

ENTERPRISE PRODUCTS PARTNERS L.P. ENTERPRISE PRODUCTS HOLDINGS LLC (General Partner)

January 18, 2023

7021 0950 0000 6827 3833 Return Receipt Requested

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

## Renewal Application for Title V Permit Number P256R1 3B-1 Turley Compressor Station Enterprise Field Services, LLC

Dear Sr/Madam:

Enterprise Field Services LLC owns and Enterprise Products Operating LLC (Enterprise) operates the 3B-1 Turley Compressor Station. The 3B-1 Turley Compressor Station receives natural gas from a gathering system and compresses it for transportation via pipeline to downstream compression and processing facilities. The Station is located at 36°46'4.3''N and 107°47'25''W, approximately 2 miles northwest of Turley, New Mexico in San Juan County. The Station is currently authorized under NSR Permit Number 1569-M3R2 and Title V Permit Number P256R1.

This permit application is being submitted under regulation 20.2.70.300.B(2) NMAC, to renew Title V Permit P256R1 for the 3B-1 Turley Compressor Station. The application is being submitted at least 12 months prior to the date of permit expiration. There are no process or equipment changes being requested in this application and all equipment will remain as currently permitted.

If you have any questions concerning this application, please contact Jing Li at (713) 381-5766 or Pranav Kulkarni at (713) 381-5830.

Sincerely,

Jing Li Staff Environmental Engineer

/bjm enclosure

Pranav Kulkarni Ph.D. Manager, Environmental Permitting



# ENTERPRISE FIELD SERVICES, LLC 3B-1 TURLEY COMPRESSOR STATION San Juan County, New Mexico

Title V Permit No. P256R1 Renewal

February 2023

# **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



#### AIRS No.:

# **Universal Air Quality Permit Application**

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

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 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. See Section 1-I for submittal instructions for other permits.

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:

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

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

□ Check No.: N/A in the amount of N/A

I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page. I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/. □ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full \$500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

Citation: Please provide the low level citation under which this application is being submitted: 20.2.70.300.B(2) 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 <sup>st</sup> 3 to 5 #s of permit IDEA ID No.): <b>1153</b>	Updating Permit/NOI #: <b>P256R1</b>		
1	Facility Name: 3B-1 Turley Compressor Station	Plant primary SIC Code (4 digits): 4922			
		Plant NAIC code (6 dig	gits): <b>486210</b>		
a	Facility Street Address (If no facility street address, provide directions fror <b>Approx. 2 Miles North of Turley, NM</b>	n a prominent landmark)	:		
2	Plant Operator Company Name: Enterprise Products Operating, LLC	Phone/Fax: (713) 381-0	6595		
a	Plant Operator Address: P.O. Box 4324, Houston TX 77210-4324				

b	Plant Operator's New Mexico Corporate ID or Tax ID:							
3	Plant Owner(s) name(s): Enterprise Field Services, LLC	Phone/Fax: (713) 381-6595						
a	Plant Owner(s) Mailing Address(s): P.O. Box 4324, Houston TX 77210-4324							
4	Bill To (Company): Enterprise Products Operating LLC	Phone/Fax: (713) 381-6595						
a	Mailing Address: P.O. Box 4324, Houston TX 77210-4324	E-mail: environmental@eprod.com						
5	Preparer: Jing Li Consultant: N/A	Phone/Fax: (713) 381-5766						
a	Mailing Address: P.O. Box 4324, Houston TX 77210-4324	E-mail: jli@eprod.com						
6	Plant Operator Contact: James Lieb	Phone/Fax: (505) 599-2159						
a	Address: P.O. Box 4324, Houston TX 77210-4324	E-mail: jplieb@eprod.com						
7	Air Permit Contact: Jing Li	Title: Staff Environmental Engineer						
a	E-mail: jli@eprod.com	Phone/Fax: (713) 381-5766						
b	Mailing Address: P.O. Box 4324, Houston TX 77210-4324							
с	The designated Air permit Contact will receive all official correspondence	(i.e. letters, permits) from the Air Quality Bureau.						

# Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☑ Yes □ No	1.b If yes to question 1.a, is it currently operating in New Mexico?						
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? $\Box$ Yes $\blacksquare$ No	If yes, give month and year of shut down (MM/YY): N/A						
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? □ Yes ☑ No							
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since $8/31/1972$ ?							
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ✓ Yes □ No	If yes, the permit No. is: P-256R1						
7	Has this facility been issued a No Permit Required (NPR)? □ Yes ☑ No	If yes, the NPR No. is: N/A						
8	Has this facility been issued a Notice of Intent (NOI)? □ Yes ☑ No	If yes, the NOI No. is: N/A						
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☑ Yes □ No	If yes, the permit No. is: <b>1569-M3R2</b>						
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? □ Yes ☑ No	If yes, the register No. is: N/A						

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

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)								
a	Current	Hourly: 3.8 MMscf	Daily: 92 MMscf	Annually: 35,600 MMscf					
b	b Proposed Hourly: 3.8 MMscf Daily: 92 MMscf Annually: 35,600 MMscf								
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)								
a	Current	Hourly: 3.8 MMscf	Daily: 92 MMscf	Annually: 35,600 MMscf					
b	Proposed	Hourly: 3.8 MMscf	Daily: 92 MMscf	Annually: 35,600 MMscf					

# Section 1-D: Facility Location Information

1	Section: 33	Range: 9W	Township: <b>30N</b>	County: San Juan		Elevation (ft): <b>5,730</b>		
2	UTM Zone: □ 12 or ☑ 13			Datum: 🗆 NAD 27	□ NAD	83 🗹 WGS 84		
a	UTM E (in meter	rs, to nearest 10 meter	s): <b>250,756</b>	UTM N (in meters, to nearest	10 meters):	4,072,789		
b	AND Latitude	(deg., min., sec.):	36° 46' 4.3"	Longitude (deg., min., see	c.): 107º 4	7'25"		
3	Name and zip o	code of nearest No	ew Mexico town: <b>Navajo I</b>	Dam, 87419				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Turley, NM travel southwest approx. 2miles on NM-511, at the Hwy 64 intersection turn west travel approx. 2 miles towards Blanco, turn left (north) at the Co Rd 4599 intersection go approx. 4 miles, turn left onto a dirt road, the site is 0.4 miles north of CR 4599.							
5	The facility is 2 miles northwest of Turley, NM.							
6	Status of land a	at facility (check o	one): 🗆 Private 🗆 Indian/Pu	ieblo 🗹 Federal BLM 🗆 F	ederal For	rest Service   Other (specify)		
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: <u>Navajo Nation; San Juan County, McKinley County;</u> Turley, NM: Blanco, NM							
8	<b>20.2.72</b> NMAC applications <b>only</b> : Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see <u>www.env.nm.gov/aqb/modeling/class1areas.html</u> )?							
9	Name nearest (	Class I area: <b>Mes</b> a	Verde National Park					
10	Shortest distant	ce (in km) from fa	acility boundary to the boundary	ndary of the nearest Class I	area (to the	e nearest 10 meters): 81 km		
11	Distance (mete lands, including	rs) from the perin g mining overburg	neter of the Area of Operati den removal areas) to neare	ions (AO is defined as the p est residence, school or occu	lant site ir	nclusive of all disturbed eture: <b>3,200 m</b>		
12	Method(s) used to delineate the Restricted Area: Fencing         "Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads compatible property is completely enclosed by fencing, a restricted area							
13	Does the owner Yes V N A portable station one location or Will this facilit	r/operator intend o ionary source is n <u>that can be re-ins</u> y operate in conju	to operate this source as a p ot a mobile source, such as <u>stalled at various locations</u> , unction with other air regul	an automobile, but a source as such as a hot mix asphalt p ated parties on the same pro	e that can lant that is operty?	n 20.2.72.7.X NMAC? be installed permanently at moved to different job sites.		
17	If yes, what is the name and permit number (if known) of the other facility? N/A							

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

1	Facility <b>maximum</b> operating $\left(\frac{\text{hours}}{\text{day}}\right)$ : 24	$(\frac{\text{days}}{\text{week}})$ : 7	$(\frac{\text{weeks}}{\text{year}})$ : 52	( <u>hours</u> ): <b>8,760</b>			
2	Facility's maximum daily operating schedule (if les	s than $24 \frac{\text{hours}}{\text{day}}$ ? Start: N/A	□AM □PM	End: N/A	□AM □PM		
3	Month and year of anticipated start of construction: N/A – no construction proposed						
4	Month and year of anticipated construction complet	ion: <b>N/A – no construction pr</b>	oposed				
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

