		C6 Totals:	0.484973	0.994454	61	N	1,c-2,c-4-Trimethylcyclohexane	0.000080	0.000241
He	otan	es (C7s)			62	P	2,2,4-Trimethylhexane	0.000119	0.000366
9	Α	Toluene	0.002206	0.004874	63	Ρ	2,4,4-Trimethylhexane	0.000088	0.000269
10	Ν	1,1-Dimethylcyclopentane	0.004884	0.011497	64	P	2,3,5-Trimethylhexane	0.000075	0.000231
11	Ν	1,c-3-Dimethylcyclopentane	0.011480	0.027025	65	Ρ	2,2,3-Trimethylhexane	0.000130	0.000398
12	N	1,t-3-Dimethylcyclopentane	0.010613	0.024984	66	Ρ	2,2-Dimethylheptane	0.000073	0.000224
13	N	1,t-2-Dimethylcyclopentane	0.015862	0.037340	67	Р	3,4-Dimethylheptane	0.000089	0.000272
14	N	Methylcyclohexane	0.032377	0.076217	68	Ρ	2 + 4-Methyloctane	0.000286	0.000878
15	N	Ethylcyclopentane	0.002816	0.006630	69	Ρ	3-Methyloctane	0.000183	0.000563
16	P	2,2,3-Trimethylbutane	0.000278	0.000669	70	Ρ	n-Nonane (nC9)	0.000131	0.000402
17	Р	2,2-Dimethylpentane	0.001442	0.003465	71		Unidentified C9s	0.000324	0.000997
18	P	2,4-Dimethylpentane	0.003722	0.008941			C9 Totals:	0.002637	0.008006
19	Ρ	3,3-Dimethylpentane	0.000806	0.001936	De	can	es (C10s)		
20	P	2,3-Dimethylpentane	0.009191	0.022080	72	Ρ	n-Decane (nC10)	0.000035	0.000121
21		2-Methylhexane	0.017505	0.042054	73		Unidentified C10s	0.000339	0.001158
22	P		0.022547	0.054167			C10 Totals:	0.000374	0.001279
23	P	n-Heptane (nC7)	0.024216	0.058175	Un	aec	anes (C11s)	0.000047	
		C7 Totals:	0.159945	0.380054	74	<u>Р</u>	n-Undecane (nC11)	0.000017	0.000064
		S (COS) Ethylbenzene	0.000655	0.001667	75		Unidentified CTTs	0.000096	0.000301
24		m + n-Yylene	0.0000000	0.001007		dec	anee (C12e)	0.000110	0.000420
20	<u>^</u>		0.001776	0.004525	- 20		In Dedeesne (PC12)	0.000005	0.000020
20	A	1 1 3-Trimethylcyclopentane	0.000336	0.000392	70	P	Lipidentified C12s	0.000003	0.000020
28	N N	1 t- 2 c-4-Trimethylcyclopentane	0.003487	0.009302			C12 Totale:	0.000078	0.000239
29	 	1 t-2 c-3-Trimethylcyclopentane	0.002598	0.007002	Tri	dec	anes (C13s)	0.000070	0.000013
30		1.c-2.t-4 + 1.c-2.c-4-TMCYC5	0.000971	0.002612	78	P	In-Tridecane (nC13)	0 00000	0 000000
31	N	1-Methyl-t-3-Ethylcyclopentane	0.000464	0.001249	79	····-	Unidentified C13s	0.000061	0.000271
32	N	1-Methyl-1-Ethylcyclopentane	0.000923	0.002484	- 1-		C13 Totals:	0.000061	0.000271
33	N	1-Methyl-t-2-Ethylcyclopentane	0.000461	0.001241	Tet	rad	ecanes (C14s)		
34	N	1-Methyl-c-3-Ethylcyclopentane	0.000356	0.000957	80	P	n-Tetradecane (nC14)	0.000000	0.000000
35	N	1,t-4-Dimethylcyclohexane	0.002757	0.007416	81		Unidentified C14s	0.000000	0.000000
36	N	1,c-3-Dimethylcyclohexane	0.001079	0.002903			C14 Totals:	0.000000	0.000000
37	N	t-1,2-Dimethylcyclohexane	0.001057	0.002844	Per	ntac	lecanes+ (C15+)		
38	N	c-1,4-Dimethylcyclohexane	0.000298	0.000802	82		C15 +	0.000000	0.000000
39	Ν	1,t-3-Dimethylcyclohexane	0.000376	0.001012					
40	N	1,c-2-Dimethylcyclohexane	0.000495	0.001332			Total Hexanes+:	0.681100	1.473500
41	N		0.001275	0.003429				<u> </u>	
42	۲ و	2,2,3-1 MOD + 2,4 & 2,5-DMOD	0.001082	0.002963	He	xane	es+ molecular weight	90.237	
43	- <u>-</u>	2.3.7- mineurypeniane	0.000088	0.000240		xane	est opecilic Gravity (Ideal)	3.0998	
44	P	3 4-Dimethylhexane	0.000753	0.002003		van	SET SCE/gal (Ideal)	4000.05	
46	P	2-Methylheptane	0.003336	0.009136				24.142	
47	P	4-Methylheptane	0.000974	0.002667	Hv	dro	carbon Types		
48	P	3-Methylheptane	0.002312	0.006332		Aro	matic (Benzene Derivative)		·
49	P	n-Octane (nC8)	0.001915	0.005245	N	Nar	ohthene (Cycloparaffin, Cycloalkane.	Cyclane)	
		C8 Totals;	0.032919	0.088692	P	Par	affin (Alkane)	_ , ,	

#### MOBILE ANALYTICAL LABORATORIES, INC.

P.O. BOX 69210 ODESSA, TEXAS 79769 PHONE (432)337-4744 WIB Flare Combined Stream

17903

#### GAS ANALYSIS REPORT

COMPANY	OCCIDENTAL PERMIAN	STATION
LEASE/PLANT	WIB VRU	PRESS. PSIG 20
OPERATOR .	NORTH HOBBS UNIT	TEMP. DEG. F 110
CYLINDER .	108	SAMPLED / RECEIVED 09/01/13
H2S PPM	21163.0	SAMPLED BY SR

#### FRACTIONAL ANALYSIS

	COMPONENT	MOL &	GPM	GPM	
			C2+	C5+	
	NITROGEN	2.739	0.000	0.000	
	CARBON DIOXIDE	56.773	0.000	0.000	
	METHANE	27.729	0.000	0.000	
	ETHANE	3.311	0.886	0.000	
	PROPANE	2.077	0.572	0.000	
	ISO-BUTANE	0.327	0.107	0.000	
	N-BUTANE	0.879	0.277	0.000	
	ISO-PENTANE	0.449	0.164	0.164	
	N-PENTANE	0.463	0.168	0.168	
	HEXANES PLUS	3.137	1.369	1.369	
	H2S	2.116	0.000	0.000	
	TOTALS	100.000	3.543	1.701	
CALC.	SP.GRAVITY 1.289	BTU/CU.	FT. (14.650	PSIA, 60	DEG. F)
		CALC.	GROSS WET	632	•
		CALC.	GROSS DRY	643	

**DISTRIBUTION:** 

MR. TONY AGUILAR

NOTES:

REPORT DATE: 09/04/13

WIB - C6+ Speciation



806-797-4325 P.O. BOX 64489 LUBBOCK, TX 79464-4489 806-669-6821 P.O. BOX 2439 PAMPA, TX 79066-2439

#### GAS / VAPOR EXTENDED FRACTIONAL ANALYSIS

#### SAMPLE ID

Customer..... Occidental Permian Ltd. Operator..... Occidental Permian Ltd. Plant North Hobbs BCF

Planc Nolen hobbs ker
Location West Injection Battery
Sample Of Tank Vapor at VRU
Level Control
Pressure < 1 psig
Temperature N/A
Atm. Temp 71 F
Sample Date 05/12/14
Sample Time 1:29 PM
Sampled By Pantechs/CLJ
Analysis Date. 06/04/14
Analysis By JSH, DCB
Sample Cyl.No. PL2138

#### **CALCULATIONS / METHODS**

Real Gas, 14.65 psia & 60 F Applicable current GPA methods, procedures, and constants are used.

#### DISTRIBUTION

.

.

- Occidental Permian Ltd.
- Jaime Perez; Denver City, TX (jaime_perez@oxy.com)
- Ronnie Popejoy; Denver City, TX (ronnie_popejoy@oxy.com)
- Craig Willoughby; Houston, TX (craig_willoughby@oxy.com)

	COMPONEN	IT	Mol %	Wt.%	GPM
	Nitrogen	N2	1.8946	1.1288	0.209
	Carbon D.	CO2	77.1476	72.2128	13.206
	Field	H2S	1.1967	0.8674	0.162
	Oxygen	02			
	Helium	He			
	Hydrogen	Н2			
	Argon	Ar			~
	Methane	C1	1.4723	0.5024	0.251
	Ethane	C2	0.6186	0.3956	0.166
	Propane	C3	3.6387	3.4127	1.007
	i-Butane	iC4	1.3328	1.6476	0.438
	n-Butane	nC4	4.0591	5.0179	1.285
	i-Pentane	iC5	2.4240	3.7197	0.891
	n-Pentane	nC5	2.2643	3.4746	0.824
*	Hexanes+	C6+	3.9513	7.6205	1.622
	Т	otals:	100.0000	100.0000	20.061

#### GASOLINE CONTENT (GPM)

Ethane & Heavier	6.233
Propane & Heavier	6.067
Butanes & Heavier	5.060
Pentanes & Heavier	3.337
26# Gasoline	4.907

#### HEATING VALUE (Gross Btu/CF)

Water	Vapor	Saturated	 676.2
Dry			 687.0

#### SPECIFIC GRAVITY

Water	Vapor	Saturated	 1.6213
Dry			 1.6382

#### **COMPRESSIBILITY FACTOR (Z)**

Water	Vapor	Saturated	0.98976
Dry		•••••••••••••••••	0.99025

* Hexanes+ Composition On Page 2

#### **REMARKS / COMMENTS / OTHER**

#### Field H2S Determination by Tutweiler Method

Sulfide:	1.1967	Mol%	
12,0	82.3	ppmv	
7	59.89	grains/100	SCF
	Sulfide: 12,0 7	Sulfide: 1.1967 12,082.3 759.89	Sulfide: 1.1967 Mol% 12,082.3 ppmv 759.89 grains/100

Pantechs Laboratories, Inc.

• 1

# WIB - C6+ Speciation

#### 806-797-4325 P.O. BOX 64489 LUBBOCK, TX 79464-4489 806-669-6821 P.O. BOX 2439 PAMPA, TX 79066-2439

Hexanes+ Fractional Analysis								
							B4-10/	
Plant:	NHRCF, West Injection Battery	Sample Date	05/12/14	NO	nan	es (C9s)	MOI %	WL7
Sample	Tank Vapor at VRU Level Control	Sample Cyl.	NO, PL2138	50	A	Isopropyibenzene	0.001845	0.00471
<u> </u>				51	A	n-Propylbenzene	0.000979	0.002502
lexane	s (C6s)	Mol %	WL%	52	<u>A</u>	m-Ethyltoluene	0.001345	0.00343
1 A	Benzene	0.002682	0.004456	53	<u>A</u>		0.000665	0.00170
2 P/N	2,3-Dimethylbutane + Cyclopentane	0.285788	0.475057	54	<u>A</u>		0.000285	0.00072
3 N	Methylcyclopentane	0.381300	0.682523	55	<u> </u>	1,3,5-1 rimethylbenzene	0.000308	0.00129
4 N	Cyclonexane	0.274374	0.491127	56	<u>A</u>	1,2,4-I rimethylbenzene	0.000298	0.00076
5 P	2,2-Dimethylbutane	0.030227	0.055402	57	<u>A</u>	1,2,3-1 rimethylbenzene	0.000002	0.00015
6 P	2-Methylpentane	0.679021	1.244561	58	<u>N</u>		0.008756	0.02350
7 P	3-Methylpentane	0.467488	0.866787	59	<u>N</u>	1.c-3,c-5-Trimethyloycionexane	0.002472	0.00003
8 P	n-Hexane (nC6)	0.004/38	1.240053	60	<u>N</u>		0.001091	0.00434
	C6 Totals:	2.785018	5.000500	61	<u>N</u>	1.c-2,c-4-Trimethylcyclonexane	0.001300	0.00372
eptan		0.000254	0.010001	62	٩	2,2,4-Thmethylnexane	0.001125	0.00300
9 A	Toluene	0.009354	0.018331	63		2,4,4-Thineurymexane	0.000824	0.00224
IO N	1, 1-Dimetnyicyclopentane	0.025882	0.054049	64	P		0.000731	0.00199
11 N	1,c-3-Dimethylcyclopentane	0.062339	0.130184	65	P	12,2,3-1 rimethylnexane	0.001593	0.00434
12 N	1,t-3-Dimethylcyclopentane	0.057234	0.119524	66	Ρ	2,2-Dimethylheptane	0.000924	0.00252
13 N	1,t-2-Dimethylcyclopentane	0.085831	0.179243	67	Ρ	3,4-Dimethylheptane	0.000903	0.00246
14 N	Methylcyclohexane	0.175712	0.366944	68	Ρ	2 + 4-Methyloctane	0.004832	0.01318
15 N	Ethylcyclopentane	0.018202	0.038012	69	P	3-Methyloctane	0.003535	0.00964
16 P	2,2,3-Trimethylbutane	0.002001	0.004264	70	Ρ	n-Nonane (nC9)	0.002758	0.00752
17 P	2,2-Dimethylpentane	0.008293	0.017674	71		Unidentified C9s	0.003881	0.01058
18 P	2,4-Dimethylpentane	0.020975	0.044702			C9 Totals:	0.041400	0.11129
19 P	3.3-Dimethylpentane	0.004938	0.010524	De	can	es (C10s)		
20 P	2.3-Dimethylpentane	0.050137	0.106852	72	P	n-Decane (nC10)	0.000189	0.00057
21 P	2-Methylhexane	0.094997	0.202458	73		Unidentified C10s	0.000866	0.00262
22 P	3-Methylhexane	0.123577	0.263368			C10 Totals:	0.001055	0.00319
23 P	n-Heptane (nC7)	0.136512	0.290934	Un	dec	anes (C11s)	1	
1	C7 Totals:	0.875984	1.847063	74	P	n-Undecane (nC11)	0.000034	0.00011
Octane	s (C8s)	· · · · · · · · · · · · · · · · · · ·		75		Unidentified C11s	0.000132	0.00043
24 A	Ethylbenzene	0.004586	0.010355			C11 Totals:	0.000166	0.00055
25 A	m + p-Xylene	0.008243	0.018614	Do	dec	anes (C12s)		
26 A	o-Xvlene	0.001455	0.003286	76	P	n-Dodecane (nC12)	0.000016	0.00005
27 N	1.1.3-Trimethylcyclopentane	0.020516	0.048964	77	<u> </u>	Unidentified C12s	0.000074	0.00026
28 N	1.t- 2.c-4-Trimethylcyclopentane	0.017951	0.042843			C12 Totals:	0.000090	0.00032
29 N	1.t-2.c-3-Trimethylcyclopentane	0.018018	0.043002	Tri	dec	anes (C13s)		·
30 N	1.c-2.t-4 + 1.c-2.c-4-TMCYC5	0.006477	0.015458	78	P	In-Tridecane (nC13)	0.000008	0.00003
31 N	1-Methyl-t-3-Ethylcyclopentane	0.003052	0.007285	79		Unidentified C13s	0.000049	0.00019
32 N	1-Methyl-1-Ethylcyclopentane	0.008096	0.019323			C13 Totals:	0.000057	0.00022
33 N	1-Methyl-t-2-Ethylcyclopentane	0.003707	0.008847	Te	trad	lecanes (C14s)	1	
34 N	1-Methyl-c-3-Ethylcyclopentane	0.002659	0.006346	80	P	In-Tetradecane (nC14)	0.000000	0.00000
35 N	1,t-4-Dimethylcyclohexane	0.021233	0.050677	81	1	Unidentified C14s	0.000008	0.00003
36 N	1,c-3-Dimethylcyclohexane	0.008149	0.019449			C14 Totals	0.000008	0.00003
37 N	t-1,2-Dimethylcyclohexane	0.008796	0.020994	Pe	nta	decanes+ (C15+)		
38 N	c-1,4-Dimethylcyclohexane	0.003331	0.007950	82		C15 +	0.000000	0.00000
39 N	1,t-3-Dimethylcyclohexane	0.003216	0.007675					
10 N	1,c-2-Dimethylcyclohexane	0.006896	0.016458			Total Hexanes+ :	3.951300	7.62050
41 N	Ethylcyclohexane	0.012543	0.029935		1			
42 P	2,2,3-TMC5 + 2,4 & 2,5-DMC6	0.007606	0.018479	He	xan	es+ Molecular Weight	90.678	
43 P	2,3,4-Trimethylpentane	0.000604	0.001467	He	xan	es+ Specific Gravity (Ideal)	3.1152	
44 P	2,3-Dimethylhexane	0.004659	0.011319	He	xan	es+ Gross Btu/CF (Ideal)	4891.81	
45 P	3,4-Dimethylhexane	0.003437	0.008351	He	xan	es+ SCF/gal. (Ideal)	24.599	
46 P	2-Methylheptane	0.027140	0.065938	<u> </u>			1	
47 P	4-Methylheptane	0.007462	0.018130	Hy	dro	carbon Types	11	
48 P	3-Methylheptane	0.018575	0.045128	A	Arc	omatic (Benzene Derivative)	† ···	
49 P	n-Octane (nC8)	0.018515	0.044982	N	Na	phthene (Cycloparaffin, Cycloalkane	, Cyclane)	
	C8 Totals:	0.246922	0.591255	P	Pai	raffin (Alkane)		
					· · · ·			