	Are there any current Notice of Violations (NOV) complia	nce orders or any of	her compli	ance or enforcement issues related					
1	to this facility? $\Box$ Yes $\blacksquare$ No If ves. specify: N/A								
a	If yes, NOV date or description of issue: N/A			NOV Tracking No: N/A					
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? 🗆 Yes 🗹 No If Yes, provide the 1c & 1d info below:								
c	c Document Title: N/A Date: N/A Requirement # (or page # and paragraph #): N/A								
d	Provide the required text to be inserted in this permit: N/A								
2	Is air quality dispersion modeling or modeling waiver being submitted with this application?								
3	Does this facility require an "Air Toxics" permit under 20.2	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 Pollu	itants (HAP)? 🗹 Ye	s □No						
a	If Yes, what type of source? $\Box$ Major ( $\Box \ge 10$ tpy of anOR $\blacksquare$ Minor ( $\blacksquare < 10$ tpy of an	y single HAP OR	$\square \ge 25$	tpy of any combination of HAPS) 5 tpy of any combination of HAPS)					
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? □ Yes	☑ No							
a	If yes, include the name of company providing commercial Commercial power is purchased from a commercial utility site for the sole purpose of the user.	electric power to the company, which spe	e facility: <u>1</u> ecifically d	<u>N/A</u> loes not include power generated on					

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

□ I have filled out Section 18, "Addendum for Streamline Applications." 1  $\blacksquare$  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): Graham W. Bacon	Phone: (713) 381-6595				
a	R.O. Title: Executive Vice President	R.O. e-mail: envir	onmental@eprod.com			
b	R. O. Address: P.O. Box 4324, Houston, TX 77210-4324					
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Rodney M. Sartor		Phone: (713) 381-6595			
а	A. R.O. Title: Senior Director	A. R.O. e-mail: en	vironmental@eprod.com			
b	A. R. O. Address: P.O. Box 4324, Houston, TX 77210-4324					
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): N/A					
4	Name of Parent Company ("Parent Company" means the primary r permitted wholly or in part.): Enterprise Field Services, LLC an of Enterprise Products Partners, LP	ame of the organiza d Enterprise Produ	ation that owns the company to be acts Operating LLC are subsidiaries			
a	Address of Parent Company: P.O. Box 4324, Houston, TX 77210	-4324				
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): Enterprise Field Services, LLC and Enterprise Products Operating LLC are subsidiaries of Enterprise Products Partners, LP					
6	Telephone numbers & names of the owners' agents and site contac 2159/(505) 599-2538	ts familiar with plan	t operations: James Lieb, (505) 599-			
7	Affected Programs to include Other States, local air pollution contribution will the property on which the facility is proposed to be constructed states, local pollution control programs, and Indian tribes and pueb ones and provide the distances in kilometers: <b>Jicarilla Apache In</b>	ol programs (i.e. Be d or operated be clos los (20.2.70.402.A.2 <b>lian Reservation</b> (	ernalillo) and Indian tribes: ser than 80 km (50 miles) from other 2 and 20.2.70.7.B)? If yes, state which (70 km), Colorado (30 km)			

# **Section 1-I – Submittal Requirements**

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

## Hard Copy Submittal Requirements:

- One hard copy original signed and notarized application package printed double sided 'head-to-toe' 2-hole punched as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use numbered tab separators in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.
- 2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard copy for Department use. This copy should be printed in book form, 3-hole punched, and must be double sided. Note that this is in addition to the head-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):**

 $\blacksquare$  CD/DVD attached to paper application

secure electronic transfer. Air Permit Contact Name

Email	
Email	

#### Phone number

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

- 4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.
- 5) If air dispersion modeling is required by the application type, include the NMED Modeling Waiver and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling 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.

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### Table 2-A: Regulated Emission Sources

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

					Manufact- urer's Rated	Requested	Date of Manufacture <sup>2</sup>	Controlled by Unit #	Source		RICE Igr	ition
Unit Number <sup>1</sup>	Source Description	Make	Model #	Serial #	Capacity <sup>3</sup> (Specify Units)	Permitted Capacity <sup>3</sup> (Specify Units)	Date of Construction/ Reconstruction <sup>2</sup>	Emissions vented to Stack #	Classi- fication Code (SCC)	For Each Piece of Equipment, Check (	One Type (Cl 4SLB, 4S 2SLB	, SI, Replacing SRB, Unit No.
1	Compressor Engine	Caterpillar	G 3612 TALE	1YG00072	3,335 hp	3,162 hp	N/A <1994	N/A 1	20200254	√ Existing (unchanged)         □ To be Removed           □ New/Additional         □ Replacement U           □ To Be Modified         □ To be Replaced	nit 4SLE	B N/A
T201	Condensate Storage Tank	-	-	EP9813	21,000 gal	21,000 gal	N/A May '98	N/A N/A	40400311	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	Init N/A	N/A
T202	Condensate Storage Tank	-	-	EP9814	21,000 gal	21,000 gal	N/A May '98	N/A N/A	40400311	√ Existing (unchanged)         □ To be Removed           □ New/Additional         □ Replacement U           □ To Be Modified         □ To be Replaced	nit N/A	N/A
3	Condensate Storage Tank	-	-	-	8,820 gal	8,820 gal	unknown May '98	N/A N/A	40400311	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	nit N/A	N/A
FUG	Fugitives	-	-	-	-	1,415 components	N/A N/A	N/A N/A	31088811	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	nit N/A	N/A
LOAD	Truck Loading	-	-	-	-	1,533,042 gals/yr	N/A N/A	N/A N/A	31000299	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	nit N/A	N/A
SSM	SSM	-	-	-	-	-	N/A N/A	N/A N/A	31000299	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	nit N/A	N/A
INST-1	Instrument Gas Dryer	Henderson	HL-100- 250	26102-6	-	-	unknown unknown	N/A N/A	31000299	√ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         □ To Be Modified       □ To be Replaced	nit N/A	N/A
INST-2	Instrument Gas Dryer	H&H Manufacturing	HH-0050	HH-14404-4	-	-	unknown unknown	N/A N/A	31000299	□ Existing (unchanged)       □ To be Removed         □ New/Additional       □ Replacement U         √ To Be Modified       □ To be Replaced	l Init N/A	N/A
MALF	Malfunction Emissions	-	-	-	-	-	N/A N/A	N/A N/A	-	√ Existing (unchanged)         □ To be Removed           □ New/Additional         □ Replacement U           □ To Be Modified         □ To be Replaced	nit N/A	N/A
										Existing (unchanged)       To be Removed         New/Additional       Replacement U         To Be Modified       To be Replaced	1 Init	
										Existing (unchanged)       To be Removed         New/Additional       Replacement U         To Be Modified       To be Replaced	1 (nit	
										Existing (unchanged)       To be Removed         New/Additional       Replacement U         To Be Modified       To be Replaced	init	

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

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

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

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

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

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

Unit Number	Service Description	Manufacture	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction <sup>2</sup>	For Food Direct of Forcing and Charle One
Unit Number	Unit Number Source Description		Serial No. Capacity Units Insignificant Activity citation (e.g. IA List Installation /Construction <sup>2</sup>		For Each Flece of Equipment, Check One		
59	Lube Oil Storage Tank	(unknown)	unknown	300	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ Naw/Additional □ Replacement Unit
54	Euse on Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
T206	Waste Oil Water Sumn	(unknown)	unknown	5,004	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
1200	Waste on Water bump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
T200	Produced Water Sump	(unknown)	unknown	21,000	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ New/Additional □ Replacement Unit
1200	Troduced water bump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
T203	Produced Water Sump	(unknown)	unknown	21,000	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
1205	Troduced water bump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
T207	Produced Water Sump	(unknown)	unknown	5,004	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
1207	i ioduced water Sump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
T208	Produced Water Sump	(unknown)	unknown	2,100	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
1208	rioduced water Sump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
4	Anti-freeze Storage Tank	(unknown)	unknown	-	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
	And-freeze Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
5	Lube Oil Storage Tank	(unknown)	unknown	250	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
5	Eule on Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
6	Methanol Storage Tank	(unknown)	unknown	3,024	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ New/Additional □ Replacement Unit
Ŭ	Medianor Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
7	Methanol Storage Tank	(unknown)	unknown	-	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ New/Additional □ Replacement Unit
,	Wethanor Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
8	Methanol Storage Tank	(unknown)	unknown	4,200	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ Naw/Additional □ Replacement Unit
0	Wethanor Storage Tank	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
9	Methanol Storage Tank	(unknown)	unknown	12,600	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed □ Naw/Additional □ Replacement Unit
2	Wethanoi Storage Tallk	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
10	Methanol Storage Tank	(unknown)	unknown	12,600	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
10	wiemanor storage rank	(unkilowil)	unknown	gal		unknown	□ To Be Modified □ To be Replaced
11	Skid Drain Sume	(unknown)	unknown	5,004	20.2.72.202 B.5	unknown	√ Existing (unchanged) □ To be Removed
11	Skid Drain Sump	(unknown)	unknown	gal		unknown	□ To Be Modified □ To be Replaced

<sup>1</sup> 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.

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

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

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) <sup>1</sup>	Efficiency (% Control by Weight)	Method used to Estimate Efficiency	
Not applicable. There is no emissions control equipment used at this facility.							
<sup>1</sup> List each con	ntrol device on a separate line. For each control device, list all er	nission units c	controlled by the control device.				

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

#### $\sqrt{1}$ 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	Ox	C	0	V	DC	S	Эx	TS	$\mathbf{P}^2$	PM	[ <b>10</b> <sup>2</sup>	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								
Totals																		

<sup>1</sup>Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

### Table 2-E: Requested Allowable Emissions

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

Unit No	N	Ox	C	0	VC	<b>D</b> C <sup>1</sup>	S	Ox	TS	$SP^2$	PM	(10 <sup>2</sup>	PM	$2.5^2$	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	5.22	22.87	18.26	80.00	4.25	18.63	0.31	1.34	0.21	0.91	0.21	0.91	0.21	0.91	-	-	-	-
T201	-	-	-	-	192.61	39.17	-	-	-	-	-	-	-	-	-	-	-	-
T201(flash)	-	-	-	-	-	16.55	-	-	-	-	-	-	-	-	-	-	-	-
T202	-	-	-	-	192.61	39.17	-	-	-	-	-	-	-	-	-	-	-	-
T202(flash)	-	-	-	-	-	16.55	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	98.51	36.96	-	-	-	-	-	-	-	-	-	-	-	-
3(flash)	-	-	-	-	-	6.95	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	2.37	10.37	-	-	-	-	-	-	-	-	-	-	-	-
LOAD	-	-	-	-	158.72	3.30	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	-	-	-
SSM	-	-	-	-	594.60	14.66												
Totals	5.22	22.9	18.3	80.0	1243.7	176.8	0.31	1.34	0.21	0.91	0.21	0.91	0.21	0.91	-	-	-	-

<sup>1</sup> Instrument gas dryer emissions from Unit INST-1 (35.5 VOC tpy) are routed to Unit 3. Instrument gas dryer emissions from Unit INST-2 (35.5 VOC tpy) are routed via common manifold to Units T201 and T202. To represent the maximum worst case potential emissions from Units T201 and T202, 35.5 VOC tpy from Unit INST-2 was included in each tank total, though it is shared between the two units, thus 35.5 VOC tpy were subtracted from the Totals.

<sup>2</sup> Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

#### 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)<sup>1</sup>, 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/aph/permit/aph. 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).

(1111)3.// W W W	N	Ox	C	<b>0</b>	V	DC	S	Ox	TS	$SP^2$	PM	$10^2$	PM	$2.5^2$	H	$\frac{1}{2}S$	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
SSM	-	-	-	-	594.60	14.66	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	594.60	24.66	-	-	-	-	-	-	-	-	-	-	-	-

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

<sup>1</sup>Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

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

 $\sqrt{1}$  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	C	S	Ox	T	SP	PN	110	PM	2.5	□ H <sub>2</sub> S or	· 🗆 Lead
Stack No.	Number(s) from Table 2-A	lb/hr	ton/yr	lb/hr	ton/yr												
	Totals:																

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

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

Stack	Serving Unit Number(s)	Orientation	Rain Caps	Height Above	Temp.	Flow	Rate	Moisture by	Velocity	Inside
Number	from Table 2-A	V=Vertical)	(Yes or No)	Ground (ft)	(F)	(acfs)	(dscfs)	Volume (%)	(ft/sec)	Diameter (ft)
1	Compressor Engine	V	No	22	842	1023	949	12%	112.7	3.40

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

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

Stack No.	Unit No.(s)	Total	HAPs	Forma √HAP o	ldehyde or 🗆 TAP	n-Hexane HAP or	√ · □ TAP	Benzene HAP or	√ ⊡ TAP	Toluene HAP or	√ · □ TAP	Provide Name	Pollutant Here or 🗆 TAP	Provide Name	Pollutant Here or 🗆 TAP	Provide Name	Pollutant e Here or 🗆 TAP	Provide Name Here HAP or	Pollutant
		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
1	1	1.51	6.60	1.10	4.83	0.02	0.10	0.01	0.04	0.01	0.04								
T201	T201	-	3.22	-	-	-	1.96	-	0.33	-	0.75								
T202	T202	-	3.22	-	-	-	1.96	-	0.33	-	0.75								
3	3	-	2.03	-	-	-	1.26	-	0.22	-	0.44								
FUG	FUG	0.24	1.04	-	-	0.14	0.60	0.02	0.10	0.07	0.29								
LOAD	LOAD	55.87	0.60	-	-	7.22	0.20	1.17	0.03	3.58	0.10								
SSM	SSM	19.73	0.49	-	-	12.56	0.31	2.30	0.06	3.55	0.09								
Tot	als:	77.35	17.20	1.10	4.83	19.94	6.38	3.51	1.09	7.20	2.46								

# 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,)	gas, raw/field natural gas, residue (e.g. SRU tail gas) or other	Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
1	Natural Gas	Pipeline Quality Natural Gas	933 Btu/scf	20.87 MMBtu/hr	182,814 MMBtu/yr	5 gr/100 ft3	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.

					Vanor	Average Stor	age Conditions	Max Storag	ge Conditions
Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Molecular Weight (lb/lb*mol)	Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
T201	31000299	Condensate Storage Tank	Condensate	5.6	67	58.39	5.25	91.69	6.43
T202	31000299	Condensate Storage Tank	Condensate	5.6	67	58.39	5.25	91.69	6.43
3	31000299	Condensate Storage Tank	Condensate	5.6	67	58.39	5.25	91.69	6.43

## 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-	Cap	acity	Diameter (M)	Vapor Space	Co (from Ta	<b>lor</b> ble VI-C)	Paint Condition (from Table	Annual Throughput	Turn- overs
			LR below)	LK below)	(bbl)	(M <sup>3</sup> )		(M)	Roof	Shell	VI-C)	(gal/yr)	(per year)
T201	May 1998	Natural Gas Condensate	NA	FX	500	79	4.57	0.143	LG	LG	good	481,872	22.95
T202	May 1998	Natural Gas Condensate	NA	FX	500	79	4.57	0.143	LG	LG	good	481,872	22.95
3	May 1998	Natural Gas Condensate	NA	FX	210	33	3.05	0.095	LG	LG	good	202,386	22.95

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

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

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

	Materi	al Processed		Μ	laterial Produced		
Description	Chemical Composition	Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)
Natural gas	Natural gas	gas/liquid	35,600 MMscf/yr	-			

## Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
		Not	applicable. CEM equ	ipment is not used at	this facility.	-	-		

## Table 2-O: Parametric Emissions Measurement Equipment

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

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
		Not applicable	e. PEM equipment is	s not used at this facilit	y.			