Pantechs Laboratories, Inc. - Order: 163-4671 - 6/1/2023 - North Hobbs RCF - Extended Analysis For Inlet, NGL, CO2 Return

SAMPLE ID		COLLECTION DATA		
Operator	Occidental Permian Ltd.	Pressure	1024 psig	
Location	North Hobbs RCF	Sample Temp	N/A	
Site	NGL Storage	Atm Temp	80 F	
Site Type	Vessel	Collection Date	06/01/2023	
Sample Point	NGL	Collection Time	11:38 AM	
Spot/Comp	Spot	Collection By	Cody Carson	
Meter ID		Pressure Base	14.650 psi	
Purchaser		Temperature Base	60 F	
Fluid	Liquid	Container(s)	PL1867	

#### GPA 2186 LiquidExtended Fractional Analysis

COMPOUND	FORMULA	MOL%	VOL%	WT%
NITROGEN	N2	0.0193	0.0062	0.0082
CARBON DIOXIDE	CO2	0.0000	0.0000	0.0000
HYDROGEN SULFIDE	H2S	0.0000	0.0000	0.0000
METHANE	C1	0.0000	0.0000	0.0000
ETHANE	C2	0.0000	0.0000	0.0000
PROPANE	C3	16.1140	12.9906	10.7666
I-BUTANE	iC4	11.2393	10.7620	9.8983
N-BUTANE	nC4	29.4161	27.1367	25.9064
I-PENTANE	iC5	12.0420	12.8870	13.1646
N-PENTANE	nC5	9.9728	10.5786	10.9025
NEO-PENTANE	neC5	0.1579	0.1775	0.1726
HEXANES PLUS	C6+	21.0386	25.4614	29.1808
TOTALS:	100.0000	100.0000	100.0000	

Value of "0.0000" in fractional interpreted as below detectable limit.

BTEX SUMMARY	FORMULA	MOL%	VOL%	WT%
BENZENE	C6H6	0.014986	0.012272	0.017737
TOLUENE	C7H8	0.027299	0.026752	0.038113
ETHYLBENZENE	C8H10	0.027086	0.030591	0.043572
M+P XYLENE	C8H10	0.050177	0.056852	0.080717
O XYLENE	C8H10	0.003664	0.004076	0.005894

### **Calculated Properties**

GROUP	SCF/Gal (Ideal)	SCF/Gal (Real)	Mol Weight	Relative Density (60/60)	Vapor Pressure 100F, psia
TOTAL SAMPLE	29.43	28.12	47.65	0.6120	58.74
C6+ ONLY	24.24		91.54	0.7014	4.46

### Hexanes Plus Detail - North Hobbs RCF:NGL Storage:NGL:6/1/2023

C6 GROUP	FORMULA	MOL%	VOL%	WT%
2,2-dimethylbutane	C6H14	0.111938	0.136763	0.146164
2,3-dimethylbutane+cyclopentane	C6H14	4.620026	5.543187	6.032645
2-methylpentane	C6H14	0.719697	0.874187	0.939752
3-methylpentane	C6H14	1.974554	2.357961	2.578294
benzene	C6H6	0.014986	0.012272	0.017737
cyclohexane	C6H12	1.460828	1.454808	1.862869
methylcyclopentane	C6H12	2.252060	2.331920	2.871859
n-hexane	C6H14	3.106214	3.737696	4.055970
TOTALS:		14.260303	16.448794	18.505290

C7 GROUP	FORMULA	MOL%	VOL%	WT%
1,1-dimethylcyclopentane+3-methylhexane	C7H16	1.155967	1.553258	1.755098
2,2-dimethylpentane	C7H16	0.034607	0.047400	0.052544
2,3-dimethylpentane	C7H16	0.295110	0.392041	0.448064
2,4-dimethylhexane+ethylcyclopentane	C7H14	0.000000	0.000000	0.000000
2,4-dimethylpentane	C7H16	0.009595	0.013163	0.014568
2-methylhexane	C7H16	0.535634	0.728379	0.813250
3,3-dimethylpentane	C7H16	0.036856	0.049039	0.055958
cis-1,3-dimethylcyclopentane+3-Ethylpentane	C7H14	0.223219	0.271153	0.332094
cycloheptane	C7H14	0.000000	0.000000	0.000000
methylcyclohexane+2,2-dimethylhexane+2,2,4- trimethylpentane	C7H14	1.118547	1.315678	1.664119
n-heptane	C7H16	0.835098	1.127404	1.267925
toluene	C7H8	0.027299	0.026752	0.038113
trans-1,2-dimethylcyclopentane+cis-1,2- Dimethylcyclopentane	C7H14	0.487257	0.586729	0.724917
trans-1,3-dimethylcyclopentane	C7H14	0.344480	0.416242	0.512500
TOTALS:		5.103669	6.527238	7.679150

C8 GROUP	FORMULA	MOL%	VOL%	WT%
1-ethyl-1-methylcyclopentane	C8H16	0.063291	0.083854	0.107613
2,2,3-trimethylpentane	C8H18	0.099783	0.146805	0.172707
2,3,4-trimethylpentane	C8H18	0.101233	0.153986	0.175217
2,3,4-trimethylpentane	C8H18	0.101233	0.148305	0.175217
2,5-dimethylhexane	C8H18	0.160346	0.243210	0.277532
2-methylheptane+4-methylheptane	C8H18	0.164125	0.247647	0.284073
3,3-dimethylhexane	C8H18	0.000000	0.000000	0.000000
3-methylheptane	C8H18	0.047106	0.070288	0.081532
cis-1,2-dimethylcyclohexane	C8H16	0.138032	0.179325	0.234694

cis-1,3-dimethylcyclohexane	C8H16	0.000000	0.000000	0.000000
cyclooctane	C8H16	0.002389	0.002957	0.004062
ethylbenzene	C8H10	0.027086	0.030591	0.043572
ethylcyclohexane	C8H16	0.088425	0.116074	0.150348
m-xylene+p-xylene	C8H10	0.050177	0.056852	0.080717
n-octane	C8H18	0.170850	0.256117	0.295712
o-xylene	C8H10	0.003664	0.004076	0.005894
trans-1,3-dimethylcyclohexane	C8H16	0.000000	0.000000	0.00000
TOTALS:		1.217740	1.740087	2.088890

C9 GROUP	FORMULA	MOL%	VOL%	WT%			
1,1,2-trimethylcyclohexane	C9H18	0.014772	0.021538	0.028256			
1,2,3-trimethylbenzene	C9H12	0.002298	0.002850	0.004185			
1,2,4-trimethylbenzene+tert-butylbenzene	C9H12	C9H12 0.004276 0.005413					
1,3,5-trimethylbenzene	C9H12	112 0.007347 0.009417					
2,2,3-trimethylhexane	C9H20	0.010091	0.016306	0.019611			
2,2,4-trimethylhexane	C9H20	0.030898	0.051055	0.060046			
2,2-dimethylheptane	C9H20	0.008466	0.014088	0.016453			
2,3,4-trimethylhexane	C9H20	0.028955	0.046385	0.056270			
2,4,4-trimethylhexane	C9H20	0.000000	0.000000	0.000000			
2,5-dimethylheptane	C9H20	0.010457	0.017255	0.020322			
2-methyloctane	C9H20	0.000000	) 0.000000				
3,4-dimethylheptane	C9H20	0.000000	0.000000	0.000000			
cis,cis-1,2,3-trimethylcyclohexane	C9H18	0.006699	0.012814				
isopropylbenzene+1,1,3-trimethylcyclopentane	C9H12	0.003285	0.004224	0.005983			
methylcyclooctane	C9H18	0.000000	0.000000	0.000000			
m-ethyltoluene+p-ethyltoluene	C9H12	0.003899	0.005001	0.007101			
n-nonane	C9H20	0.025410	0.041842	0.049381			
propylbenzene	C9H12	0.009422	0.012118	0.017159			
propylcyclohexane	C9H18	0.013683	0.020069	0.026173			
r-1,t-2,c-3-trimethylcyclohexane	C9H18	0.000000	0.000000	0.000000			
r-1,t-2,t-4-trimethylcyclohexane	C9H18	9H18 0.007341 0.01087					
trans, trans-1,2,4-trimethylcyclohexane	C9H18	0.003577	0.005291	0.006842			
Unidentified C9	C9	0.195922	0.322616	0.380748			
TOTALS:		0.386798	0.616063	0.746553			

C10 GROUP	FORMULA	MOL%	VOL%	WT%
1,2,3,4-tetramethylbenzene	C10H14	0.000166	0.000227	0.000338
1,2,3,5-tetramethylbenzene	C10H14	0.000259	0.000360	0.000527
1,2,4,5-tetramethylbenzene	C10H14	0.000105	0.000147	0.000214
1,2-diethylbenzene	C10H14	0.000249	0.000350	0.000506

1,2-dimethyl-3-ethylbenzene	C10H14	0.000000	0.000000	0.000000
1,2-dimethyl-4-ethylbenzene	C10H14	0.000000	0.000000	0.000000
1,3-diethylbenzene	C10H14	0.000957	0.001372	0.001946
1,3-dimethyl-2-ethylbenzene	C10H14	0.000592	0.000823	0.001204
1,4-diethylbenzene	C10H14	0.001424	0.002046	0.002896
1,4-dimethyl-2-ethylbenzene	C10H14	0.000163	0.000230	0.000331
1-methyl-2-isopropylbenzene	C10H14	0.001772	0.002505	0.003604
1-methyl-2-propylbenzene	C10H14	0.000854	0.001210	0.001737
1-methyl-3-isopropylbenzene	C10H14	0.000000	0.000000	0.000000
1-methyl-4-isopropylbenzene	C10H14	0.002879	0.004160	0.005855
2-methylnonane	C10H22	0.000000	0.000000	0.000000
3-ethyloctane	C10H22	0.003585	0.006206	0.007729
3-methylnonane	C10H22	0.001592	0.002849	0.003432
4-methylnonane	C10H22	0.004299	0.007704	0.009268
butylbenzene	C10H14	0.000000	0.000000	0.000000
butylcyclohexane	C10H20	0.000842	0.001363	0.001790
isobutylbenzene	C10H14	0.000748	0.001086	0.001521
naphthalene	C10H8	0.000111	0.000128	0.000216
n-decane	C10H22	0.005163	0.009273	0.011131
sec-butylbenzene	C10H14	0.000000	0.000000	0.000000
tert-butylcyclohexane	C10H20	0.000924	0.001471	0.001964
Unidentified C10	C10	0.026921	0.048351	0.058039
TOTALS:		0.053605	0.091861	0.114248

C11 GROUP	FORMULA	MOL%	VOL%	WT%
n-undecane	C11H24	0.000999	0.001945	0.002366
pentylbenzene	C11H16	0.000367	0.000584	0.000824
Unidentified C11	C11	0.002991	0.005823	0.007084
TOTALS:		0.004357	0.008352	0.010274

C12 GROUP	FORMULA	MOL%	VOL%	WT%
n-dodecane	C12H26	0.000150	0.000314	0.000387
Unidentified C12	C12	0.002991	0.006270	0.007720
TOTALS:		0.003141	0.006584	0.008107

C13 GROUP	FORMULA	MOL%	VOL%	WT%
n-tridecane	C13H28	0.000000	0.000000	0.000000
Unidentified C13	C13	0.001495	0.003362	0.004176
TOTALS:		0.001495	0.003362	0.004176

	-	-		
C14 GROUP	FORMULA	MOL%	VOL%	WT%

n-tetradecane	C14H30	0.000000	0.000000	0.000000
TOTALS:	014	0.000000	0.000000	0.000000

C15+ GROUP	FORMULA	MOL%	VOL%	WT%		
n-pentadecane	C15H32	0.000000	0.000000	0.000000		
Unidentified C15	C15	0.007478	0.019075	0.024069		
TOTALS:		0.007478	0.019075	0.024069		