### 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  $\Box$  By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO <sub>2</sub> ton/yr	N2O ton/yr	CH <sub>4</sub> ton/yr	SF <sub>6</sub> ton/yr	<b>PFC/HFC</b> ton/yr <sup>2</sup>					<b>Total</b> <b>GHG</b> Mass Basis ton/yr <sup>4</sup>	<b>Total</b> <b>CO<sub>2</sub>e</b> ton/yr <sup>5</sup>
Unit No.	GWPs <sup>1</sup>	1	298	25	22,800	footnote 3						
1	mass GHG	10684.38	0.02	0.20	-	-					10684.60	
1	CO <sub>2</sub> e	10684.38	6.01	5.04	-	-						10695.43
T201	mass GHG	11.97	-	155.13	-	-					167.10	
1201	CO <sub>2</sub> e	11.97	-	3878.20	-	-						3890.17
Т202	mass GHG	11.97	-	155.13	-	-					167.10	
1202	CO <sub>2</sub> e	11.97	-	3878.20	-	-						3890.17
3	mass GHG	11.97	-	155.13	-	-					167.10	
	CO <sub>2</sub> e	11.97	-	3878.20	-	-						3890.17
FUG	mass GHG	0.57	-	7.33	-	-					7.90	
100	CO <sub>2</sub> e	0.57	-	183.29	-	-						183.86
LOAD	mass GHG	-	-	-	-	-					0.00	
LOND	CO <sub>2</sub> e	-	-	-	-	-						0.00
SSM	mass GHG	4.95	-	64.13	-	-			 		69.08	
5511	CO <sub>2</sub> e	4.95	-	1603.21	-	-						1608.15
	mass GHG											
	CO <sub>2</sub> e											
	mass GHG								 			
	CO2e											
Total	mass GHG	10713.84	0.02	381.92							11,095.8	
Iotal	CO <sub>2</sub> e	10713.84	6.01	9547.94								20,267.8

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

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

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

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

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

Note: T201 and T202 GHG emissions are estimated by dividing the total GHG emissions between the two tanks. The total GHG emissions in this table include the emissions from one of the tanks, otherwise the emissions would be double counted. This methodology has been used for VOC emission rates for these tanks in the past.

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

The **<u>Process</u>** Summary 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.

#### Facility Description:

Enterprise Field Services, LLC owns, and Enterprise Products Operating, LLC operates (collectively "Enterprise") two adjacent natural gas compressor stations, collectively permitted as the 3B-1 Turley Compressor Station. 3B-1 Turley is located in Township 30N, Range 9W, Section 33, approximately 2 miles north of Turley, New Mexico in San Juan County.

#### Process Description:

The 3B-1 Turley facility compresses natural gas through underground natural gas pipelines using one reciprocal internal combustion engine-driven compressor and one electric compressor. Additional activities at the site include the storage and loading of condensate liquids, removed from the gas stream.

#### Permit Application:

This application is being submitted to renew Title V Operating Permit Number P256. The application is being submitted pursuant to 20.2.70.300.B(2) New Mexico Administrative Code (NMAC).

In addition, Enterprise would like to correct the make and model number of Instrument Gas Dryer INST-2. An administrative permit revision was submitted to the New Mexico Environment Department (NMED) January 26, 2017. NMED made the revision to the facility's NSR Permit (Number 1569-M3R2) but did not make the correction to the Tile V Permit. The Title V Permit currently list Instrument Gas Dryer INST-2 as a Henderson Model Number HL-100-250 when it is in fact an H&H Manufacturing Model number HH-0050. There is no increase in emissions associated with this change.

#### Air Permits:

This site is currently authorized to operate under NSR Air Quality Permit No. 1569-M3R2, issued February 1, 2017.

On September 24, 2015, NSR Air Quality Permit No. 1569-M3R1 was issued. This revision authorized an Administrative Revision for a like-kind engine replacement. Unit 1, previously a 3162-hp Caterpillar G3612TALE, SN 1YG00075, was replaced by a 3162-hp Caterpillar G3612TALE, SN 1YG00072. The requirements specified in 20.2.72 NMAC, Construction Permits, Permit Processing and Requirements, Section 219.A were met.

# **Process Flow Sheet**

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

A process flow sheet for the 3B-1 Turley Compressor Station is included on the following page.



# **Plot Plan Drawn To Scale**

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

A plot plan for the 3B-1 Turley Compressor Station is included on the following page.



# **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.

#### Emission Calculation Details:

A summary of criteria pollutant emissions, HAP emissions, and GHG emissions for the 3B-1 Turley Compressor Station are included in this Section. There are no changes to emission rates being proposed with this application.

#### Engine Unit ID 1:

The engine included in this application is an existing source. The NOx, CO, and VOC emissions are based on vendor data. The PM and SO<sub>2</sub> emissions are based on AP-42 emission factors. The SO<sub>2</sub> factor (0.0147 lb SO<sub>2</sub>/MMBtu) was based on 5 gr S/100 scf and the AP-42 emission factor from Table 3.1-2a. HAP emissions are based on AP-42, 5th ed. (July 2000) emission factors for 4SLB engines, Table 3.2-2. Greenhouse gas emissions were calculated using emission factors from 40 CFR 98, Tables C-1 and C-2.

#### Storage Tanks, Unit IDs T201, T202, and 3:

All storage tanks in this application are existing tanks. EPA's TANKS 4.0.9d program was used to estimate VOC emissions from the storage tanks. Flash emissions are only included for the condensate tanks as the other storage tanks onsite are not expected to produce flashing emissions. VOC and HAP emissions for tanks storing condensate are reported on an annual basis only. The emissions are based on monthly condensate volumes, and no realistic hourly volume can be estimated due to the variability of the tank flashing process.

The Produced Water sumps, Lube Oil tanks, Antifreeze tanks, Methanol tanks, and Waste Oil and Water/Skid Drain Sumps meet the requirements of exemption 20.2.72.202 B.5. Calculations showing that these storage vessels qualify for the exemption are provided.

#### Fugitives, Unit ID FUG:

Fugitive VOC and HAPs emissions are based on a gas analysis (included in Section 7) and emission factors from EPA's "Protocol for Equipment Leak Emission Estimates" document (EPA-453-R-95-017, 11/1995).

#### Truck Loading, Unit ID LOAD:

The truck loading emissions of condensate and wastewater are based on a liquids analysis (included in Section 7) and EPA's AP-42, Section 5.2.

#### Startup, Shutdown, and Maintenance (SSM) Emissions, Unit ID SSM:

This site is expected to experience planned maintenance, pigging, shutdowns, and compressor engine startup. The event frequency and volumes included in this application are based on historical SSM data and site knowledge. The VOC fugitive emissions are based on a supplied gas analysis (included in Section 7).

#### Instrument Gas Emissions, Unit IDs INST-1 and INST-2:

3B-1 Turley uses dried natural gas for its instrument system. Purge rates used in the emission estimates is based on vendor information.

#### Malfunction Emissions, Unit ID MALF:

This site is expected to experience malfunction emissions from various units. Accordingly, 10 tons per year of malfunction emissions are included in the permit pursuant to the NMED IMPLEMENTATION GUIDANCE FOR PERMITTING SSM EMISSIONS AND EXCESS EMISSIONS (dated January 10, 2011).

# Section 6.a

# **Green House Gas Emissions**

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must

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

## **Calculating GHG Emissions:**

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

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

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

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

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

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

#### Sources for Calculating GHG Emissions:

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

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

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

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

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

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

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

#### Metric to Short Ton Conversion:

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

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

Green House Gas emissions have been included in the emission calculations and Form UA2.

#### Emissions Summary (Criteria Pollutants) 3B-1 Turley Compressor Station Enterprise Field Services LLC

			N	<b>.</b>		ò			,	voc		DM	10		00	
ID	Emissions Source	Description		7		0	Tot	al	Flash	Tank Non- Flash	Instrument Gas	PM	10	5	02	Included in Facility-wide Potential Emissions
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy	tpy	tpy	lb/hr	tpy	lb/hr	tpy	
1	Engine	CAT 3612	5.22	22.87	18.26	80.00	4.25	18.63	-	-	-	0.21	0.91	0.31	1.34	Yes
T201	Tank	Condensate Storage Tank	-	-	-	-	192.61	55.72	16.55	3.70	35.47	-	-	-	-	Yes
T202	Tank	Condensate Storage Tank	-	-	-	-	192.61	55.72	16.55	3.70	35.47	-	-	-	-	Yes
5a	Tank	Lube Oil Storage Tank	-	-	-	-	0.01	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
T206	Sump	Waste Oil Water Sump	-	-	-	-	0.24	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
T200	Sump	Produced Water Sump	-	-	-	-	5.43	0.01	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
T203	Sump	Produced Water Sump	-	-	-	-	5.93	0.01	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
T207	Sump	Produced Water Sump	-	-	-	-	1.65	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
T208	Sump	Produced Water Sump	-	-	-	-	0.69	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
3	Tank	Condensate Storage Tank	-	-	-	-	98.51	43.92	6.95	1.49	35.47	-	-	-	-	Yes
4	Tank	Anti-freeze Storage Tank	-	-	-	-	0.01*	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
5	Tank	Lube Oil Storage Tank	-	-	-	-	0.01*	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
6	Tank	Methanol Storage Tank	-	-	-	-	4.95	0.03	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
7	Tank	Methanol Storage Tank	-	-	-	-	6.87	0.06	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
8	Tank	Methanol Storage Tank	-	-	-	-	6.87	0.06	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
9	Tank	Methanol Storage Tank	-	-	-	-	20.61	0.15	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
10	Tank	Methanol Storage Tank	-	-	-	-	20.61	0.15	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
11	Sump	Skid Drain Sump	-	-	-	-	0.24	0.01*	-	-	-	-	-	-	-	No, source meets exemption 20.2.72.202 B.5
FUG	Fugitives	Fugitives	-	-	-	-	2.37	10.37	-	-	-	-	-	-	-	Yes
LOAD	Truck Loading	Truck Loading	-	-	-	-	158.72	3.30	-	-	-	-	-	-	-	Yes
MALF	Malfunction	Malfunction Emissions	-	-	-	-	-	10.00								Yes
SSM	SSM	SSM	-	-	-	-	594.60	14.66	-	-	-	-	-	-	-	Yes
		Facility-wide Potential Emissions	5.22	22.87	18.26	80.00	1236.75	176.84	40.06	8.88	70.94	0.21	0.91	0.31	1.34	

\* In order to assure compliance with permit representations, lb/hr and tpy emissions which are less than 0.01 are represented as 0.01.

1) See Section 6 for emission calculation details.

2) See Section 7 for program output reports.

3) To represent the worst-case potential emissions from IDs T201 and T202, the entire volume of emissions from the Turley gas dryer have been allocated to both tanks. The Facility-Wide Potential VOC Emissions only include this volume of emissions once.

4) Malfunction emissions are being included at the allowed rate of 10 tpy per NMED Guidance, IMPLEMENTATION GUIDANCE FOR PERMITTING SSM EMISSIONS AND EXCESS EMISSIONS (1.10.11).

#### Emissions Summary\* (HAP Emissions) 3B-1 Turley Compressor Station Enterprise Field Services LLC

EPN Emissions Source		Acetaldehyde Acro		Acrolein Formaldehyde		Metha	Methanol n-Hex		ane Benzene		Toluene		Xylene		Total HAPS		Included in Facility-wide Potential			
LEN	Emissions Source	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	Emissions
1	Engine	0.17	0.76	0.11	0.47	1.10	4.83	0.05	0.23	0.02	0.10	0.01	0.04	0.01	0.04	0.01*	0.02	1.51	6.60	Yes
T201	Tank	-	-	-	-	-	-	-	-	-	1.96	-	0.33	-	0.75	-	0.13	-	3.22	Yes
T202	Tank	-	-	-	-	-	-	-	-	-	1.96	-	0.33	-	0.75	-	0.13	-	3.22	Yes
5a	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T206	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T200	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.6
T203	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.7
T207	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.8
T208	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.9
3	Tank	-	-	-	-	-	-	-	-	-	1.26	-	0.22	-	0.44	-	0.09	-	2.03	Yes
4	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.11
5	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.12
6	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.13
7	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.14
8	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.15
9	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.16
10	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.17
11	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.18
FUG	Fugitives	-	-	-	-	-	-	-	-	0.14	0.60	0.02	0.10	0.07	0.29	0.01	0.04	0.24	1.04	Yes
LOAD	Truck Loading	-	-	-	-	-	-	43.21	0.25	7.22	0.20	1.17	0.03	3.58	0.10	0.45	0.01	55.87	0.60	Yes
SSM	SSM	-	-	-	-	-	-	-	-	12.56	0.31	2.30	0.06	3.55	0.09	1.12	0.03	19.73	0.49	Yes
Facility-W	ide Potential Emissions	0.17	0.76	0.11	0.47	1.10	4.83	43.26	0.48	19.94	6.38	3.51	1.09	7.20	2.46	1.59	0.46	77.35	17.20	

Reporting Threshold	1	1		1	1		1		1		1	1
Report on UA2?			REF	PORT		REP	ORT	REP	ORT	REP	ORT	

\* In order to assure compliance with permit representations, Ib/hr and tpy emissions which are less than 0.01 are represented as 0.01.

1) Only HAP emissions for any HAP greater than 0.1 tpy for the site are listed here. However, the total HAP emissions from each source is the total of all HAP pollutants from the source. Therefore, the total HAP emissions may not agree with the sum of individual HAPs shown. Per form instructions, only HAPs emitted in excees of one ton per year are reported on the UA2 form.

2) HAP emissions from storage tanks (other than those storing methanol and 100% condensate) and wastewater loading are negligible, and therefore, have not been included in HAP emission estimates.

3) HAP emissions for storage tanks are reported on an annual basis only. For condensate tanks, the emissions are based on monthly condensate volumes, and no realistic hourly volume can be estimated due to the variability of the tank flashing process.

# Emissions Summary (GHG Emissions) 3B-1 Turley Compressor Station Enterprise Field Services LLC

EDN	Emissions Sourco	C	02	N	20	С	H4	Included in Facility-wide Potential	
EFN	Emissions Source	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	Emissions	
1	Engine	2439.4	10684.4	0.005	0.02	0.05	0.20	Yes	
T201	Tank	2.7	12.0	-	-	35.4	155.1	Yes	
T202	Tank	2.7	12.0	-	-	35.4	155.1	Yes	
5a	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5	
T206	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5	
T200	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.6	
T203	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.7	
T207	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.8	
T208	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.9	
3	Tank	2.7	12.0	-	-	35.4	155.1	Yes	
4	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.11	
5	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.12	
6	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.13	
7	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.14	
8	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.15	
9	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.16	
10	Tank	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.17	
11	Sump	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.18	
FUG	Fugitives	0.13	0.57	-	-	1.67	7.33	Yes	
LOAD	Truck Loading	-	_	-	-	_	_	Yes	
SSM	SSM	200.6	4.9	-	-	2600.4	64.1	Yes	
	Total	2,645.6	10,713.8	0.005	0.020	2,672.9	381.9		
	CO2 Equivalent	2,645.6	10,713.8	1.4	6.0	66,823.2	9,547.9		

Total mass GHG	11,095.8	tpy
Total CO2 Equivalent	20,267.8	tpy
## Compressor Engines Emissions (ID 1) - HAPs 3B-1 Turley Compressor Station Enterprise Field Services LLC

	1		
Compresso	Caterpillar 3612 TALE		
Com	4S	LB	
C	ontrol Device:	(none)	
v	OC reduction:	(no	ne)
Annual Operating	Hours (hrs/yr):	8,7	60
Fuel Consumptio	on (Btu/hp-hr):	6,6	00
Rated Compressor Hor	sepower (hp):	3,1	62
Annual Aggregate Heat Inp	ut (MMBtu/yr):	182,	814
Hourly Aggregate Heat Inp	ut (MMBtu/hr):	20.	87
	Factor		
Pollutant	lb/MMBtu	lb/hr	tons/yr
1,1,2,2-Tetrachloroethane	4.00E-05	8.35E-04	3.66E-03
1,1,2-Trichloroethane	3.18E-05	6.64E-04	2.91E-03
1,3-Butadiene	2.67E-04	5.57E-03	2.44E-02
1,3-Dichloropropene	2.64E-05	5.51E-04	2.41E-03
2,2,4-Trimethylpentane	2.50E-04	5.22E-03	2.29E-02
2-Methylnaphthalene	3.32E-05	6.93E-04	3.03E-03
Acenaphthylene	5.53E-06	1.15E-04	5.05E-04
Acetaldehyde	8.36E-03	1.74E-01	7.64E-01
Acrolein	5.14E-03	1.07E-01	4.70E-01
Benzene	4.40E-04	9.18E-03	4.02E-02
Biphenyl	2.12E-04	4.42E-03	1.94E-02
Carbon Tetrachloride	3.67E-05	7.66E-04	3.35E-03
Chlorobenzene	3.04E-05	6.34E-04	2.78E-03
Chloroform	2.85E-05	5.95E-04	2.61E-03
Ethylbenzene	3.97E-05	8.29E-04	3.63E-03
Ethylene Dibromide	4.43E-05	9.25E-04	4.05E-03
Formaldehyde	5.28E-02	1.10E+00	4.83E+00
Methanol	2.50E-03	5.22E-02	2.29E-01
Methylene Chloride	2.00E-05	4.17E-04	1.83E-03
n-Hexane	1.11E-03	2.32E-02	1.01E-01
Naphthalene	7.44E-05	1.55E-03	6.80E-03
PAH	2.69E-05	5.61E-04	2.46E-03
Phenanthrene	1.04E-05	2.17E-04	9.51E-04
Phenol	2.40E-05	5.01E-04	2.19E-03
Styrene	2.36E-05	4.93E-04	2.16E-03
Toluene	4.08E-04	8.51E-03	3.73E-02
Vinyl Chloride	1.49E-05	3.11E-04	1.36E-03
Xylene	1.84E-04	3.84E-03	1.68E-02
Total HAPS		1.51	6.60

1) HAP Emissions based on AP-42, 5th ed. (July 2000) emission factors for 4SLB engine.