Fuel gas

#### NORTHERN NATURAL GAS

#### DAILY ANALYSIS

#### 0658683-02 --- OXY LEA INTERCONNECT

December, 2010

Press	ure Base:			14.730	Tem	peratur	e Base:		60.00				HV Cond	1:	Dry				Contract	Hour	\$	AW 6		
Atmos	Pressure	(psl):		12.860	Tem	peratur	e (Deg. F	•):	46.11															
Pulse	s (Counts):			44.41	Pres	ssure (P	SIG):		360.27				Meter SI	ze:	6.000									
	Relative	H2S	Wet Heating Value	Dry Heating Value	As Deliv Heating Value	C02	N2	Cl	C2	C3	104	NC4	ICS	NCS	C6+	C2	C3	IC4	NC4	ICS	NCS	C6+	C2+	C5+
DAY	Density	PPM	(btu/scf)	(btu/scf)	(btu/sef)	Mol%	Mol%	Mol%	Mol%	Mol%	Mol%	Mol%	Mol%	Mol%	Mol%	GPM	GPM	GPM	GPM	GPM	GPM_	GPM	GPM_	GPM
1	0.6549	0.000	1042.05	1060,50	0.00	0.010	6.644	81.994	8.431	2.393	0.167	0.289	0.035	0.027	0.010	2.254	0.659	0.055	0.091	0.013	0.010	0.004	3.086	0.027
2	0.5955	0.000	1005.12	1022.93	0.00	0.181	3.050	92.148	4,006	0.486	0.034	0.063	0.010	0.009	0.012	1.071	0.134	0.011	0.020	0.004	0.003	0.005	1.248	0.012
3	0.6256	0.000	1023.59	1041.72	0.00	0.088	4.899	86.947	6.312	1.431	0.099	0.174	0.022	0.018	0.011	1.688	0.394	0.032	0.055	0.008	0.006	0.005	2.188	0.019
4	0.6165	0.000	1019.60	1037.66	0.00	0.132	4.216	88.490	5.826	1.073	0.074	0.141	0.020	0.017	0.011	1.558	0.296	0.024	0.044	0.007	0.006	0.005	1.940	0.018
5	0.5862	0.000	1003.72	1021,49	0.00	0,180	2.261	93,923	3.282	0.249	0.022	0.041	0.011	0.010	0.022	0.877	0.068	0.007	0.013	0.004	0.004	0.009	0.983	0.017
6	0.5832	0.000	1001.44	1019.18	0.00	0,163	2.142	94.439	2.989	0.173	0.018	0.034	0.010	0.010	0.021	0.799	0.048	0.006	0.011	0.004	0.004	0.009	0.880	0.017
7	0.5926	0.000	1005.50	1023.31	0.00	0.200	2.722	92.769	3.746	0.437	0.033	0.059	0.010	0.009	0.014	1.001	0.120	0.011	0.019	0.004	0.003	0.006	1.164	0.013
8	0.6075	0.000	1015.47	1033,45	0,00	0.183	3.540	90.170	5.050	0.846	0.060	0.107	0.016	0.013	0.016	1.350	0.233	0.020	0.034	0.006	0.005	0.007	1.654	0.017
9	0.6551	0.000	1048.44	1067,01	0.00	0.085	6.156	82.454	8.170	2,500	0.193	0.345	0.045	0.036	0.016	2.185	0.688	0.063	0.109	0.017	0.013	0.007	3.081	0.036
<b>L</b> 0	0.6273	0.000	1031.11	1049.37	0.00	0.190	4.440	87.087	6.335	1.532	0.121	0.221	0.032	0.026	0.015	1.694	0.422	0.040	0.070	0.012	0.009	0.006	2.253	0.027
11	0.6116	0.000	1020.65	1038.73	0.00	0.160	3.646	89.753	5.073	1.040	0.087	0,165	0.028	0.024	0.024	1,356	0.286	0.028	0.052	0.010	0.009	0.010	1.752	0.029
12	0.6343	0.000	1034.41	1052.73	0.00	0.104	5.024	85.647	7.130	1.664	0.127	0.233	0.032	0.026	0.013	1.906	0.458	0.042	0.073	0.012	0.010	0.005	2,506	0.027
13	0.6551	0.000	1043.46	1061.94	0.00	0.016	6,563	82.016	8.461	2.405	0.170	0.295	0.036	0.028	0.011	2.262	0.662	0.056	0.093	0.013	0.010	0.005	3.101	0.028
14	0.6007	0.000	1010.91	1028.82	0.00	0.199	3.161	91.328	4.496	0.648	0.047	0.081	0.013	0.011	0.014	1.202	0.179	0.015	0.026	0.005	0.004	0.006	1.437	0.015
15	0.6037	0.000	1014.38	1032,34	0.00	0.206	3.214	91.023	4.516	0.823	0.060	0.107	0.017	0.015	0.020	1.207	0.227	0.020	0.034	0.006	0.005	0.008	1.507	0.020
16	0.5838	0.000	1002.71	1020.47	0.00	0.283	1.937	94.531	2.949	0.190	0.021	0.038	0.012	0.011	0,027	0.789	0.052	0.007	0.012	0.004	0.004	0.011	0.879	0.020
17	0.5837	0.000	1002.94	1020.71	0.00	0.286	1.913	94.527	2,990	0.180	0.020	0.036	0.012	0.011	0.025	0.799	0.050	0.007	0.011	0.004	0,004	0.011	0.886	0.019
18	0.6493	0.000	1039.83	1058.25	0.00	0.040	6,201	83.012	8.019	2.241	0.152	0.267	0.032	0.025	0.011	2.144	0.617	0.050	0.084	0.012	0.009	0.005	2,920	0.025
19	0.6230	0.000	1025.21	1043.36	0.00	0.118	4,504	87.533	6.096	1.457	0.087	0.165	0.018	0.015	0.008	1.630	0.401	0.028	0.052	0.007	0.005	0.003	2.127	0.016
20	0.6284	0.000	1029,61	1047.85	0.00	0.125	4.729	86.635	6.583	1.595	0.100	0.184	0.021	0.017	0.010	1.760	0.439	0.033	0.058	0.008	0.006	0.004	2,308	0.019
21	0.6371	0.000	1034,08	1052,39	0.00	0.091	5.335	85.155	7.137	1.871	0.125	0.222	0.028	0.022	0.013	1.908	0,515	0.041	0.070	0.010	0.008	0.006	2.558	0.024
22	0.5850	0.000	1000.84	1018.56	0.00	0.207	2.279	94.110	3.117	0.194	0.019	0.035	0.010	0.009	0.020	0.833	0.053	0.006	0.011	0.004	0.003	0.008	0.919	0.015
23	0.6221	0.000	1025.27	1043.43	0.00	0.122	4.411	87.731	6.034	1.385	0.094	0.167	0.022	0.018	0.015	1.613	0.382	0.031	0.053	0.008	0.006	0.006	2.099	0.021
24	0.6240	0.000	1026.52	1044.71	0.00	0.150	4.471	87.498	6.092	1.437	0.104	0.181	0.025	0.021	0.020	1.629	0.396	0.034	0.057	0.009	0.007	0.008	2.141	0.025
25	0.5880	0.000	1004,62	1022.41	0,00	0.271	2,235	93.760	3.300	0.305	0,029	0.050	0.013	0.011	0.024	0.882	0.084	0.009	0.016	0.005	0.004	0.010	1.011	0.019
26	0.5827	0.000	998.14	(015.82	0.00	0.257	2.156	94.575	2.792	0.138	0.016	0.027	0.009	0,008	0.023	0.746	0.038	0.005	0.009	0.003	0.003	0.010	0.814	0.016
27	0.5830	0.000	998.93	1016.62	0.00	0.252	2.144	94.490	2.895	0.142	0.015	0.025	0.008	0.007	0.020	0.774	0.039	0.005	0.008	0.003	0.003	0.009	0,840	0.014
28	0.6177	0.000	1024.22	1042.36	0.00	0.156	4.010	88,583	5.666	1.294	0.084	0.154	0.020	0.017	0.015	1.515	0.356	0.028	0.049	0.007	0.006	0,007	1.967	0.020
29	0.6361	0.000	1032.44	1050.72	0.00	0.099	5.319	85.375	6.963	1.821	0.130	0.225	0.029	0.023	0.015	1.862	0.502	0.043	0.071	0.011	0.008	0.007	2.302	0.020
31	0 5872	0.000	1034,00	1052,31	0.00	0.080	5.248	63,387 03.020	7.015	1.855	0.126	0.224	0,028	0.022	0.014	1.8/0	0.311	0.041	0.018	0.006	0.005	0.011	0.965	0.021
ه می میرونی میریدی - میرونی میریدی	0.5072	0.000	1003,03	1021,41	0.00	U.231	2.280	73.747	3.084 	0.323	0.032	0.037	0.013	0.013	0.020	V.02)	0.070	0.011	0.044	0.000	0.004	0.007	1 815	0.021
- Aver.1	0.0135	0.000	1019.40	1037.52	0.00	0.157	3,900	89,254	2.210	1.102	0.080	0.142	0,021	0.017	0.017	1.420	0.303	0.020	0.045	0.000	0,000	0.001	1.015	0.021

Report prepared by the Flow-Cal@ Enterprise System. Copyright © 2002, 2009 Flow-Cal, Inc. Houston, Texas

Page I

#### Fuel Gas

Fuel Gas										J						
	Maximum	Average		Average M	W Fuel Gas [/	All Constituents]										
<u>Gas Analysis</u>	Mole %	Mole %	Mol Wt.	MWi	Wt %											
Nitrogen	6.156	3.900	28.02	1.09	6.16											
Carbon dioxide	0.085	0.16	44.01	0.07	0.39	Maximum	Maximum VOC MW				Average VOC MW					
Hydrogen Sulfide	0	0	34.08	0.00	NA											
Methane	82.45	89.25	16.04	14.32	80.74	VOC Mole 9	%	VOC		VOC Mole %		VOC				
Ethane	8.17	5.31	30.07	1.60	9.00	Normalized	Mol Wt.	<u>MWi</u>	<u>Wt %</u>	Normalized	Mol Wt.	<u>MWi</u>	<u>Wt %</u>			
Propane	2.5000	1.1020	44.09	0.49	2.74	0.80	44.09	35.16	74.12	0.80	44.09	35.24	73.96			
Isobutane	0.1930	0.0800	58.12	0.05	0.26	0.06	58.12	3.58	7.54	0.06	58.12	3.37	7.08			
n-Butane	0.3450	0.1420	58.12	0.08	0.47	0.11	58.12	6.40	13.48	0.10	58.12	5.98	12.56			
Isopentane	0.0450	0.0210	72.15	0.02	0.09	0.01	72.15	1.04	2.18	0.02	72.15	1.10	2.31			
n-pentane	0.0360	0.0170	72.15	0.01	0.07	0.01	72.15	0.83	1.75	0.01	72.15	0.89	1.87			
Hexanes +	0.0160	0.0170	86.17	0.01	0.08	0.01	86.17	0.44	0.93	0.01	86.17	1.06	2.23			
Heptanes +	0.0000	0.0000	86.17	0.00	NA	0.00	86.17	0.00	0.00	0.00	86.17	0.00	0.00			
Benzene	0	0	78.11	0.00	NA	0.00	78.11	0.00	0.00	0.00	78.11	0.00	0.00			
Toluene	0	0	92.14	0.00	NA	0.00	92.14	0.00	0.00	0.00	92.14	0.00	0.00			
Ethylbenzene	0	0	106.17	0.00	NA	0.00	106.17	0.00	0.00	0.00	106.17	0.00	0.00			
xylene	0	0	106.17	0.00	NA	0.00	106.17	<u>0.00</u>	0.00	0.00	106.17	<u>0.00</u>	0.00			
Other sulfur compounds	<u></u>	<u></u>	0.00	0.00	NA											
	100.00	100.00		17.73	100.00	1.00		47.44	100.00	1.00		47.64	100.00			
H2S	0.00	0.00			NA	density	VOC	7.99	scf/ib	density	VOC	7.95	scf/lb			
VOC (C3+) - Average VOC (C3+) - Rounded up for Permit	3.14 <b>5.0</b>	1.38			3.7 <b>5.0</b>	VOC MW	for Permitt	ing = 50		1						

Reference: Northern Natural Gas, December 2010.

## **Air Permit Technical Guidance for Chemical Sources**

**Fugitive Guidance** 

APDG 6422

## Air Permits Division Texas Commission on Environmental Quality

June 2018

### Table II: Facility/Compound Specific Fugitive Emission Factors

Equipment/Service	Compound Specific See Section I for more information				Facility Spe	cific ¹			
	Ethylene Oxide ² w/LDAR	Phosgene ³ w/LDAR	Butadiene w/LDAR⁴	Petroleum Marketing Terminal ^{5, 6} w/28PET	Oil and Gas ProductionOperation ⁶ Refir		Refinery 6		
					Gas	Heavy Oil < 20 API	Light Oil	Water/ Light Oil	
Valves					0.00992	0.0000185	0.0055	0.000216	
Gas/Vapor	0.000444	0.00000216	0.001105	0.0000287					0.059
Light Liquid	0.00055	0.00000199	0.00314	0.0000948					0.024
Heavy Liquid				0.0000948					0.00051
Pumps	0.042651	0.0000201	0.05634		0.00529	0.00113 ⁷	0.02866	0.000052	
Light Liquid				0.00119					0.251
Heavy Liquid				0.00119					0.046
Flanges/Connectors ¹¹	0.000555	0.00000011	0.000307		0.00086	0.0000086	0.000243	0.000006	0.00055
					0.00044	0.0000165	0.000463	0.000243	
Gas/Vapor				0.000092604					
Light Liquid				0.00001762					
Heavy Liquid				0.0000176					
Compressors	0.000767		0.000004		0.0194	0.0000683	0.0165	0.0309	1.399
Relief Valve	0.000165	0.0000162	0.02996		0.0194	0.0000683	0.0165	0.0309	0.35
Open-ended Lines ⁸	0.001078	0.0000007	0.00012		0.00441	0.000309	0.00309	0.00055	0.0051
Sampling [®]	0.000088		0.00012						0.033
Other ¹⁰					0.0194	0.0000683	0.0165	0.0309	
Gas/Vapor				0.000265					
Light/Heavy Liquid				0.000287					
Process Drains					0.0194	0.0000683	0.0165	0.0309	0.07

#### Endnotes Table II

- ¹ Factors give the total organic compound emission rate. Multiply by the weight percent of non-methane, non-ethane organics to get the VOC emission rate.
- ² These emission factors require the use of the 28MID fugitive program. Monitoring must occur at a leak definition of 500 ppmv. No additional control credit can be applied to these factors except 28CNTQ and 28CNTA. Emission factors are from EOIC Fugitive Emission Study, summer 1988.
- ³ These emission factors require the use of the 28MID fugitive program. Monitoring must occur at a leak definition of 50 ppmv. No additional control credit can be applied to these factors. Emission factors are from Phosgene Panel Study, summer 1988.
- ⁴ These emission factors require the use of the 28MID fugitive program. Monitoring must occur at a leak definition of 100 ppmv. No additional control credit can be applied to these factors. Emission factors are from Randall, J. L., et al., Radian Corporation. Fugitive Emissions from the 1,3-butadiene Production Industry: A Field Study. Final Report. Prepared for the 1,3-Butadiene Panel for the Chemical Manufacturers Association. April 1989.
- ⁵ Control credit is included in the factor; no additional control credit can be applied to these factors. Monthly 28 PET inspection is required.
- ⁶ Factors are taken from EPA Document EPA-453/R-95-017, November 1995, pages 2-13, 2-14, and 2-15.
- ⁷ Heavy liquid oil Pump factor was not derived during the API study. The factor is the SOCMI without C₂ Heavy Liquid – Pump factor with a 93% reduction credit for the physical inspection.

- ⁸ The 28 Series quarterly LDAR programs require open-ended lines to be equipped with a cap, blind flange, plug, or a second valve. If so equipped, open-ended lines may be given a 100% control credit.
- ⁹ Emission factor for sampling connections is in terms of pounds per hour per sample taken.
- ¹⁰ For Petroleum Marketing Terminals, "Other" includes any component excluding fittings, pumps, and valves. For Oil and Gas Production Operations, "Other" includes diaphragms, dump arms, hatches, instruments, meters, polished rods, and vents.
- ¹¹ For Oil and Gas Production Operations, separate factors are given for "Flanges" and "Connectors." The factor for "flanges" is shown on the top line, and the factor for "connectors" is on the line below

Equipment/Service	28M	28RCT	28VHP	28MID	28LAER	28CNTQ	28CNTA	28PI	28AVO ⁹
Valves ¹									97%
Gas/Vapor	75%	97%	97%	97%	97%			30%	
Light Liquid	75%	97%	97%	97%	97%			30%	
Heavy Liquid⁵	0% ⁶	0% ⁶	0% ⁶	0% ⁶	30% ^{6, 8}			30% ⁸	
Pumps ¹									93%
Light Liquid	75%	75%	85%	93%	93%			30%	
Heavy Liquid⁵	0%	0%7	0% ⁷	0% ^{8, 10}	30% ⁸			30% ⁸	
Flanges/Connectors ¹	30%	30%	30%	30%				30%	97%
Gas/Vapor					97%	97%	75%		
Light Liquid					97%	97%	75%		
Heavy Liquid ⁸					30%	30%	30%		
Compressors ¹	75%	75%	85%	95%	95%			30%	95%
<b>Relief Valves^{1, 2}</b> (Gas/Vapor)	75%	97%	97%	97%	97%			30%	97%
Sampling Connection ³ (pounds per hour per sample taken)	0%	0%	0%	0%	0%			0%	0%
Open Ended Lines ^{1, 4}									

### Table V: Control Efficiencies for LDAR

It should be noted in the application and added to the permit conditions if any of the footnotes are applicable. For example, if components in heavy liquid service are monitored, then the application should include the monitored concentration and the concentration of saturation, in ppmv and such monitoring will be added as a separate condition.

### Endnotes Table V

- ¹ Control efficiencies apply only to components that are actually monitored. Control efficiencies do not apply to components that are difficult or unsafe-to-monitor on the standard schedule. However, difficult-to-monitor gas or light liquid valves under the 28RCT, 28VHP, 28MID, or 28LAER programs that are monitored once per year may apply a 75% reduction credit.
- ² 100% control may be taken if a relief valve vents to an operating control device or if it is equipped with a rupture disc and a pressure-sensing device between the valve and disc to monitor for disc integrity. For new facilities, BACT guidelines generally require that all relief valves vent to a control device. When there are safety reasons that the relief valve cannot achieve 100% control, the relief valve can be monitored under the LDAR programs for the credit listed. This monitoring must be performed regardless of whether the relief valve is considered accessible, difficult-to-monitor or unsafe-to-monitor. Relief valves that do not achieve 100% control should not be built in locations that are unsafe-to-monitor.
- ³ Sampling connection control efficiencies are covered under other equipment and services. Sampling emissions are based on the number of samples taken per year as opposed to the number of connections. Fugitives for a closed loop sampling system are based on the component count.
- ⁴ Good design criteria for special chemicals handling and most LDAR programs require open-ended lines to be equipped with an appropriately sized cap, blind flange, plug, or a second valve. If so equipped, open-ended lines may be given a 100% control credit. Regardless of the lines given 100% credit, these lines should be mentioned in permit applications. Exceptions to the LDAR program criteria may be made for safety reasons with the approval of TCEQ management.

- ⁵ Monitoring components in heavy liquid service using an instrument is not required by any of the 28 Series LDAR programs. If monitored with an instrument, the applicant must demonstrate that the VOC being monitored has sufficient vapor pressure to allow for reduction credit. Monitoring near or below background concentration is unreasonable and additional credit is not given for monitoring generic VOC below 500 ppmv. Credit will be given in cases where a specific compound is monitored below 500 ppmv when sufficient demonstration has been made of the ability to monitor at the specified concentration and there is no concern about the monitoring concentration being close to the background concentration. No credit may be taken if the concentration at saturation is below the leak definition of the monitoring program (i.e. (0.044 psia/14.7 psia) x 10⁶ = 2,993 ppmv versus leak definition = 10,000 ppmv).
- ⁶ If the concentration at saturation is greater than the leak definition. Contact the TCEQ to determine whether valves in heavy liquid service may be given a 97% credit if monitored at 500 ppmy
- ⁷ If the concentration at saturation is greater than the leak definition. Contact the TCEQ to determine whether pumps in heavy liquid service may be given a 85% reduction credit if monitored at 2,000 ppmv.
- ⁸ Ultra heavy liquid with a vapor pressure < 0.0147 psia at operating temperature may receive higher emission reduction credit (matching the credit of 28AVO) provided a 28PI inspection program is performed on these components.</p>
- ⁹ Audio, Visual and Olfactory (AVO) AVO credit is based on the chemical constituent, not vapor pressure or service type. This program (28AVO) is approved for chlorine, ammonia, hydrogen sulfide, hydrogen fluoride, mercaptans, and hydrogen cyanide only.
- ¹⁰ If the concentration at saturation is greater than the leak definition. Contact the TCEQ to determine whether pumps in heavy liquid service may be given a 93% credit if monitored at 500 ppmv.

Combustor Type	Ν	$\mathrm{IO}_{\mathrm{x}}{}^{\mathrm{b}}$	СО		
(MMBtu/hr Heat Input) [SCC]	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]					
Uncontrolled (Pre-NSPS)°	280	А	84	В	
Uncontrolled (Post-NSPS) ^c	190	А	84	В	
Controlled - Low NO _x burners	140	А	84	В	
Controlled - Flue gas recirculation	100	D	84	В	
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]					
Uncontrolled	100	В	84	В	
Controlled - Low NO _x burners	50	D	84	В	
Controlled - Low NO _x burners/Flue gas recirculation	32	С	84	В	
Tangential-Fired Boilers (All Sizes) [1-01-006-04]					
Uncontrolled	170	А	24	С	
Controlled - Flue gas recirculation	76	D	98	D	
Residential Furnaces (<0.3) [No SCC]					
Uncontrolled	94	В	40	В	

## Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NOx) AND CARBON MONOXIDE (CO)FROM NATURAL GAS COMBUSTIONa

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from lb/10 ⁶ scf to kg/10⁶ m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from 1b/10 ⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.
 ^b Expressed as NO₂. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO x emission factor. For

^b Expressed as NO₂. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO x emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO x emission factor.
 ^c NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat

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

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	А
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	Е
N ₂ O (Controlled-low-NO _X burner)	0.64	Е
PM (Total) ^c	7.6	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	В
$\mathrm{SO}_2^{\mathrm{d}}$	0.6	А
ТОС	11	В
Methane	2.3	В
VOC	5.5	С

## TABLE 1.4-2.EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE<br/>GASES FROM NATURAL GAS COMBUSTIONa

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

^b Based on approximately 100% conversion of fuel carbon to CO₂.  $CO_2[lb/10^6 \text{ scf}] = (3.67)$  (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel,  $4.2 \times 10^4 \text{ lb}/10^6 \text{ scf}$ .

^c All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

^d Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

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

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene ^{b, c}	2.4E-05	D
56-49-5	3-Methylcholanthrene ^{b, c}	<1.8E-06	E
	7,12- Dimethylbenz(a)anthracene ^{b,c}	<1.6E-05	E
83-32-9	Acenaphthene ^{b,c}	<1.8E-06	Е
203-96-8	Acenaphthylene ^{b,c}	<1.8E-06	Е
120-12-7	Anthracene ^{b,c}	<2.4E-06	Е
56-55-3	Benz(a)anthracene ^{b,c}	<1.8E-06	E
71-43-2	Benzene ^b	2.1E-03	В
50-32-8	Benzo(a)pyrene ^{b,c}	<1.2E-06	Е
205-99-2	Benzo(b)fluoranthene ^{b,c}	<1.8E-06	Е
191-24-2	Benzo(g,h,i)perylene ^{b,c}	<1.2E-06	Е
207-08-9	Benzo(k)fluoranthene ^{b,c}	<1.8E-06	Е
106-97-8	Butane	2.1E+00	Е
218-01-9	Chrysene ^{b,c}	<1.8E-06	Е
53-70-3	Dibenzo(a,h)anthracene ^{b,c}	<1.2E-06	Е
25321-22- 6	Dichlorobenzene ^b	1.2E-03	E
74-84-0	Ethane	3.1E+00	Е
206-44-0	Fluoranthene ^{b,c}	3.0E-06	Ε
86-73-7	Fluorene ^{b,c}	2.8E-06	Ε
50-00-0	Formaldehyde ^b	7.5E-02	В
110-54-3	Hexane ^b	1.8E+00	Е
193-39-5	Indeno(1,2,3-cd)pyrene ^{b,c}	<1.8E-06	Е
91-20-3	Naphthalene ^b	6.1E-04	Е
109-66-0	Pentane	2.6E+00	Е
85-01-8	Phenanathrene ^{b,c}	1.7E-05	D
74-98-6	Propane	1.6E+00	E

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

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
129-00-0	Pyrene ^{b, c}	5.0E-06	Е
108-88-3	Toluene ^b	3.4E-03	С

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired.
 Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from 1b/10⁶ scf to lb/MMBtu, divide by 1,020. Emission Factors preceeded with a less-than symbol are based on method detection limits.

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

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

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

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
7440-38-2	Arsenic ^b	2.0E-04	Е
7440-39-3	Barium	4.4E-03	D
7440-41-7	Beryllium ^b	<1.2E-05	Е
7440-43-9	Cadmium ^b	1.1E-03	D
7440-47-3	Chromium ^b	1.4E-03	D
7440-48-4	Cobalt ^b	8.4E-05	D
7440-50-8	Copper	8.5E-04	С
7439-96-5	Manganese ^b	3.8E-04	D
7439-97-6	Mercury ^b	2.6E-04	D
7439-98-7	Molybdenum	1.1E-03	D
7440-02-0	Nickel ^b	2.1E-03	С
7782-49-2	Selenium ^b	<2.4E-05	Е
7440-62-2	Vanadium	2.3E-03	D
7440-66-6	Zinc	2.9E-02	Е

TABLE 1.4-4. EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION^a

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. Emission factors preceded by a less-than symbol are based on method detection limits. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by l6. To convert from lb/10⁶ scf to 1b/MMBtu, divide by 1,020.

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

🛗 Displaying title 40, up to date as of 1/07/2025. Title 40 was last amended 1/07/2025. Ø

Title 40 — Protection of Environment Chapter I — Environmental Protection Agency Subchapter C — Air Programs Part 98 — Mandatory Greenhouse Gas Reporting Subpart C — General Stationary Fuel Combustion Sources

⊙ Table C-1 to Subpart C of Part 98—Default CO₂ Emission Factors and High Heat Values for Various Types of Fuel

DEFAULT CO2 EMISSION FACTORS AND HIGH HEAT VALUES FOR VARIOUS TYPES OF FUEL

Fuel type	Default high heat value	Default CO ₂ emission factor
Coal and coke	mmBtu/short ton	kg CO ₂ /mmBtu
Anthracite	25.09	103.69
Bituminous	24.93	93.28
Subbituminous	17.25	97.17
Lignite	14.21	97.72
Coal Coke	24.80	113.67
Mixed (Commercial sector)	21.39	94.27
Mixed (Industrial coking)	26.28	93.90
Mixed (Industrial sector)	22.35	94.67
Mixed (Electric Power sector)	19.73	95.52
Natural gas	mmBtu/scf	kg CO ₂ /mmBtu
(Weighted U.S. Average)	1.026 × 10 ⁻³	53.06
Petroleum products—liquid	mmBtu/gallon	kg CO ₂ /mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10
Used Oil	0.138	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG) ¹	0.092	61.71
Propane ¹	0.091	62.87

### 🛗 Displaying title 40, up to date as of 1/07/2025. Title 40 was last amended 1/07/2025. Ø

There has been one change in the last two weeks to Table C-2 to Subpart C of Part 98.

Title 40 —Protection of Environment Chapter I —Environmental Protection Agency Subchapter C —Air Programs Part 98 —Mandatory Greenhouse Gas Reporting Subpart C —General Stationary Fuel Combustion Sources

#### • Table C-2 to Subpart C of Part 98–Default CH₄ and N₂O Emission Factors for Various Types of Fuel

Fuel type	Default $CH_4$ emission factor (kg $CH_4$ /mmBtu)	Default N ₂ O emission factor (kg N ₂ O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1 × 10 ^{−02}	1.6 × 10 ^{−03}
Natural Gas ¹	1.0 × 10- ⁰³	1.0 × 10- ⁰⁴
Petroleum Products (All fuel types in Table C-1)	3.0 × 10 ⁻⁰³	$6.0 \times 10^{-04}$
Fuel Gas	3.0 × 10 ⁻⁰³	$6.0 \times 10^{-04}$
Other Fuels—Solid	3.2 × 10 ⁻⁰²	4.2 × 10 ⁻⁰³
Blast Furnace Gas	2.2 × 10 ⁻⁰⁵	1.0 × 10 ⁻⁰⁴
Coke Oven Gas	4.8 × 10 ⁻⁰⁴	1.0 × 10 ⁻⁰⁴
Biomass Fuels—Solid (All fuel types in Table C-1, except wood and wood residuals)	3.2 × 10 ^{−02}	4.2 × 10 ⁻⁰³
Wood and wood residuals	7.2 × 10 ⁻⁰³	3.6 × 10 ⁻⁰³
Biomass Fuels—Gaseous (All fuel types in Table C-1)	3.2 × 10 ^{−03}	6.3 × 10 ⁻⁰⁴
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1 × 10 ⁻⁰³	1.1 × 10 ^{−04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the "Energy Industry" or "Manufacturing Industries and Construction". In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC "Energy Industry" category may employ a value of 1g of  $CH_4$ /mmBtu.

🛗 Displaying title 40, up to date as of 1/07/2025. Title 40 was last amended 1/07/2025. Ø

There has been one change in the last two weeks to Table A-1 to Subpart A of Part 98.

Title 40 — Protection of Environment Chapter I — Environmental Protection Agency Subchapter C — Air Programs Part 98 — Mandatory Greenhouse Gas Reporting Subpart A — General Provision

• Table A-1 to Subpart A of Part 98–Global Warming Potentials, 100-Year Time Horizon

# TABLE A-1 TO SUBPART A OF PART 98—GLOBAL WARMING POTENTIALS, 100-YEAR TIME HORIZON

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)			
Chemical-Sf	PECIFIC GWPs					
Carbon dioxide	124-38-9	CO ₂	1			
Methane	74-82-8	CH ₄	^{ad} 28			
Nitrous oxide	10024-97- 2	N ₂ O	^{ad} 265			
Fully Fluor	FULLY FLUORINATED GHGs					
Sulfur hexafluoride	2551-62-4	SF ₆	^{ad} 23,500			
Trifluoromethyl sulphur pentafluoride	373-80-8	$SF_5 CF_3$	^d 17,400			
Nitrogen trifluoride	7783-54-2	NF ₃	^d 16,100			
PFC-14 (Perfluoromethane)	75-73-0	CF ₄	^{ad} 6,630			
PFC-116 (Perfluoroethane)	76-16-4	C ₂ F ₆	ad 11,100			
PFC-218 (Perfluoropropane)	76-19-7	$C_3 F_8$	^{ad} 8,900			
Perfluorocyclopropane	931-91-9	c-C ₃ F ₆	^d 9,200			
PFC-3-1-10 (Perfluorobutane)	355-25-9	C ₄ F ₁₀	^{ad} 9,200			
PFC-318 (Perfluorocyclobutane)	115-25-3	c-C ₄ F ₈	^{ad} 9,540			
Perfluorotetrahydrofuran	773-14-8	c-C ₄ F ₈ O	^e 13,900			
PFC-4-1-12 (Perfluoropentane)	678-26-2	$C_5 F_{12}$	^{ad} 8,550			
PFC-5-1-14 (Perfluorohexane, FC-72)	355-42-0	C ₆ F ₁₄	^{ad} 7,910			

#### Texas Commission on Environmental Quality Air Permits Division New Source Review (NSR) Emission Calculations

This information is maintained by the Chemical NSR Section and is subject to change. Last update was made March 2021. These emission calculations represent current NSR guidelines and are provided for informational purposes only. The emission calculations are subject to change based on TCEQ case by case evaluation. Please contact the appropriate Chemical NSR Section management if there are questions related to the emission calculations.

#### Sample Calculations for Flares

The flare destruction efficiencies and emission factors are used in the sample calculations that follow. The TCEQ accepted destruction efficiencies and emission factors used in the sample calculations are included in Attachment A. Assuming an ideal gas mixture, use the ideal gas law to convert the volumetric flow rates from Attachment B (table template uses TCEQ NSR Table 8, Flare systems) and Table 1 into mass flow rates. The values are shown in Table 2.

$$m = \frac{60(MW)PV}{RT}$$

Where:

m = mass flow rate in lb/hr, MW = molecular weight in lb/lbmole, P = standard pressure = 14.7 psia, V = flow rate in scfm,

$$R = \text{gas constant} = 10.73 \frac{psia \cdot ft^3}{lbmol \cdot {}^{o}R}$$

T = standard temperature = 528 °R

Constituent	Average Case		Maximu	ım Case
	scfm	Mole %	scfm	Mole %
Butane	10.16	5.08	12.70	5.08
Propylene	5.94	2.97	7.43	2.97
Propane	5.08	2.54	6.35	2.54
Ethylene	84.74	42.37	105.93	42.37
Ethane	37.28	18.64	46.60	18.64
Hydrogen	22.04	11.02	27.55	11.02
Ammonia	4.24	2.12	5.30	2.12
Inerts	30.50	15.26	38.15	15.26
Totals	200.00	100.00	250.00	100.00

Table 1	Masta	Ctracm	Constituente		Mala	Dereent
Table 1	. vvaste	Stream	Constituents	IN	iviole	Percent

Waste Stream⁵	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
СО	case-by-case

Air Contaminants	Emission Factors	Btu	lb/MMBtu
Thermal NO _x	Steam-assist	High Btu	0.0485 lb/MMBtu
		Low Btu	0.068 lb/MMBtu
	Other	High Btu	0.138 lb/MMBtu
		Low Btu	0.0641 lb/MMBtu

Air Contaminants	Emission Factors
Fuel NO _x	$NO_x$ is 0.5 wt percent of inlet $NH_3$ in the sample calculations. The actual conversion of ammonia and other fuels to Fuel $NO_x$ are subject to case-by-case review.

Air Contaminants	Emission Factors	Btu	lb/MMBtu
со	Steam-assist	High Btu	0.3503 lb/MMBtu
		Low Btu	0.3465 lb/MMBtu
	Other	High Btu	0.2755 lb/MMBtu
		Low Btu	0.5496 lb/MMBtu

Air Contaminants	Emission Factors
РМ	None, required to be smokeless
SO ₂	100 percent S in fuel to SO ₂

⁵The 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.

FLARE

### **REPRESENTATIVE MANUFACTURER'S SPECIFICATIONS**



This flare is representative of the new RCF Flare that Oxy will construct. The flare height will be 194 feet above ground level with the foundation built.