2) Fuel Consumption figure is from Vendor.

3) See Section 7, Vendor Data Sheet.

#### Compressor Engines Emissions (ID 1) - Criteria Pollutants 3B-1 Turley Compressor Station Enterprise Field Services LLC

,	
Source No.	1
Engine Model	Caterpillar 3612 TALE
Control Device	(none)
Fuel Consumption	6,600 Btu/hp-hr
Horse Power Rating	3,162 HP
Annual Operating Hours	8,760 hours
NOx Factor	0.749 g/hp-hr
CO Factor	2.620 g/hp-hr
VOC Factor	0.610 lb/MMBtu
VOC reduction	(none)
CO reduction	(none)
PM10 Factor	9.99E-03 lb/MMBtu
SO2 Factor	1.47E-02 lb/MMBtu
CO2 Factor	5.30E+01 kg/MMBtu
N2O Factor	1.00E-04 kg/MMBtu
CH4 Factor	1.00E-03 kg/MMBtu

Source No	1	
Pollutant	lb/hr	tpy
NOx	5.22	22.87
СО	18.26	80.00
VOC	4.25	18.63
PM10	0.21	0.91
SO2	0.307	1.344
CO2	2439.4	10684.4
N2O	0.005	0.020
CH4	0.046	0.202

Site Elevation (ft) = 5730

Derated Horsepower = 3335 hp - [3335 hp x (5730 ft - 4000 ft) / 1000 ft x 3%] = 3,162 hp

#### Notes

1) NOx, CO, and VOC factors are from the vendor; additionally, NOx and CO include an engineering factor based on process knowledge.

2) PM10 factor is from AP-42, Table 3.2-2, 5th Edition, July, 2000.

3) The SO2 factor (0.0147 lb SO2/MMBtu) was based on 5 gr S/100 scf and scaled using AP-42 emission factor of 0.000588 lb SO2/MMBtu for 0.2 gr S/100 scf (Table 3.2-2, 5th Edition, July, 2000).

4) Emission Factor for CO2 is from 40 CFR 98, Table C-1 - Default CO2 Emissions Factors

5) Emission Factor for N2O and CH4 are from 40 CFR 98, Table C-2, Default CH4 and N2O Emission Factors for Various Types of Fuel

6) NOx Emissions, lb/hr = Emission Factor, g/hp-hr, x Horse Power, hp, / 453.6 g/lb

7) NOx Emissions, tons/yr = NOx Emissions, lb/hr, x 8,760 hrs/yr, / 2,000 lb/ton

8) Fuel Consumption figure is from Vendor.

9) See Section 7, Vendor Data Sheet. DM5310-06 Setup was used, because it most accurately represents the configuration of this engine.
 10) Derated horspower was calculated in accordance with NMED guidance (AQB02.07-01, dated December 21, 1998).

		<sup>1</sup> Oil & Gas Production Operations Fugitive		
		Emission Factors	Component	Total Lose
Component Type	Service	lb/hr/component	Count	(lb/hr)
	GasMapor	0.00002	112	1 11E+00
Valves	Light Liquid	0.00552	200	1.1105+00
Valves	Heavy Liquid	0.00000	200	0.00E+00
	Gas Vapor	0.00002	0	0.000000
Pumps	Light Liquid	0.00329	7	2.01E.01
i unpa	Howy Liquid	0.02000		2.01E-01
	Gas/Vapor	0.00113	180	1.55E-01
Flanges	Light Liquid	0.00000	199	1.53E-01
i langeo	Heavy Liquid	0.000243	100	4.57E=02
	Gas/Vapor	0.00000000	4	7 76E-02
Compressors	Light Liquid	0.0194	- 4	0.00E+00
Compressors	Heavy Liquid	0.0105	0	0.00E+00
	Gas/Vapor	0.0000000	10	1.00E+00
Relief Valves	Light Liquid	0.0165	2	3.30E-02
	Heavy Liquid	0.000683	0	0.00E+00
	Gas/Vapor	0.0000000	15	6.62E-02
Open Ended Lines	Light Liquid	0.00441	0	0.02L-02
	Howy Liquid	0.00303	0	0.000000
	Gas/Vapor	0.000303	180	7 92E-02
Connectors	Light Liquid	0.00044	453	2 10E-01
Connectors	Heavy Liquid	0.000405		0.00E+00
	Gas/Vanor	0.0194	40	7 76E-01
<sup>2</sup> Other	Light Liquid	0.0165	20	3 30E-01
- Outer	Heavy Liquid	0.000683	0	0.00E+00
	Gas/Vanor	0.0194	0	0.00E+00
Process Drains	Light Liquid	0.0165	4	6.60E-02
	Heavy Liquid	0.000683	0	0.00E+00
Component Emission Total Losses (lb/br):				
	Comp	Gas/Vanor Em	issions (lb/hr):	2.46
Gas/vapor Emissions (ID/Nr):				
Light Light Emissions (Ib/hr): Heavy Liquid Emissions (Ib/hr):				

#### Sample Calculations:

 $\label{eq:emissions} \begin{array}{l} {\sf Emission Factor (lb/hr/component) \ x \ Component Count} \\ {\sf Emissions \ (tons/yr) = Emissions \ (lb/hr) \ x \ 8,760 \ hrs/yr \ / \ 2,000 \ lb/ton \end{array}$ 

#### Speciated Emissions Based on Inlet Gas Analysis

Compound	Dry Basis Mole %	MW	lb/mol	Dry Basis Weight %	lb/hr	tons/year
CO <sub>2</sub>	2.41	44.010	106.28	5.25	0.1292	0.5657
H <sub>2</sub> S	0.000	34.076	0.00	0.00	0.0000	0.0000
N <sub>2</sub>	0.360	28.013	10.07	0.50	0.0122	0.0536
Methane	85.851	16.043	1377.31	68.08	1.6739	7.3317
Ethane	7.134	30.070	214.52	10.60	0.2607	1.1419
Propane	2.961	44.097	130.56	6.45	0.1587	0.6950
i-butane	0.559	58.124	32.51	1.61	0.0395	0.1731
n-butane	0.728	58.124	42.33	2.09	0.0514	0.2253
i-pentane	0.267	72.151	19.28	0.95	0.0234	0.1026
n-pentane	0.200	72.151	14.46	0.71	0.0176	0.0770
Cyclopentane	0.012	70.100	0.86	0.04	0.0010	0.0046
n-Hexane	0.077	86.178	6.65	0.33	0.0081	0.0354
Cyclohexane	0.037	84.160	3.12	0.15	0.0038	0.0166
Other Hexanes	0.154	86.180	13.26	0.66	0.0161	0.0706
Heptanes	0.089	100.210	8.90	0.44	0.0108	0.0474
Methylcyclohexane	0.028	98.190	2.75	0.14	0.0033	0.0146
Benzene	0.016	78.114	1.22	0.06	0.0015	0.0065
Toluene	0.020	92.141	1.88	0.09	0.0023	0.0100
Ethylbenzene	0.001	106.168	0.11	0.01	0.0001	0.0006
Xylene	0.006	106.168	0.59	0.03	0.0007	0.0032
C6+/C8+ Heavies	0.423	86.117	36.45	1.80	0.0443	0.1940
Total:	101.34		2023.12	100.00		
			VOC Total:	15.57%	0.38	1.68
			HAPs Total:	0.52%	0.01	0.06

#### Speciated Emissions Based on Liquid Analysis Data<sup>(2)</sup>

Compound	Weight %	lb/hr	tons/year
n-Hexane	6.46	0.13	0.56
Benzene	1.05	0.02	0.09
Toluene	3.20	0.06	0.28
Ethylbenzene	0.22	0.004	0.02
Xylene	0.40	0.01	0.03
non-HAP <sup>(3)</sup>	88.67	1.76	7.71
Total:	100.00		
VOC Total:	100.00%	1.99	8.69
HAPs Total:	11.33%	0.22	0.99

1) Emission factors are from EPA's "Protocol for Equipment Leak Emission Estimates" EPA-453/R-95-017, 11/1995, Table 2-4.

2) For Oil and Gas Production Operations, "Other" includes diaphragms, dump arms, hatches, instruments, meters, polished rods, and vents.

3) See attached gas and liquid analyses in Section 7.

4) See attached liquid analysis in Section 7.

5) All non-HAPs assumed VOC.

### Instrument Gas Dryer Emissions, Unit IDs INST-1 and INST-2 3B-1 Turley Compressor Station Enterprise Field Services LLC

#### Basis:

- Instrument gas emissions are vented through condensate tanks (IDs T201, T202, and 3).

- The site consists of 2 adjacent compressor stations - the 3B-1 Station and the Turley Station. ID 3 is located at the 3B-1 Station, while IDs T201 and T202 are at the Turley Station. The site was designed such that instrument gas emissions from INST-1 are routed via manifold to ID 3, while the emissions from INST-2 are routed via common manifold to IDs T201 and T202. For the purposes of this application, half of the total volume of instrument gas dryer emissions are represented as being emitted at ID 3. It is not possible to accurately determine how the remaining half of these emissions will be released from Tanks T201 and T202. Therefore, in order to accurately represent the maximum worst case potential emissions from Tanks T201 and T202, the remaining half of the gas dryer emissions are being represented as being emitted both from T201 and T202. Actual allocation of emissions from T201 and T202 may vary.

	Hourly	Annual				
	Volume	Volume	Material	Standard	Total	Total
Event Description	(MCF)	(MMCF)	Vented	scf/lbmol	lbmol/hr	lbmol/yr
Dryer Regen Gas Discharged to Atm	1.80	15.77	Nat. Gas	379.482	4.74	41,551.38
Actual Use of Instrument Gas	0.15	1.33	Nat. Gas	379.482	0.40	3,501.09

	Dry Basis		15 //b	lb/br	tov
Compound	WOIe %	NIVV	Ib/ib-moi	10/11	ιpy
CO2	2.41	44.01	1.06	5.47	23.94
H2S	0.000	34.08	0.00	0.00	0.00
N2	0.360	28.01	0.10	0.52	2.27
Methane	85.851	16.04	13.77	70.83	310.26
Ethane	7.134	30.07	2.15	11.03	48.32
Propane	2.961	44.10	1.31	6.71	29.41
i-butane	0.559	58.12	0.33	1.67	7.32
n-butane	0.728	58.12	0.42	2.18	9.54
i-pentane	0.267	72.15	0.19	0.99	4.34
n-pentane	0.200	72.15	0.14	0.74	3.26
Cyclopentane	0.012	70.10	0.01	0.04	0.19
n-Hexane	0.077	86.18	0.07	0.34	1.50
Cyclohexane	0.037	84.16	0.03	0.16	0.70
Other Hexanes	0.154	86.18	0.13	0.68	2.99
Heptanes	0.089	100.21	0.09	0.46	2.00
Methylcyclohexane	0.028	98.19	0.03	0.14	0.62
Benzene	0.016	78.11	0.01	0.06	0.27
Toluene	0.020	92.14	0.02	0.10	0.42
Ethylbenzene	0.001	106.17	0.00	0.01	0.02
Xylene	0.006	106.17	0.01	0.03	0.13
C6+/C8+ Heavies	0.423	86.117	0.36	1.87	8.21
Total:	101.34	Avg. MW =	20.23		
			VOC Total:	16.20	70.94
			HAPs Total:	0.54	2.35

(1) See attached gas analysis in Section 7.

(2) Non-HAP portion assumed to be 100% VOC.

### Startup, Shutdown, & Maintenance (SSM) Emissions, ID SSM Emissions from Scheduled/Routine & Predictable Events 3B-1 Turley Compressor Station Enterprise Field Services LLC

	Volume Per Event (MCF)	Events per hour	Events per year	Hourly Volume (MCF)	Annual Volume (MMCF)	Material Vented	Standard scf/lbmol	Total Ibmol/hr	Total Ibmol/yr
Blowdowns	9.32	4	310	37.27	2.89	Nat. Gas	379.482	98.21	7,611.49
Planned maintenance and emergency shutdown	13.98	2	14	27.95	0.20	Nat. Gas	379.482	73.66	515.62
Compressor Engine Startup and Pigged	1.61	4	280	6.42	0.45	Nat. Gas	379.482	16.93	1,184.98

Compound	Dry Basis Mole %	MW	lb/lb-mol	lb/hr	tpy
CO2	2.41	44.01	1.06	200.65	4.95
H2S	0.000	34.08	0.00	0.00	0.00
N2	0.360	28.01	0.10	19.02	0.47
Methane	85.851	16.04	13.77	2600.37	64.13
Ethane	7.134	30.07	2.15	405.01	9.99
Propane	2.961	44.10	1.31	246.49	6.08
i-butane	0.559	58.12	0.33	61.38	1.51
n-butane	0.728	58.12	0.42	79.92	1.97
i-pentane	0.267	72.15	0.19	36.40	0.90
n-pentane	0.200	72.15	0.14	27.30	0.67
Cyclopentane	0.012	70.10	0.01	1.63	0.04
n-Hexane	0.077	86.18	0.07	12.56	0.31
Cyclohexane	0.037	84.16	0.03	5.89	0.15
Other Hexanes	0.154	86.18	0.13	25.04	0.62
Heptanes	0.089	100.21	0.09	16.80	0.41
Methylcyclohexane	0.028	98.19	0.03	5.19	0.13
Benzene	0.016	78.11	0.01	2.30	0.06
Toluene	0.020	92.14	0.02	3.55	0.09
Ethylbenzene	0.001	106.17	0.00	0.20	0.005
Xylene	0.006	106.17	0.01	1.12	0.03
C6+/C8+ Heavies	0.423	86.117	0.36	68.82	1.70
Total:	101.34		20.23		
			VOC Total:	594.60	14.66
			HAPs Total:	19.73	0.49

(1) See attached gas analyses in Section 7.

### Flash Emissions 3B-1 Turley Compressor Station Enterprise Field Services LLC

6 Month Totals (bbls) - January through June 2010							
3B-1 Turley	Jan	Feb	March	April	May	June	Totals
Water Total	0	0	80	0	0	0	80
Condensate Total	1,850	1,440	2,740	2,225	790	610	9,655
Trucked In	160	240	0	0	0	0	400

9,655 80	Total Condensate Total Water
9,255	Produced Condensate ("condensate total" minus "trucked in")
1,210.00	total bbls total condensate storage (IDs T201, T202, and 3)
22.95	Turnovers per tank
1.50	Times Current Throughput (Safety Factor)
27,765.00	bbl/yr (produced condensate only, multiplied by 2 to estimate one year of data, then multiplied by safety factor)
29,205.00	bbl/yr (all)
80,112.45	lb/yr flash gas
16.55	TPY flash per 500 bbl tank

6.95 TPY flash per 210 bbl tank

based on 3B-1 Turley HYSYS, see Section 7 for VOC Mass Flow Rate and Std. Ideal Liquid Vol. Flow

#### Speciated Condensate Flash Emissions Based on Liquid Analysis

Compound	Woight %	T201	T202	3
Compound	weight //	tpy	tpy	tpy
Non HAPs	88.67	14.68	14.68	6.16
n-Hexane	6.46	1.07	1.07	0.45
Benzene	1.05	0.17	0.17	0.07
Toluene	3.20	0.53	0.53	0.22
Ethylbenzene	0.22	0.04	0.04	0.02
Xylene	0.40	0.07	0.07	0.03
Total:	100.00			
VOC Total:	100.00%	16.55	16.55	6.95
HAPs Total:	11.33%	1.88	1.88	0.79

1) See Section 7, "Turley Pigged Liquids Emissions" for VOC Mass Flow Rate and Std. Ideal Liquid Vol. Flow

2) Flash emissions = Produced Condensate Throughput x (VOC Mass Flow, lb/hr x 24 hr / Std. Ideal Liq. Vol. Flow, bbl/day)
 3) See attached liquid analyses in Section 7.

4) Non-HAP portion assumed to be 100% VOC.

5) VOC and HAP emissions for tanks storing condensate are reported on an annual basis only. The emissions are based on monthly condensate volumes, and no realistic hourly volume can be estimated due to the variability of the tank flashing process.