## Oxy Permian Ltd. Self Supported Stack PF-120 Pipe Flare 185' Tall (overall height)



Ref: CF18.26986 Date: June 3, 2019



## **PIPEFLARE SPECIFICATIONS:**

PF-120 w/ velocity seal

CORONA REF. NO: CF18.2698

Flares for the Future	I		verocity	scal		J	une 3, 2019	
PROCESS DATA			UTILITIES					
GAS STREAM			PILOT FUEL	GAS		100 SCFH	I - per pilot	
FLOW MAXIMUM	338 mmscfd (incl.	38 mmscfd assist)	PURGE GAS0.7			0.7 to 0.	0.7 to 0.8 mmscfd	
FLOW MINIMUM	PURGE		ASSIST / ENRICHMENT GAS			Up to 38 mmscfd		
MOLECULAR WEIGHT	39.2 to 39.9	(incl. assist)	PILOTS					
TEMPERATURE	98	3°F	QUANTITY		Four	ТҮРЕ	CHT Electronic	
INLET PRESSURE	< 1	" H2O	THERMOCOU	UPLES	n/a	ТҮРЕ	n/a	
SMOKELESS CAPACITY	1	ı/a						
DIMENSIONS (approx.)				$\wedge$			ון	
HEIGHT 10' - 0"	WIDTH	10' - 0"	Pilot Nozzle				Wind	
WEIGHT	6000 lbs			//1			Deflectors	
MATERIALS								
UPPER BODY (5')	31	0 SS						
LOWER BODY (5')	31	0 SS			╧╢╢		<u>Ц</u>	
PILOT	31	0 SS						
PILOT NOZZLE	31	0 SS			IŲUL			
LIFTING LUGS	31	0 SS				Flare		
PILOT MANIFOLD	31	0 SS				Бойу		
IGNITION MANIFOLD	Flexible Stainless Steel							
AIR LOCK SEAL	31	0 SS						
NON DESTRUCTIVI	E EXAMINAT	ION						
RADIOGRAPHY	10 % of butt we	elds	/					
OTHER NDE	PT of lifting lug	35	Inspirator		⇒ļ			
			Assembly	,ЩO=	- <u> </u>		5	
SURFACE FINISH / P	PAINT (carbon st	eel)	Pilot			1	-	
SANDBLAST	SP-10		Manifold Inlet	Ignition	_			
PRIMER	SW Heat Flex HT 1200			Manifold N Inlet			lain Gas	
ТОР СОАТ	SW Heat Flex HT	1200 Oxy Tan		- *		imet		
			This offer may not in	clude all iten	ns show.			
<b>TERMINAL POINTS</b>								
GAS INLET	120"	Carbon Steel Plate	Flange					
IGNITION INLET	1-1/2"	FNPT						
PILOT INLET	1"	Class 150 RFWN	A-105					

# Section 8

## Map(s)

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

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



## 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.  $\square$  A copy of the property tax record (20.2.72.203.B NMAC).
- 4.  $\square$  A sample of the letters sent to the owners of record.
- 5. I A sample of the letters sent to counties, municipalities, and Indian tribes.
- 6.  $\square$  A sample of the public notice posted and a verification of the local postings.
- 7. 🗹 A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
- 8. 🗹 A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
- 9. ☑ A copy of the <u>classified or legal</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 10. A copy of the <u>display</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 11. I 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.

### NOTICE OF AIR QUALITY PERMIT APPLICATION

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM 2.5	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521 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.

#### Attención

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

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

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

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

#### Notice of Non-Discrimination

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

#### LEGAL NOTICE January 31, 2025

#### NOTICE OF AIR QUALITY PERMIT APPLICATION

### Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

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

> Beginning with the issue dated January 31, 2025 and ending with the issue dated January 31, 2025.

Publisher

Sworn and subscribed to before me this 31st day of January 2025.

**Business Manager** 

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

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM _{to}	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO2e	n/a	32854 tpy

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

The owner and/or operator of the Facility is: Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

Re

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

 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.

 #00297914

01100104

00297914

TRACY POWELL TRINITY CONSULTANTS, INC. 12700 PARK CENTRAL DR., STE. 600 **DALLAS, TX 75251** 

#### PUBLIC SERVICE ANNOUNCEMENT

#### NOTICE OF AIR QUALITY PERMIT APPLICATION

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas and liquid separation and extraction facility and injection plant.

The exact location for the facility, known as North Hobbs Unit Reinjection Compression Facility and West Injection Battery, is at latitude 32 degrees, 43 minutes, 15.65 seconds and longitude

-103 degrees, 12 minutes, 3.49 seconds. The approximate location of this facility is 0.5 miles southwest of the intersection of West Bender Boulevard and West Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application.

The owner of the Facility is:

Occidental Permian, Ltd. Attention: Femi Serrano 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

Notices have been posted at the following four locations:

Hobbs City Hall 200 East Broadway Street Hobbs, New Mexico 88240

Hobbs Public Library 509 North Shipp Street Hobbs, New Mexico 88240

Hobbs Post Office 2200 North Alto Drive Hobbs, New Mexico 88240

Occidental Permian, Ltd. – North Hobbs Unit Reinjection Compression Facility and West Injection Battery Plant Entrance 0.5 miles southwest of the intersection of West Bender Boulevard and West Shell Road in Hobbs, New Mexico 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 to (505) 476-4300 or 1 (800) 224-7009.

#### Submittal of Public Service Announcement – Certification

1/31/25 AARON FORRISTER, the undersigned, certify that on {DATE}, submitted a public service announcement to KZOR-FM radio that serves the City of Hobbs, Lea County, New Mexico, in which the source is or is proposed to be located and that the Radio Station responded that it would air the announcement.

Signed this 29th day of January, 2025,

1/29/25

Signature

Forriste

Printed Name

New Mexico Market Manager - Noal Mark Broad Casting Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

STATE OF NEW MEXICO NOTARY PUBLIC MARIA STEVENS **COMMISSION # 1069305** COMMISSION EXPIRES 11/15/2025

### Submittal of Public Service Announcement – Certification

I, <u>Tina Purington</u>, the undersigned, certify that on <u>January 28, 2025</u>, I submitted a public service announcement to KZOR-FM radio that serves the City of Hobbs, Lea County, New Mexico, in which the source is or is proposed to be located and that the Radio Station responded that it would air the announcement.

Signed this <u>4th</u> day of <u>February</u>, <u>2025</u>,

<u>Tina Purington</u> Signature

<u>4/2/2025</u>

Date

Tina A. Purington Associate Consultant Trinity Consultants

# NOTICE

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

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.

#### Attención

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

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

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

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

rs Madrid _____, the undersigned, certify that on **{DATE},** posted a true and ١, correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in Hobbs, Lea County, State of New Mexico on the following dates:

1. North Hobbs RCF & WIB Plant Entrance  $\frac{DATE}{1/31/25}$ 

- 1/30/25 2. Hobbs City Hall {DATE}
- 3. Hobbs Public Library {DATE} 1/30/28
- 4. Hobbs Post Office {DATE}  $\left| \frac{31}{25} \right|$

Signed this 31st day of January, 2025,

**Printed Name** 

HSE Advisor O

Title {APPLICANT OR RELATIONSHIP TO APPLICANT}





Occidental Permian, Ltd. North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB) Location of all Property Owners within 0.5 mile radius of property boundary





Mr. Alonzo Ramirez Jr. 3404 N Enterprise Rd Hobbs, NM 88240 Certified Mail: 9589 0710 5270 0003 1965 78

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7
 Facility: North Hobbs Unit Reinjection Compression Facility and West Injection Battery
 Company: Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Ramirez

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove X

Feedback

# Tracking Number: 9589071052700003196578

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to an individual at the address at 11:16 am on February 1, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 February 1, 2025, 11:16 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



Mr. Amador Reyes 4330 W Bender Blvd. Hobbs, NM 88240 Certified Mail: 9589 0710 5270 0003 1965 85

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7
 Facility: North Hobbs Unit Reinjection Compression Facility and West Injection Battery
 Company: Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Reyes

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

# **USPS Tracking**[®]

FAQs >

Remove X

Feedback

# Tracking Number: 9589071052700003196585

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to an individual at the address at 11:56 am on January 31, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 January 31, 2025, 11:56 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



February 3, 2025

Federal Express: 7718 4636 3009

Mr. Corey Needham Lea County Manager 100 Main Street, Suite 4 Lovington, NM 88260

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Gallagher

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM 2.5	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

February 3, 2025

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com



Dear Customer,

The following is the proof-of-delivery for tracking number: 771846363009

Delivery Information:			
Status:	Delivered	Delivered To:	Shipping/Receiving
Signed for by:	S.Chanesman	Delivery Location:	100 N MAIN AVESTE 4
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday		Lovington, NM, 88260
		Delivery date:	Feb 4, 2025 12:33
Shipping Information:			
Tracking number:	771846363009	Ship Date:	Feb 3, 2025
		Weight:	0.5 LB/0.23 KG
<b>Recipient:</b> Mr. Corey Needham, County Mgr, Lea County 100 Main Street Suite 4 Lovington, NM, US, 88260		<b>Shipper:</b> Tina Purington, Trinity Consultants 9737 Great Hills Trl #340 AUSTIN, TX, US, 78759	
Reference	244404.0203 4404		





Ms. Dana Vackar Strang Assistant Commissioner for Surface Resources 310 Old Santa Fe Trail Santa Fe, NM 87501 Certified Mail: 9589 0710 5270 0003 1965 92

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Ms. Strang

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM 2.5	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY DELAY FINAL ...

### **USPS Tracking**[®]

Tracking Number:

Remove X

Feedback

FAQs >

### 9589071052700003196592

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)



Your item was picked up at a postal facility at 7:53 am on February 3, 2025 in SANTA FE, NM 87501.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Individual Picked Up at Postal Facility SANTA FE, NM 87501 February 3, 2025, 7:53 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$

See Less 🔨

Track Another Package

Enter tracking or barcode numbers



Mr. Garrick Bond 1902 N Gary Ln Hobbs, NM 88240-9208 Certified Mail: 9589 0710 5270 0003 1966 39

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7
 Facility: North Hobbs Unit Reinjection Compression Facility and West Injection Battery
 Company: Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Bond

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove  $\mathbf{X}$ 

Feedback

# Tracking Number: 9589071052700003196639

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to an individual at the address at 9:47 am on February 1, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 February 1, 2025, 9:47 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



Mr. Josue G. Armendariz 4218 W Bender Blvd. Hobbs, NM 88240 Certified Mail: 9589 0710 5270 0003 1966 46

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Armendariz

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

# **USPS Tracking**[®]

FAQs >

Remove X

Feedback

Tracking Number: 9589071052700003196646

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to an individual at the address at 9:52 am on January 31, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 January 31, 2025, 9:52 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



Mr. Julio Salas 4218 W Bender Blvd. Hobbs, NM 88240 Certified Mail: 9589 0710 5270 0003 1966 53

# RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Salas

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

# **USPS Tracking**[®]

FAQs >

Remove X

Feedback

# Tracking Number: 9589071052700003196653

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to an individual at the address at 9:54 am on January 31, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 January 31, 2025, 9:54 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



Certified Mail: 9589 0710 5270 0003 1966 08

Mr. Manny Gomez Hobbs City Manager City Hall, 200 E. Broadway Hobbs, NM 88240

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Gomez

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM 2.5	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO2e	n/a	32854 tpy

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

The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove  $\mathbf{X}$ 

Feedback

# Tracking Number: 9589071052700003196608

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

#### Latest Update

Your item was delivered to the front desk, reception area, or mail room at 11:07 am on February 3, 2025 in HOBBS, NM 88240.

#### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Front Desk/Reception/Mail Room HOBBS, NM 88240 February 3, 2025, 11:07 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



Mr. Rogelio Enriquez 4320 W Bender Blvd. Hobbs, NM 88240-9208 Certified Mail: 9589 0710 5270 0003 1966 60

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Mr. Enriquez

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

The standard and maximum operating schedules of the facility will be 24 hours a day, 7 days per week and 52 weeks per year. The owner and/or operator of the Facility is:

#### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

#### Attención

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

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

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

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com
ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove  $\mathbf{X}$ 

Feedback

# Tracking Number: 9589071052700003196660

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

Your item was delivered to an individual at the address at 9:50 am on January 31, 2025 in HOBBS, NM 88240.

## Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered Delivered, Left with Individual HOBBS, NM 88240 January 31, 2025, 9:50 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



January 27, 2025

Southwestern Public Service Company PO Box 840 Denver, CO 80201

Certified Mail: 9589 0710 5270 0003 1966 77

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

To Whom It May Concern:

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM 2.5	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

January 27, 2025

The standard and maximum operating schedules of the facility will be 24 hours a day, 7 days per week and 52 weeks per year. The owner and/or operator of the Facility is:

## Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

## Attención

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

## **Notice of Non-Discrimination**

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

Sincerely,

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove X

# Tracking Number: 9589071052700003196677

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

Your item has been delivered to an agent. The item was picked up at USPS at 1:55 pm on February 1, 2025 in DENVER, CO 80202.

### Get More Out of USPS Tracking:

USPS Tracking Plus[®]

Delivered to Agent Delivered to Agent, Picked up at USPS DENVER, CO 80202 February 1, 2025, 1:55 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$
See Less 🔨	
Track Another Package	



January 27, 2025

Ms. Stephanie Garcia Richard Commissioner of Public Lands New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87501 Certified Mail: 9589 0710 5270 0003 1966 15

RE: Public Notice: Application for Permit Revision to Air Quality Permit 2656-M7Facility:North Hobbs Unit Reinjection Compression Facility and West Injection BatteryCompany:Occidental Permian, Ltd., 5 Greenway Plaza, Suite 110, Houston, TX 77046-0521

Dear Ms. Richard

Occidental Permian, Ltd. announces its application submittal to the New Mexico Environment Department for an air quality permit for the modification of its gas/liquid separation/extraction facility and injection plant. The expected date of application submittal to the Air Quality Bureau is January 30, 2025.

The exact location for the proposed facility known as, North Hobbs Unit Reinjection Compression Facility (RCF) and West Injection Battery (WIB), is/will be at latitude 32 deg, 43 min, 15.65 sec and longitude -103 deg, 12 min, 3.49 sec. The approximate location of this facility is 0.5 miles southwest of the intersection of W Bender Boulevard and W Shell Road in Hobbs, Lea County, New Mexico.

The proposed revision intends to (a) restructure and increase authorized flaring emissions and (b) restructure and apply current monitoring control credits for fugitive emissions. No physical changes are proposed with this application. Authorized flaring emissions are being restructured to simplify the permit, and authorized flaring emissions are being increased based on historical emission rates. Fugitive emissions are being restructured so that each process unit gets its own Unit ID. Authorized fugitive emissions are decreasing because the RCF and WIB have implemented fugitive monitoring programs as required by recent regulations. Emissions from other sources will remain unchanged. Site-wide emissions remain below major source threshold levels and thus the site remains a minor source with respect to both Title V and PSD.

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

Pollutant:	Pounds per hour	Tons per year
PM 10	1 pph	1 tpy
PM _{2.5}	1 pph	1 tpy
Sulfur Dioxide (SO ₂ )	4531 pph	98 tpy
Nitrogen Oxides (NO _x )	85 pph	35 tpy
Carbon Monoxide (CO)	696 pph	97 tpy
Volatile Organic Compounds (VOC)	422 pph	49 tpy
Hydrogen Sulfide (H ₂ S)	49 pph	12 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	17 pph	5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	32854 tpy

January 27, 2025

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

The owner and/or operator of the Facility is:

### Attention: Femi Serrano Occidental Permian, Ltd. 5 Greenway Plaza, Suite 110 Houston, TX 77046-0521

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.

### Attención

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

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

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

Sincerely,

Mil Z. Cut

Miranda L. Cheatham Trinity Consultants miranda.cheatham@trinityconsultants.com

ALERT: WILDFIRES AND EMERGENCY EVENTS IN THE LOS ANGELES METRO AREA U.S. MAY ...

## **USPS Tracking**[®]

FAQs >

Remove X

Feedback

# Tracking Number: 9589071052700003196615

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

Your item was picked up at a postal facility at 7:53 am on February 3, 2025 in SANTA FE, NM 87501.

### Get More Out of USPS Tracking:

USPS Tracking Plus®

Delivered Delivered, Individual Picked Up at Postal Facility SANTA FE, NM 87501 February 3, 2025, 7:53 am

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

Text & Email Updates	$\checkmark$
USPS Tracking Plus®	$\checkmark$
Product Information	$\checkmark$

See Less 🔨

## Written Description of the Routine Operations of the Facility

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

The North Hobbs Unit (NHU) Reinjection Compression Facility (RCF) and West Injection Battery (WIB) have linked processes that are described below. The function of the facility is to clean and compress  $CO_2$  field gas to reinjection pressure, separate water/hydrocarbon field liquids, and process natural gas liquids. Section 3 of this application includes the changes to be authorized with this permit revision application and Section 4 contains process flow diagrams.

 $CO_2$  field gas enters the RCF where field liquids (water/oil) are separated and routed to the WIB. The field liquids from the RCF are separated at the WIB and routed to either a sales pipeline or to liquid reinjection pumps. Gases separated at the WIB are diverted back to the RCF. There is a separate NGL processing train where the distillation separation of  $CO_2$  and NGL occurs. The NGLs are sent to the sales pipeline.

Flares are used to control emissions from routine startup, shutdown or scheduled maintenance (SSM) as well as emergency upset events. Details related to SSM activities are provided in the calculations - Section 6.

### RCF

The NHU RCF dehydrates and recompresses produced gas from field production operations to injection pressure. The RCF unit can process 300 MMscfd of produced gas (dehydration and compression) utilizing nine electric compressors (Trains A-I). The RCF also includes an NGL process train to extract NGLs. The RCF is equipped with upset systems which will divert all gases to the flare knockout, and then on to the RCF flare, if required.

Produced gas from the field enters the slug catchers at the RCF. The field gas consists of mostly  $CO_2$  with some hydrocarbon and  $H_2S$  content. Liquids from the slug catchers are diverted to the WIB production separators, while gases are sent to the dehydrators.

Two TEG units and one DexPro[™] unit are used for dehydration. TEG is regenerated by two re-generation skids. The TEG flash tank and regenerator vent streams are recycled. Under normal conditions this recycled gas is compressed by the TEG vapor recovery units (VRUs) and sent to the WIB LP compressors. In the event of an SSM or upset event, the skids are equipped with a bypass to the WIB LP flare.

Dehydrated gas is routed to either the NGL Plant or to reinjection compression. The NGL Plant separates  $CO_2$  and NGLs. The NGLs are treated and sold. The  $CO_2$ -rich gas is compressed and sent off-site for reinjection. In the event of an SSM or upset event, the compressors are equipped with a bypass to the RCF flare.

Liquids from the RCF slug catchers, dehydrators, compressor knockouts, and flare knockout are routed to the WIB production separators. All gases into the RCF flare knockout are sent to the RCF flare.

### WIB

Production separators at the WIB accept separated liquids from the RCF as well as liquids from the field. Gas that is initially separated at the WIB production separators is sent to the WIB LP compressor. This gas can also be diverted to the RCF flare knockout if required. The gas from the LP compressor is forwarded to the RCF slug catcher.

Liquids from the WIB production separators are sent to the gunbarrels to separate gas and oil from water. Water is sent to the water tank and oil is sent to the oil tanks. A spillover tank is also available in case of overflow from the other tanks. Gas is sent

Occidental Permian, Ltd.

to the VRUs, compressed by the WIB LP compressor, and sent back to the RCF slug catcher. The gas is routed to the WIB flare during VRU downtime. Water is pumped off-site to reinjection, and oil is sold by pipeline.

### NGL

The site also includes a natural gas liquids (NGL) processing train where the distillation separation of  $CO_2$  and NGL occurs. The NGLs are treated and sold. The  $CO_2$ -rich gas is compressed and sent off-site for reinjection.

## Source Determination

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

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

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

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

Occidental Permian Sites:

North Hobbs Unit RCF and WIB – Subject of Application North Hobbs Unit Central Tank Battery (CTB) – 1.1 Miles North Hobbs Unit NIB – 2.3 Miles South Hobbs Unit RCF – 3.5 Miles South Hobbs Unit CTB – 3.7 Miles

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

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

☑ Yes □ No

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

☑ Yes □ No

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

 $\Box$  Yes  $\Box$  No (Oxy has provided the supporting document on page 2)

#### 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, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.
- □ The source, as described in this application, <u>does not</u> constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

#### North Hobbs Unit Single Source Determination

Sites considered for aggregation with North Hobbs Unit RCF/WIB are:

- North Hobbs Unit Central Tank Battery (NHU CTB)
- North Injection Battery (NIB)
- South Hobbs Unit Recompression Facility (SHU RCF)
- South Hobbs Unit Central Tank Battery (SHU CTB)

All the sites are in the same SIC code and are owned by Oxy. They are not contiguous or adjacent.

- North Hobbs Unit RCF/WIB to NHU CTB 1.1 Miles
- North Hobbs Unit RCF/WIB to NIB 2.3 Miles
- North Hobbs Unit RCF/WIB to SHU RCF 3.5 Miles
- North Hobbs Unit RCF/WIB to SHU CTB 3. 7 Miles

The EPA defines a "stationary source" as "any building, structure, facility, or installation which emits or may emit a regulated [air] pollutant." 40 C.F.R. § 52.21(b)(5). Multiple pollutant-emitting activities can be aggregated together and considered a "building, structure, facility, or installation," i.e., a single stationary source only if they: (1) are under common control; (2) "are located on one or more contiguous or adjacent properties"; and (3) belong to the same major industrial grouping. For oil and gas facilities under Standard Industrial Classification (SIC) Major Group 13, multiple pollutant-emitting activities are considered adjacent if they are located on the same surface site or if they are located on surface sites within ¹/₄ mile of one another and they share equipment.

If the pollutant-emitting activities fail to satisfy any one of these three criteria, they are considered separate stationary sources and their emissions cannot be aggregated to meet the major source threshold. The WIB/RCF, CTB, NIB, and SHU RCF are not contiguous or adjacent. Since they fail one part of the "three-part test" they are not a single facility.

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

(Submitting under 20.2.72, 20.2.74 NMAC)

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

- A. This facility is:
  - $\square$  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 not one of the listed 20.2.74.501 Table I PSD Source Categories. The "project" emissions for this modification are not significant. The emissions are under the significant emission rate thresholds listed in 20.2.74.502 Table 2 Significant Emission Rates. The "project" emissions listed below do only result from changes described in this permit application, thus no emissions from other revisions or modifications, past or future to this facility are authorized in this project. Also, specifically discuss whether this project results in "de-bottlenecking", or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:
  - a. NOx: 34 TPY b. CO: 94 TPY **VOC: 48 TPY** c. d. SOx: 95 TPY e. PM: 1 TPY f. **PM10: 1 TPY** PM2.5: 1 TPY g. h. Fluorides: 0 TPY i. Lead: 0 TPY Sulfur compounds (listed in Table 2): 11 TPY j. GHG: 32,210 TPY k.

Note: The "project" emission rates above are conservatively set equal to the proposed site-wide allowable emissions.

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

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

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

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

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

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

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

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

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

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

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

#### Federally Enforceable Conditions:

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

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

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

## **Table for State Regulations:**

<u>State</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility emits all three compounds and thus, this regulation applies.
20.2.7 NMAC	Excess Emissions	Yes	Facility	Individual pieces of equipment are subject to emissions limits as per this permit and therefore, this regulation applies.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	Not Applicable. Oxy is not authorizing a notice of intent (NOI) per 20.2.73 NMAC, and the facility is not located in an area subject to a mitigation plan pursuant to 40 CFR 51.930.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	Not Applicable. This facility does not have new or existing 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. No units at the facility are subject to this regulation.
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No	N/A	Not Applicable. This facility does not contain 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. No units at the facility are subject to this regulation.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	<b>Not Applicable.</b> This facility is not a natural gas processing plant that uses a Sulfur Recovery Unit to reduce sulfur emissions. Therefore, it is not subject to 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	Yes	WIB_T1-OIL WIB_T2-OIL WIB_T4- WTR WIB_T5-GB WIB_T6-GB	This regulation applies to storage tanks at the facility. Tanks are equipped with VRUs to capture tank vapors. During most SSM events the vapors are vented to the WIB flare, except for tank hatch SSM emissions, which can't be flared. Operational procedures followed to minimize emissions during tank hatch SSM are as follows: Prior to a tank hatch SSM event a valve is closed that isolates the tank while maintenance is performed. Thus, there are only standing/breathing losses. In addition, only one tank hatch is repaired in any one hour.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	<b>Not Applicable.</b> This facility does not use a Sulfur Recovery Unit to reduce sulfur emissions. Therefore, it is not subject to this regulation.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	Yes	DEHY1 DEHY2 FUG-WIB FUG-RCF WIB_T1-OIL WIB_T2-OIL	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NOx) for oil and gas production, processing, compression, and transmission sources. 20.2.50 NMAC subparts below: Include the construction status of applicable units as "New", "Existing", "Relocation of Existing", or "Reconstructed" as defined by this Part in your justification:
			WIB_T4- WTR WIB_T5-GB WIB_T6-GB	Check the box for the subparts that are applicable: □113 – Engines and Turbines – Facility has no combustion engines or turbines ⊠114 – Compressor Seals – Applies to RCF VRUs, WIB VRUs, injection compressors, and LP compressors

<u>State</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
			All Compressor Seals	<ul> <li>⊠115 - Control Devices and Closed Vent Systems – applies to RCF dehydrator vents/VRUs/flare and WIB storage vessels/VRUs/flare</li> <li>⊠116 - Equipment Leaks and Fugitive Emissions – Applies to RCF and WIB fugitives</li> <li>□ 117 - Natural Gas Well Liquid Unloading – Site has no production well</li> <li>⊠ 118 - Glycol Dehydrators – applies to RCF dehydrator vents/VRUs/flare</li> <li>□ 119 - Heaters – site has no heaters &gt; 20 MMBtu/hr</li> <li>□ 120 - Hydrocarbon Liquid Transfers – Oil and NGLs are sent off-site by pipeline, not truck</li> <li>□ 121 - Pig Launching and Receiving – There is no pigging at the RCF or WIB</li> <li>□ 122 - Pneumatic Controllers and Pumps – Site has no natural gas-driven pneumatic controllers or pumps</li> <li>⊠ 123 - Storage Vessels – Applies to WIB storage vessels/VRUs/flare</li> <li>□ 124 - Well Workovers – Site has no production well</li> <li>□ 125 - Small Business Facilities – Site is not a small business facility</li> <li>□ 126 - Produced Water Management Unit – Site is not a produced water management unit as defined in the rule</li> <li>□ 127 - Flowback Vessels and Preproduction Operations – Site has no production well</li> </ul>
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	REBOILER1 REBOILER2 NGL HEAT1 Loading Facility Tanks Pumps and Compressors Blowdowns RCFN-FLR RCFN-FLR RCFN-FLR SSM WIB-FLR WIB-FLR- SSM RCFN-FLR- MALF WIB-FLR- MALF	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC). Equipment at this facility was subject to the repealed regulation 20.2.37 NMAC, therefore it is now subject to 20.2.61 NMAC.
20.2.70 NMAC	Operating Permits	No	N/A	<b>Not Applicable.</b> This regulation does not apply as the facility is not major for any pollutant.
20.2.71 NMAC	Operating Permit Fees	No	N/A	<b>Not Applicable.</b> This regulation does not apply as the facility is not subject to 20.2.70 NMAC or 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	This facility is subject to 20.2.72 NMAC and NSR Permit number: <b>2656-M7</b> .

<u>State</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	A Notice of Intent application 20.2.73.200 NMAC is applicable as the facility's PER of a regulated air pollutant is greater than 10 tpy. Oxy will submit <b>Emissions Inventory Reporting per</b> 20.2.73.300 NMAC as the facility emits over 10 tons of CO in any calendar year.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	<b>Not Applicable.</b> This regulation does not apply as the facility is not a PSD major source.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This facility is subject to 20.2.72 NMAC and is in turn subject to NMAC Permit Fees 20.2.75 NMAC.
20.2.77 NMAC	New Source Performance	Yes	FUG-RCF COM-D COM-E COM-F COM-F COM-G COM-G COM-H COM-I WIB-T4- WTR RCFN-FLR RCFN-FLR RCFN-FLR SSM RCFN-FLR- MALF WIB-FLR SSM WIB-FLR- SSM	This is a stationary source which is subject to the requirements of 40 CFR Part 60.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61. Therefore, the facility is not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	<b>Not Applicable.</b> The site is not located in a nonattainment area. Therefore, this regulation does not apply.
20.2.80 NMAC	Stack Heights	Yes	REBOILER1 REBOILER2 RCFN-FLR RCFN-FLR- SSM WIB-FLR	Oxy will maintain stacks according to good engineering practice.

<u>State</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
			WIB-FLR-	
			SSM	
			RCFN-FLR-	
			MALF	
			WIB-FLR-	
			MALF	
			NGL HEAT1	
	MACT Standards		DEHY-1	This regulation amplies to all sources emitting become an allutants which
20.2.82 NMAC	for source categories of HAPS		DEHY-2	are subject to the requirements of 40 CFR Part 63. Therefore, this regulation applies to units DEHY-1 and DEHY-2 at the facility.

## **Table for Federal Regulations:**

40 CFR 50       NAAQS       Yes       Facility       The facility is subject 20.2.72 NMAC. Therefore, this regulation applies.         40 CFR 50       NAAQS       FUG-RCF       COM-D       COM-D       COM-E       COM-VRU1-6       COM-VRU1-6       COM-F         6       COM-F       CO	
FUG-RCF COM-D COM-E COM-VRU1-6 COM-F	s.
COM-D COM-E COM-VRU1-6 COM-F	
COM-E COM-VRU1-6 COM-F	
COM-VRU1-6 COM-F	
COM-F	
COM-G	
COM-H	
COM-I	• ,
CFR 60 General Provisions Ves WIB-T4-WTR Applies if any other Subpart in 40 CFR 60 applies. As the facility is subj	ject
Subpart A RCFN-FLR RCFN-FLR specified units.	the
RCFN-FLR-	
SSM DOEN ELD	
MALF	
WIB-FLR	
WIB-FLR-	
SSM	
WIB-FLR-	
MALF	
Subpart Da,	
NSPS 40 Performance Not Applicable.	
CFR60.40a, Standards for No The facility does not include any electric utility steam generating unit.	
Subpart Da Steam Therefore, this regulation is not applicable.	
Generating Units	

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No		<b>Not Applicable.</b> The facility does not include any electric utility steam generating unit. Therefore, this regulation is not applicable.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial- Commercial- Institutional Steam Generating Units	No		<b>Not Applicable.</b> The facility does not include any steam generating units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr). Therefore, this regulation is not applicable.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for <b>Storage Vessels</b> <b>for Petroleum</b> <b>Liquids</b> for which Construction, or Modification Commenced After May 18, 1978, and <b>Prior</b> to July 23, 1984	No		<b>Not Applicable.</b> The facility was constructed after July 23, 1984. Therefore, this regulation does not apply.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	Yes	WIB_T4-WTR	This facility has storage vessels, emission units listed in the adjacent column with a capacity greater than or equal to 75 cubic meters (m ³ ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. Therefore, this regulation applies.
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No		<b>Not Applicable.</b> The facility does not include any stationary gas turbines. Therefore, this regulation does not apply.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from <b>Onshore</b> <b>Gas Plants</b>	Yes	FUG-RCF (Includes NGL Plant and components that are post- NGL plant and pre-NSPS OOOO) COM-D COM-D COM-E COM-VRU1-6	Affected Facility with Leaks of VOC from Onshore Gas Plants. Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984 and on or before August 23, 2011, is subject to the requirements of this subpart. The group of all equipment (each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service or in wet gas service, and any device or system required by this subpart) except compressors (defined in § 60.631) within a process unit is an affected facility. A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for <b>Onshore Natural</b>	No		<b>Not Applicable.</b> The facility does not include any sweetening units. Therefore, this regulation does not apply.

<u>Federal</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
	Gas Processing: SO ₂ Emissions			
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	Yes	FUG-RCF (Includes components that are post- NSPS OOOO and pre-NSPS OOOOa)	The facility includes "affected" facilities that are constructed, modified, or reconstructed after August 23, 2011 and on or before September 18, 2015 (40 CFR 60.5365).
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	FUG-RCF (Includes components that are post- NSPS OOOOa) COM-F COM-F COM-H COM-I	The facility includes "affected" facilities that are constructed, modified, or reconstructed after September 18, 2015 and on or before December 6, 2022 (40 CFR 60.5365a).
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No		<b>Not Applicable.</b> The facility does not include any applicable compression-ignition engines that are subject to this regulation.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No		<b>Not Applicable.</b> The facility does not include any applicable spark-ignition engines that are subject to this regulation.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No		<b>Not Applicable.</b> The facility does not include any electric generating unit. Therefore, this regulation is not applicable.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No		<b>Not Applicable.</b> The facility does not include any electric utility generating unit. Therefore, this regulation is not applicable.
NSPS 40 CFR 60, Subparts WWW	Standards of performance for Municipal Solid	No		<b>Not Applicable.</b> The facility does not include Municipal Solid Waste Landfills. Therefore, this regulation is not applicable.

<u>Federal</u> <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
XXX, Cc, and Cf	Waste (MSW) Landfills			
NESHAP 40 CFR 61 Subpart A	General Provisions	No		<b>Not Applicable.</b> The facility does not include units subject to 40 CFR Part 61. Therefore, this regulation is not applicable.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for <b>Mercury</b>	No		<b>Not Applicable.</b> The facility does not include any stationary sources that process mercury. Therefore, this regulation is not applicable.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks	No		<b>Not Applicable.</b> The facility does not include any sources that are intended to operate in volatile hazardous air pollutant (VHAP) service. Therefore, this regulation is not applicable.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	DEHY1 DEHY2	MACT Subpart HH applies to the dehydrator units at the facility. Therefore, Subpart A also applies to DEHY1 and DEHY2.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	Yes	DEHY1 DEHY2	This facility is Subject to the requirements of 40 CFR 63 Subpart HH Vapors from the TEG regenerator system are captured and returned to the process. The dehy units are affected sources per 63.760(b)(2), but exempt from General Standards per 63.764(e)(1)(ii) due to the capture and re-inject system. The facility complies with monitoring and recordkeeping as required in 63.772(b)(2) and 63.774(d)(1)(ii) to demonstrate the facility is exempt from General Standards. To demonstrate compliance with general standard exemptions found in 63.764(e), recordkeeping may apply.
MACT 40 CFR 63 Subpart HHH		No		<b>Not Applicable.</b> This facility is not a major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. Therefore, this regulation is not applicable to this facility.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No		<b>Not Applicable.</b> This facility is not a major sources of hazardous air pollutants (HAP) emissions as defined in §63.1271. Therefore, this regulation is not applicable to this facility.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No		<b>Not Applicable.</b> This facility does not own or operate a coal-fired EGU or an oil-fired EGU. Therefore, this regulation is not applicable to this facility.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion	No		<b>Not Applicable.</b> This facility does not authorize any Stationary Reciprocating Internal Combustion Engines. Therefore, this regulation is not applicable to this facility.

Federal <u>Regulation</u> Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:	
	Engines (RICE MACT)				
40 CFR 64	Compliance Assurance Monitoring	No		<b>Not Applicable.</b> The facility does utilize any Compliance Assured Monitoring as the site is not classified as a Title V (Part 70) major source.	
40 CFR 68Chemical Accident PreventionNoNot Applicable. The facility does not include any stationary sources that util threshold quantity of a regulated substance in a process, as under §68.115. Therefore, the facility is not subject to this r		<b>Not Applicable.</b> The facility does not include any stationary sources that utilize more than a threshold quantity of a regulated substance in a process, as determined under §68.115. Therefore, the facility is not subject to this regulation.			
Title IV – Acid Rain 40 CFR 72	Acid Rain	No		<b>Not Applicable.</b> The facility does generate commercial electric power or electric power for sale. Therefore, the facility is not subject to this regulation.	
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No		<b>Not Applicable.</b> The facility does generate commercial electric power or electric power for sale. Therefore, the facility is not subject to this regulation.	
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No		<b>Not Applicable.</b> The facility does generate commercial electric power or electric power for sale. Therefore, the facility is not subject to this regulation.	
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No		<b>Not Applicable.</b> The facility does generate commercial electric power or electric power for sale. Therefore, the facility is not subject to this regulation.	
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	Not Applicable. The facility does not produce, transform, destroy, import or export a controlled substance or import or export a controlled product (40 CFR 82.1 and 82.100). It does not service a motor vehicle (40 CFR 82.30) nor is it a department, agency, and instrumentality of the United States subject to Federal procurement requirements (40 CFR 82.80). Additionally, the facility does not "service", "maintain" or "repair" class I or class II appliances nor "disposes" of the appliances (82.150).	

## **Operational Plan to Mitigate Emissions**

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

## **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.

Not Applicable.

## Section 16 Air Dispersion Modeling

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

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC).	Х
See #1 above. Note: Neither modeling nor a modeling waiver is required for VOC emissions.	
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3	
above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	Х
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.
- $\Box$  No modeling is required.

## **Universal Application 4**

## **Air Dispersion Modeling Report**

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-	16-A: Identification				
1	Name of facility:	North Hobbs Unit RCF and WIB			
2	Name of company:	Occidental Permian, Ltd.			
3	Current Permit number:	2656-M7			
4	Name of applicant's modeler:	Melissa Latterell			
5	Phone number of modeler:	817-228-8072			
6	E-mail of modeler:	melissa.latterell@trinityconsultants.com			

16	16-B: Brief							
1	Was a modeling protocol submitted and approved?	Yes⊠	No□					
2	Why is the modeling being done?	Other (describe below)						
	Describe the permit changes relevant to the modeling.							
3	The proposed revision to Air Permit 2656-M7 will increase authorized emission rates for the RCF RCFN-FLR-SSM) and WIB flare (EPN WIB-FLR, WIB-FLR-SSM). In lieu of defining project emissions flaring emissions of criteria pollutants are included in the project modeling. The application is also restructuring and applying current monitoring control credits for fugitive of decrease in allowable H ₂ S emissions from fugitives; therefore, fugitive emissions were not include modeling demonstration.	N flare (EPN RC , all proposed a emissions. The r led in the H₂S pi	FN-FLR, llowable result is a roject					
4	What geodetic datum was used in the modeling?	WGS84						

5	How long will the facility be at this location?					
6	Is the facility a major source with respect to Prevention of Sigr	nificant Deterioration (PSD)?	Yes□	No⊠		
7	Identify the Air Quality Control Region (AQCR) in which the fac	ility is located	155			
	List the PSD baseline dates for this region (minor or major, as a	appropriate).				
0	NO2	Minor – March 16, 1988				
0	SO2 Minor – July 27, 1978					
	PM10	Minor – February 20, 1979				
	PM2.5	Minor – November 13, 2013				
	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).					
9	Carlsbad Caverns National Park – 124 km					
10	Is the facility located in a non-attainment area? If so describe l	below	Yes□	No⊠		
	Describe any special modeling requirements, such as streamline permit requirements.					
11						

#### **16-C: Modeling History of Facility** Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers). Latest permit and modification Pollutant number that modeled the Date of Permit Comments pollutant facility-wide. CO 2656M6 August 2014 NO₂ 2656M6 August 2014 1 SO₂ 2656M6 August 2014 August 2014 $H_2S$ 2656M6 PM2.5 Not applicable PM10 Not applicable Lead No emissions Ozone (PSD only) PSD not applicable NM Toxic Air Pollutants Not applicable (20.2.72.402 NMAC)

16-	16-D: Modeling performed for this application					
	For each pollutant, indicate the modeling performed and submitted with this application.					
1	Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative					
	analysis were also performed.					

Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
СО	$\boxtimes$				
NO ₂	$\boxtimes$				
SO ₂	$\boxtimes$	$\boxtimes$			
H ₂ S	$\boxtimes$	$\boxtimes$			
PM2.5					$\boxtimes$
PM10					$\boxtimes$
Lead					$\boxtimes$
Ozone					$\boxtimes$
State air toxic(s) (20.2.72.402 NMAC)					

16-	16-E: New Mexico toxic air pollutants modeling							
1	List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application. Not applicable							
	List any NN below, if re	/ITAPs that are emi equired.	tted but not modeled becau	ise stack height co	prrection factor. Add add	itional rows to the table		
2	Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor		
	None							

16-	16-F: Modeling options						
1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes⊠	No□				

16-	16-G: Surrounding source modeling							
1	Date of surround	ing source retrieval	October 16, 2024					
	If the surrounding sources modeled table below to de	If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.						
2	AQB Source ID	Description of Corrections						
		See "Retrieval Source Refinement - SO2.xlsx"						

## 16-H: Building and structure downwash

1	How many buildings are present at the facility?	2			
2	How many above ground storage tanks are present at the facility?	6			
3	Was building downwash modeled for all buildings and	I tanks? If not explain why below. Yes No 🛛			
	The two flares are tall enough and far enough away from structures at the North Hobbs facility such that they are out of the region of influence of any downwash wake effects. Downwash was included in site-wide SO2 analyses to account for potential downwash wake effects on the reboilers and heater sources.				
4	Building comments				

16-	I: Recepto	ors and r	nodeled	property bour	dary						
1	"Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.										
	Restricted area	a indicated by	v signage								
2	Receptors mus Are there publ	it be placed a ic roads passi	long publicly a ing through the	ccessible roads in the r e restricted area?	estricted area.		Yes□	No⊠			
3	Are restricted area boundary coordinates included in the modeling files? Yes No					No□					
	Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.										
	Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments					
	Cartesian	Square	50 m	0	Fenceline						
	Cartesian	Square	100 m	Fenceline	2 km						
4	Cartesian	Square	500 m	2 km	10 km	Additional "hot spot" receptor grids at 100 m spacing were added for project analyses with maximum impacts located within the 500 m grid, include CO 1-hr 8-hr, H2S 1-hr, NO2 1-hr S1 S2, and SO2 1-hr S3					
	Cartesian	Square	1000 m	10 km	50 km						
	Describe recep	otor spacing a	long the fence	line.							
5	50 m spacing a	long the fend	e line								
_	Describe the P	SD Class I are	a receptors.								
6	Not applicable.										

16	-J: Mod	eling S	Scenari	OS								
	Identify, de rates, time etc. Altern described	efine, and es of day, t ative oper in Section	describe al imes of yea ating scena 15 of the U	l modelin ar, simulta arios shou Iniversal A	g scenarios ineous or a ld correspo Application	s. Examples alternate o ond to all p (UA3).	s of model peration o arts of the	ling scenari If old and n e Universal	os include u ew equipme Application	sing diffe int during and shou	erent pr g transi uld be fu	oduction tion periods, ully
1	Simultanteous SSM flaring from both the RCFN and WIB flares will not occur for more than 100 hours per year. Therefore, these activities were modeled as intermittent sources for the 1-hr NO2 and 1-hr SO2 NAAQS. Per a discussion with NMED modeling team staff in August 2024, these simultaneous SSM emission "intermittent" rates had an annualized scalar value applied equaling 100/8760, per EPA's intermittent source treatment guidance. The following flare scenarios were utilized for these analyses. Other site-wide sources were included in all scenarios if applicable. Scenario 1 (S1): RCFN_FLR, RCFN_FLR_SSM, WIB_FLR Scenario 2 (S2): RCFN_FLR, WIB_FLR, WIB_FLR_SSM Scenario 3 (S3): RCFN_FLR, RCFN_FLR_SSM (intermittent rate), WIB_FLR, WIB_FLR_SSM (intermittent rate)											
	Which sce	nario prod	uces the hi	ghest con	centration	is? Why?						
2	NO2 1-hr NAAQS: S1 SO2 1-hr NAAQS: S2											
3	S1 and S2 scenarios had similar impacts and were higher than S3 since the intermittent rate is lower.         Were emission factor sets used to limit emission rates or hours of operation?         (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)											
4	If so, descu (Modify or Sources:	ribe factors duplicate	s for each g table as ne	group of so ecessary. I	ources. Lis t's ok to p	t the sourc ut the table	es in each e below se	group befo ction 16-K	ore the facto if it makes fo	r table fo prmatting	or that g g easier	group. .)
	Hour of Day	Factor	Hour of Day	Factor								
	1		13									
	2		14									
	3		15									
	4		16									
	5		17									
	6		18									
5	7		19									
	8		20									
	9		21									
	10		22									
	11		23									
	12	1	24			1		1				
	If hourly, v	variable em	nission rate	s were us	ed that we	ere not des	cribed abo	ove, describ	e them belo	w.		
6	Were diffe below.	erent emiss	sion rates u	ised for sh	ort-term a	and annual	modeling	? If so desc	ribe	Yes□		No⊠

Annual malfunction flaring emissions are limited to a combined total of 10 tons/yr of each crite	ria pollutant. Th	e annual
modeling demonstration was conservatively conducted using maximum short-term emission ra	tes. Therefore,	malfunction
flaring was not modeled as a separate scenario for the annual standards.		

16	-K: NO ₂ I	Vodeling					
	Which type Check all th	s of NO2 modeling were used? at apply.					
	$\boxtimes$	ARM2					
1		100% $NO_X$ to $NO_2$ conversion					
		PVMRM					
	OLM OLM						
		Other:					
	Describe the NO ₂ modeling.						
2	NO2 1-hr N evaluated b scenarios a	AAQS analysis was evaluated for the 3 flaring scenarios as described above. NO2 based on the maximum emission rates from each flaring source. The project impaind averaging times.	2 24-hr and ann acts were belov	ual analyses were v the SIL for all			
3	Were defau describe an	lt NO ₂ /NO _x ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not d justify the ratios used below.	Yes⊠	No□			
4	Describe th	e design value used for each averaging period modeled.					
	1-hour: Hig	h first high					
	Annual One	rear Annual Average:					

## 16-L: Ozone Analysis

NMED has performed a generic analysis that demonstrates sources that are minor with respect to PSD do not cause or contribute to any violations of ozone NAAQS. The analysis follows.

1The basis of the ozone SIL is documented in Guidance on Significant Impact Levels for Ozone and Fine Particles in the<br/>Prevention of Significant Deterioration Permitting Program, EPA, April 17, 2018 and associated documents. NMED<br/>accepts this SIL basis and incorporates it into this permit record by reference. Complete documentation of the ozone<br/>concentration analysis using MERPS is included in the New Mexico Air Quality Bureau Air Dispersion Modeling Guidelines.The MERP values presented in Table 10 and Table 11 of the NM AQB Modeling Guidelines that produce the highest<br/>concentrations indicate that facilities emitting no more than 250 tons/year of NOx and no more than 250 tons/year of VOCs<br/>will cause less formation of O3 than the O3 significance level.

2

$$[O_3]_{8-hour} = \left(\frac{250\frac{ton}{yr}}{340_{MERP_{NOX}}} + \frac{250\frac{ton}{yr}}{4679_{MERP_{VOC}}}\right) \times 1.96 \,\mu\text{g/m}^3$$

=1.546  $\mu$ g/m³, which is below the significance level of 1.96  $\mu$ g/m³.

Sources that produce ozone concentrations below the ozone SIL do not cause or contribute to air contaminant levels exceeding the ozone NAAQS.

3	Does the facility emit at VOCs? Sources that emi VOCs are covered by the	least 250 tons per year o t at least 250 tons per ye e analysis above and requ	f NO _x or at least 250 tons ar of NO _x or at least 250 t iire an individual analysis.	per year of ons per year of	Yes□		No⊠
	For new PSD Major Sources or PSD major modifications, if MERPs were used to account for ozone fill out the information below. If another method was used describe below.						information
5	NO _x (ton/yr)	MERP _{NOX}	VOCs (ton/yr)	MERP _{VOC}	ю		r
		•					

16-	-M: Parti	culate Mat	ter Model	ling							
	Select the pollutants for which plume depletion modeling was used.										
1		PM2.5									
		PM10									
	$\boxtimes$	None									
2	Describe the	particle size distr	ibutions used. In	nclude the source of in	nforr	mation.					
2											
3	Does the facility emit at least 40 tons per year of NO _x or at least 40 tons per year of SO ₂ ? Sources that emit at least 40 tons per year of NO _x or at least 40 tons per year of SO ₂ are considered to emit       Yes⊠       No□         significant amounts of precursors and must account for secondary formation of PM2.5.       No□       No□					No□					
4	Was seconda	ary PM modeled f	or PM2.5?			Yes⊠ No□					
	If MERPs we below.	re used to accour	t for secondary	PM2.5 fill out the info	orma	tion below. If another method was us	ed describe				
	Pollutant		NO _x	SO ₂		[PM2.5] _{24-hour}					
5	MERPannual		26780	14978		0.062					
	MERP _{24-hour}		7331	1981		[PM2.5] _{annual}					
	Emission rate (ton/yr) 28.40 94.61					9.6E-4					
	Note: Emiss	ion rate (ton/yr) e	equals total emis	ssions from site flares.							

16-	-N: Setback Distances
1	Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.
	Not applicable.
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	Not applicable

16-	O: PSD Incr	ement and So	urce IDs					
1	The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below.						X	No□
	Unit Number in U	JA-2		Unit Numb	er in Modeling Files			
2	The emission rat these match? If r	es in the Tables 2-E and not, explain why below.	2-F should match the	ones in the	modeling files. Do	Yes	$\boxtimes$	No□
3	Have the minor I been modeled?	NSR exempt sources or	Title V Insignificant Ac	tivities" (Tab	le 2-B) sources	Yes□		No⊠
	Which units cons	sume increment for whi	ich pollutants?			•		
4	Unit ID	NO ₂	SO ₂		PM10	PM2.5		
5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).							
6	Are all the actual installation dates included in Table 2A of the application form, as required?         This is necessary to verify the accuracy of PSD increment modeling. If not please explain how         Yes⊠         No□						No□	

16	16-P: Flare Modeling									
1	For each flare or flaring scenario, complete the following									
	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)						
	RCFN_FLR	17.70	1,933,501	1.24						
	RCFN_FLR_SSM	36.98	70,535,987	7.07						
	WIB_FLR	17.70	36,621	0.17						
	WIB_FLR_SSM	33.14	14,207,012	3.21						

16-	6-Q: Volume and Related Sources				
1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes	No⊠		

	Describe the determination of sigma-Y and sigma-Z for fugitive sources.
2	Not Applicable
3	Describe how the volume sources are related to unit numbers. Or say they are the same.
	Not Applicable
	Describe any open pits.
4	Not Applicable
5	Describe emission units included in each open pit.
5	Not Applicable

16-	R: Backgi	round Concentrations					
	Were NMED used below. I that was used	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the dataYesNothat was used.NoNoNoNo					
	CO: N/A						
	NO ₂ : N/A						
1	PM2.5: N/A						
	PM10: N/A						
	SO ₂ : N/A						
	Other:						
	Comments:						
2	Were backgro	Were background concentrations refined to monthly or hourly values? If so describe below.       Yes⊠       No□					
	Using availab	le permit data and converting concentrations to emission rates per unit conversion	ons.				

16-S: Meteorological Data								
1	Was NMED provided meteorological data used? If so select the station used. Hobbs Year 2018 was used based on Table 29 of NMED guidance	Yes⊠	No□					
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.							
	Not Applicable							

16-T: Terrain								
1	Was complex terrain used in the modeling? If not, describe why below.	Yes⊠	No□					
	What was the source of the terrain data?							

2 National Elevation Dataset (NED) 1 Arc Second data obtained from Multi-Resolution Land Characteristics (MRLC) consortium viewer

#### **16-U: Modeling Files** Describe the modeling files: Purpose (ROI/SIA, cumulative, File name (or folder and file name) Pollutant(s) culpability analysis, other) Project/ Additional HotSpot **ROI/SIA** CO Receptors/North Hobbs CO 1hr 8hr Project/ Additional HotSpot H2S **ROI/SIA** Receptors/North Hobbs H2S 1hr Project/ Additional HotSpot NO2 ROI/SIA Receptors/North Hobbs NO2 1hr S1 Project/North Hobbs NO2 1hr S2 NO2 ROI/SIA 1 Project/North Hobbs NO2 1hr S3 NO2 ROI/SIA Project/North Hobbs NO2 24hr NO2 ROI/SIA Project/North Hobbs NO2 An ROI/SIA NO2 Project/North Hobbs SO2 1hr S1 S2 SO2 **ROI/SIA** Project/ Additional HotSpot SO2 **ROI/SIA** Receptors/North Hobbs SO2 1hr S3 Project/North Hobbs SO2 3hr 24hr SO2 ROI/SIA Project/North Hobbs SO2 An SO2 **ROI/SIA** Site Wide/North Hobbs SO2 1hr S1 S2 SO2 Cumulative Site Wide/North Hobbs SO2 3hr 24hr SO2 Cumulative Site Wide/North Hobbs SO2 An SO2 Cumulative

16-V: PSD New or Major Modification Applications									
1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes□	No□						
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes□	No□						
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.								
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.								
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes□	No□						

16-W: Modeling Results														
1		If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.								No⊠				
		No amb	No ambient standards were exceeded											
2		Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary. – see table below for detailed results of each analysis												
Pollutant, Mod Time Faci Period and Concer Standard n (µg,		M 1odeled Conc Facility r	Modeled Concentratio n with	Secondary PM (µg/m3)	Background Concentratio n (μg/m3)	Cumulative Concentratio n (μg/m3)	Value of Standard (μg/m3)	Percent of Standard	Location					
		entratio g/m3)	Surrounding Sources (µg/m3)						UTM E (m)	UTM N (m)	Elevation (ft)			
CO 8-hr ROI	3	6.6					500	7%	667500	3627000	3690.52			
CO 1-hr ROI	2	0.0					2000	1%	668800	3622500	3668.50			
H2S 1-hr ROI	2	2.6					5	53%	667550	3626800	3691.33			
NO2 Annual ROI	C	).2					1	18%	668800	3622400	3665.55			
NO2 24-hr ROI	1	0					5	20%	668800	3622500	3668.50			
NO2 1-hr ROI	3	5.0					7.2	40%	667350	3627700	3699.15			
PM2.5 Annual ROI	n	/a		9.6E-4			0.13	1%						
PM2.5 24- hr ROI	n	/a		0.062			1.2	5%						
SO2 Annual Class II Inc			10.6				20	53%	668700	3622400	3664.90			
SO2 24-hr Class II Inc			46.6				91	51%	668700	3622500	3665.58			

Occidental Permian, Ltd.

Pollutant, Time	Modeled Facility	Modeled Iodeled Concentratio Facility n with centratio Surrounding (μg/m3) Sources (μg/m3)	Secondary PM (μg/m3)	Background Concentratio n (μg/m3)	Cumulative Concentratio n (µg/m3)	Value of Standard (μg/m3)	Percent of Standard	Location		
Period and Standard	Concentratio n (μg/m3)							UTM E (m)	UTM N (m)	Elevation (ft)
SO2 3-hr Class II Inc		145.9					28%	669200	3622400	3660.83
SO2 1-hr Cumulative NAAQS		185.1					94%	674000	3602000	3539.60
# 1 A statement that modeling requirements have been satisfied and that the permit can be issued. 1 Impacts of all pollutants and averaging times are below the applicable standards and therefore emissions associated with

this permit application are not expected to have adverse impacts on human health and the environment.

## Supplemental Attachments Universal Application 4

## **Air Dispersion Modeling Report**

## **Modeling Tables – Inputs and Outputs**

#### Description of Modeled Scenarios - SO2 1-hr and NO2 1-hr

					All Other On-
Modeling Scenario	RCFN FLR	RCFN-FLR-SSM	WIB FLR	WIB-FLR-SSM	Site Sources
Scenario 1	Х	Х	Х		Х
Scenario 2	Х		Х	Х	Х
Scenario 3	Х	X (Intermittent)	Х	X (Intermittent)	Х

#### Modeling Notes:

Simultanteous SSM flaring from both the RCFN and WIB flares will not occur for more than 100 hours per year.

Therefore, these activities were modeled as intermittent sources for the 1-hr NO2 and 1-hr SO2 NAAQS.

Malfunction and SSM flaring will not occur simultaneously.

Short-term malfunction flaring emissions are not authorized to exceed the lb/hr SSM flaring limits.

Therefore, malfunction flaring was not modeled as a separate scenario for the short-term standards.

Annual malfunction flaring emissions are limited to a combined total of 10 tons/yr of each criteria pollutant.

The annual modeling demonstration was conservatively conducted using maximum short-term emission rates.

Therefore, malfunction flaring was not modeled as a separate scenario for the annual standards.

#### **Modeled Emission Rates**

#### Emission Rates (lb/hr)

Scenario			Scenario	-	-	-	-	S1	S2	S3	-	-		S1	S2	S3
			Model	CO 1-hr 8-hr	H ₂ S 1-hr	NO2 An	NO2 24-hr	NO2 1-hr	NO2 1-hr	NO2 1-hr	SO2 An	SO2 3-hr	SO2 24-hr	SO2 1-hr	SO2 1-hr	SO2 1-hr
Scenario	Source Type	EPN	ID	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Routine	Project	RCFN-FLR	RFLR	15.17	0.004	3.81	3.81	3.81	3.81	3.81	0.40	0.40	0.40	0.40	0.40	0.40
SSM	Project	RCFN-FLR	RFLR_SSM	553.45	36.01	64.55	64.55	64.55		0.74	3384.89	3384.89	3384.89	3384.89		38.64
Routine	Project	WIB-FLR	WFLR	0.29	0.0001	0.07	0.07	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01
SSM	Project	WIB-FLR	WFLR_SSM	111.47	11.24	13.00	13.00		13.00	0.15	1056.51	1056.51	1056.51		1056.51	12.06
Routine	Site-Wide	REBOILER1	BLR1								0.03	0.03	0.03	0.03	0.03	0.03
Routine	Site-Wide	REBOILER2	BLR2		n/a - site-wide modeling not applicable								0.04	0.04	0.04	0.04
Routine	Site-Wide	NGL HEAT1	HEAT1							0.11	0.11	0.11	0.11	0.11	0.11	

#### Emission Rates (g/s)

Scenario			Scenario	-	-	-	-	S1	S2	S3	-	-		S1	S2	S3
			Model	CO 1-hr 8-hr	H ₂ S 1-hr	NO2 An	NO2 24-hr	NO2 1-hr	NO2 1-hr	NO2 1-hr	SO2 An	SO2 3-hr	SO2 24-hr	SO2 1-hr	SO2 1-hr	SO2 1-hr
Scenario	Source Type	EPN	ID	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)
Routine	Project	RCFN-FLR	RFLR	1.9132	0.0005	0.4804	0.4804	0.4804	0.4804	0.4804	0.0504	0.0504	0.0504	0.0504	0.0504	0.0504
SSM	Project	RCFN-FLR	RFLR_SSM	69.7958	4.5418	8.1403	8.1403	8.1403	0	0.0929	426.8717	426.8717	426.8717	426.8717	0	4.8730
Routine	Project	WIB-FLR	WFLR	0.0362	0.0000	0.0091	0.0091	0.0091	0.0091	0.0091	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
SSM	Project	WIB-FLR	WFLR_SSM	14.0579	1.4176	1.6396	1.6396	0	1.6396	0.0187	133.2376	133.2376	133.2376	0	133.2376	1.5210
Routine	Site-Wide	REBOILER1	BLR1								0.0038	0.0038	0.0038	0.0038	0.0038	0.0038
Routine	Site-Wide	REBOILER2	BLR2			n/a - site-wio	le modeling n	ot applicable			0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Routine	Site-Wide	NGL HEAT1	HEAT1								0.0139	0.0139	0.0139	0.0139	0.0139	0.0139

#### **Stack Parameters**

		Model	Easting	Northing	Elevation	Stack Height		Temp		Velocity		Diameter	
Source Type	EPN	ID	(m)	(m)	(m)	(ft)	(m)	(F)	(K)	(ft/s)	(m/s)	(ft)	(m)
Project	RCFN-FLR	RFLR	668810.75	3621931.25	1116.29	194.00	59.13	1273	1273	65.6	20	4.08	1.24
Project	RCFN-FLR	RFLR_MSS	668810.75	3621931.25	1116.29	194.00	59.13	1273	1273	65.6	20	23.19	7.07
Project	WIB-FLR	WFLR	668705.38	3621740.34	1115.77	190.00	57.91	1273	1273	65.6	20	0.56	0.17
Project	WIB-FLR	WFLR_MSS	668705.38	3621740.34	1115.77	190.00	57.91	1273	1273	65.6	20	10.52	3.21
Site-wide	REBOILER1	BLR1	668820.96	3621695.92	1115.86	43.00	13.11	600.00	588.71	2.3	0.710	3.28	1.00
Site-wide	REBOILER2	BLR2	668839.83	3621694.17	1115.81	43.00	13.11	600.00	588.71	3.0	0.900	3.28	1.00
Site-wide	NGL HEAT1	HEAT1	668888.27	3621693.81	1115.71	15.00	4.57	500.00	533.15	23.0	7.010	1.51	0.46

#### PM2.5 Secondary Formation

Secondary formation of PM2.5 is calculated based on equations and MERPS in the NMED modeling guidance

#### Table 13: PM2.5 MERPS

AQCR	<b>MERP_{NOX}annual</b>	MERP _{so2} annual	MERP _{NOX_24}	MERP _{SO2} _24
14	43833	48057	33634	11410
155	26780	14978	7331	1981
The rest of New Mexico	130260	53898	42498	9753

#### **Project Emissions**

NOx Emission Rate (tpy)	28.40
SO2 Emissions Rate (tpy)	94.61

#### Secondary PM2.5 Formation

	24-hour	Annual
Impact (µg/m³)	0.062	9.6E-04
SIL (µg/m³)	1.20	0.13

#### **Modeling Results**

		Significance		Project		Project Impacts <			Nearby Sources		AERMOD Site +		Site-Wide Impacts <	PSD Increment		Site-Wide Impacts <
	Averaging	Level		Impacts ²		Significance	NAAQS		or Add	Modeled	Nearby Source		NAAQS or	Class II		Class II
Pollutant	Period	(µg/m³)	Scenario	(µg/m ³ )	%Standard	Level?	(µg/m³)	NMAAQS (µg/m ³ )	Background?	Concentration	Impacts ³ (µg/m ³ )	%Standard	NMAAQS?	(µg/m ³ )	%Standard	Increment?
CO	8-hour	500	-	36.6	7%	Yes	10303.6	9960.1						-		
CO	1-hour	2000	-	20.0	1%	Yes	40069.6	14997.5						-		
H2S ¹	1/2-hour	5	-	2.6	53%	Yes	-	41.8						-		
NO2	annual	1	-	0.2	18%	Yes	99.66	94.02						-		
NO2	24-hour	5	-	1.0	20%	Yes	-	188.03						-		
			S1	3.0	40%	Yes	188.03	-						25		
NO2	1-hour	7.52	S2 2.4	2.4	32%	Yes								-		
			S3	1.2	16%	Yes								-		
PM2.5 ⁴	annual	0.13	-	9.6E-04	1%	No	9							4		
PM2.5 ⁴	24-hour	1.2	-	0.062	5%	No	35							9		
SO2	annual	1	-	8.8	n/a	No	-	52.4	Nearby Sources	Annual Average	10.6	\$021	hour NAAOS	20	53%	Yes
SO2	24-hour	5	-	53.8	n/a	No	-	261.9	Nearby Sources	2nd Highest	46.6	Domonot	ratao Complianco	91	51%	Yes
SO2	3-hour	25	-	159.3	n/a	No	1309.3	-	Nearby Sources	2nd Highest	145.9	Demonstr	ales compliance	512	28%	Yes
			S1 142.2 n/a	No				4th Highest	185.1	94%	Yes	-				
SO2	1-hour	7.8	\$2	146.8	n/a	No	196.4	-	Nearby Sources	4th Highest	185.1	94%	Yes	-		
			\$3	2.9	37%	Yes										

1. Hydrogen Sulfide Air Quality Standards for the Pecos-Permian Basin Intrastate AQCR, per Table 6 of NMED Modeling Guidance

2. Project impacts for all analyses represent the 1st highest modeled concentration

3. Note that the NAAQS neighboring sources are conservatively included for increment analyses

4. There are no direct PM2.5 impacts associated with the projects, but secondary impacts are evaluated

## 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.

#### Not Applicable.

There are no units that require compliance testing under 20.2.70, 20.2.72, or 20.2.74 NMAC.

## Section 20

## **Other Relevant Information**

<u>Other relevant information</u>. 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.

Not Applicable.

## **Section 22: Certification**

Company Name: Occidental Permian, Ltd.

I. MADITO GUERRAD 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  $\underline{S_{DD}}$  day of  $\underline{IBBUARY}$ ,  $\underline{ZO25}$ , upon my oath or affirmation, before a notary of the State of

TEXAS

*Signature

VA72000 TARAS Printed Name

2/3/2025 Date OPERATIONS MANAGER

Scribed and sworn before me on this 3rd day of February 2025

TEXAS

2026

My authorization as a notary of the State of

expires on the

Dec day of

Notary's Signature

s Printed Name



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