#### Tank Emissions 3B-1 Turley Compressor Station Enterprise Field Services LLC

		Maximum	Tank	No. of	VOC Short	-Term Emissio	n Rates	VOC Annual Emissions Rates								
ID	Material Stored	Pump Rate (gal/hr)	Capacity (Gallons)	Turnovers per year	TANKS 4.0 L <sub>w</sub> <sup>(1)</sup> (Ibs/month)	TANKS 4.0 Turnover Factor	(lbs/hr)	TANKS 4.0 Total Losses <sup>(2)</sup> (Ibs/yr)	TANKS 4.0 n-Hexane Losses <sup>(2)</sup> (Ibs/yr)	TANKS 4.0 Benzene Losses <sup>(2)</sup> (Ibs/yr)	TANKS 4.0 Toluene Losses <sup>(2)</sup> (Ibs/yr)	TANKS 4.0 Ethylbenzene Losses <sup>(2)</sup> (lbs/yr)	TANKS 4.0 Xylenes Losses <sup>(2)</sup> (lbs/yr)	TANKS 4.0 (tpy)	Flash Emissions (tpy)	Overall (tpy)
T201	Condensate Storage Tank	18,000	21000	22.95	411.62	1.00	184.51	7,389.76	285.02	28.65	25.36	0.59	0.90	3.69	16.55	20.25
T202	Condensate Storage Tank	18,000	21000	22.95	411.62	1.00	184.51	7,389.76	285.02	28.65	25.36	0.59	0.90	3.69	16.55	20.25
5a	Lube Oil Storage Tank	18,000	300	4	0.005	1.00	0.01	0.38	-	-	-	-	-	0.0002	-	0.0002
T206	Waste Oil Water Sump	18,000	5004	1	0.02	1.00	0.24	1.91	-	-	-	-	-	0.001	-	0.001
T200	Produced Water Sump	18,000	21000	1	0.53	1.00	5.43	19.12	-	-	-	-	-	0.010	-	0.010
T203	Produced Water Sump	18,000	21000	1	0.58	1.00	5.93	23.09	-	-	-	-	-	0.012	-	0.012
T207	Produced Water Sump	18,000	5004	1.00	0.14	1.00	1.65	9.22	-	-	-	-	-	0.005	-	0.005
T208	Produced Water Sump	18,000	2100	1.00	0.06	1.00	0.69	2.60	-	-	-	-	-	0.001	-	0.001
3	Condensate Storage Tank	18,000	8820	22.95	172.88	1.00	90.41	2,983.85	115.08	11.57	10.24	0.24	0.36	1.49	6.95	8.44
4	Anti-freeze Storage Tank	18,000	100	8.00	0.002	1.00	0.003	0.80	-	-	-	-	-	0.0004	-	0.0004
5	Lube Oil Storage Tank	18,000	250	8.00	0.005	1.00	0.01	0.32	-	-	-	-	-	0.0002	-	0.0002
6	Methanol Storage Tank	18,000	3024	8.00	3.30	1.00	4.95	64.05	-	-	-	-	-	0.03	-	0.03
7	Methanol Storage Tank	18,000	4200	8.00	4.58	1.00	6.87	114.20	-	-	-	-	-	0.06	-	0.06
8	Methanol Storage Tank	18,000	4200	8	4.58	1.00	6.87	114.20	-	-	-	-	-	0.06	-	0.06
9	Methanol Storage Tank	18,000	12600	8	13.74	1.00	20.61	299.82	-	-	-	-	-	0.15	-	0.15
10	Methanol Storage Tank	18,000	12600	8	13.74	1.00	20.61	299.82	-	-	-	-	-	0.15	-	0.15
11	Skid Drain Sump	18,000	5004	1	0.02	1.00	0.24	3.02	-	-	-	-	-	0.002	-	0.002
Total Significant Sources (Ib/hr)				459.43	Total Significant Sources (tpy) 48.5					48.94						
Total Exempt Sources (lb/hr)					74.11						Total	Exempt S	ources (tpy)	0.47		

Total Exempt Sources (lb/hr) 74.11 [1] To (1) Short term, lb/hr, emissions are based on the equation, Lmax = highest monthly working loss, lb/month x 12 months / turnover factor x max filling rate, gal/hr, / tank capacity, gals, / # of Turnovers

If the fill rate is sufficiently high that that tank can be filled in less than one hour, Lmax = highest working loss, lb/month x 12 months / # turnovers

(1) & (2) See TANKS monthly reports in Section 7 for emission estimates.

(3) See Table 6-4b and Section 7 for flash data. Flash emissions = Condensate Throughput x (VOC Mass Flow, lb/hr x 24 hr / Std. Ideal Liq. Vol. Flow, bbl/day)

(4) Tank shell colors from the TANKS 4.0.9d program that were most similar to actual tank shell colors were used in accordance with EPA guidance.

#### Truck Loading Emissions, ID LOAD 3B-1 Turley Compressor Station Enterprise Field Services LLC

#### Basis

Emissions calculated based on loading loss factors from EPA's AP-42, Table 5.2-1, Section 5.2, June, 2008.

Product		MIA	Short-Term	Annual	Saturation	Bult	Short-Te	erm Loading	Annual L	oading Loss	s Throughput		lb/br	tov
Floduct	Loading Type	/pe Max VP A		VP Average VP Factor, S (F		(F)	Loss Factor		Factor		(gal/hr)	(gal/yr)		ιpy
Condensate water mix	Submerged	67.00	6.43	5.14	0.6	58.39	6.21	lb/1000 gal	4.96	lb/1000 gal	18,000	1,226,610	112	3.045
Methanol	Splash	32.04	2.14	1.55	1.45	57.19	2.40	lb/1000 gal	1.73	lb/1000 gal	18,000	292,992	43	0.254
Wastewater	Submerged	24.99	0.58	0.40	0.6	59.23	0.21	lb/1000 gal	0.14	lb/1000 gal	18,000	13,440	3.7	0.001
		,	,	,								Totals:	158.72	3.30

#### Notes:

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

where:

- L = Loading Losses, lb/1000 gallons
- S = Saturation Factor, see Table 5.2-1 in AP-42, Section 5.2.
- P = True vapor pressure, psia
- M = Molecular weight of vapors, lb/lb-mol
- T = Temperature of bulk liquid loaded, R (F + 460)

#### Speciated Emissions Based on Liquid Analysis Data<sup>(1)</sup>

Compound	Weight %	lb/hr	tons/year
n-Hexane	6.46	7.22E+00	1.97E-01
Benzene	1.05	1.17E+00	3.20E-02
Toluene	3.20	3.58E+00	9.74E-02
Ethylbenzene	0.22	2.46E-01	6.70E-03
Xylene	0.40	4.47E-01	1.22E-02
non-HAP(2)	88.67	9.91E+01	2.70E+00
Total:	100.00		
VOC Total:	100.00%	111.76	3.04
HAPs Total:	11.33%	12.66	0.34

1) See attached liquid analysis in Section 7.

2) All non-HAPs assumed VOC.

3) See attached Section 7, TANKS 4.0.9d monthly runs for short term max vapor pressure values, and annual runs for average vapor pressure.

# 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.
- $\blacksquare$  If an EPA document or other material is referenced, include a complete copy.
- □ Fuel specifications sheet.
- ☑ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

Information used to estimate emissions has been documented on each calculation spreadsheet included in Section 2 and the documents are included in this Section. Details of emission calculation methodologies are discussed in Section 6.



## G3612 LE Gas Petroleum Engine

2647-2823 bkW (3550-3785 bhp) 1000 rpm



# FEATURES

#### **Engine Design**

- Proven reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range

#### Emissions

Meets U.S. EPA Spark Ignited Stationary NSPS Emissions for 2010/11 with the use of an oxidation catalyst

#### Lean Burn Engine Technology

Lean-burn engines operate with large amounts of excess air. The excess air absorbs heat during combustion reducing the combustion temperature and pressure, greatly reducing levels of NOx. Lean-burn design also provides longer component life and excellent fuel consumption.

#### Ease of Operation

- High-strength pan and rails for excellent mounting and stability
- Side covers on block allow for inspection of internal components

#### **Advanced Digital Engine Management**

ADEM A3 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system. ADEM A3 has improved: user interface, display system, shutdown controls, and system diagnostics.

#### **Full Range of Attachments**

Large variety of factory-installed engine attachments reduces packaging time.

#### Testing

Every engine is full-load tested to ensure proper engine performance.

## 0.5 g/bhp-hr NOx or 0.7 g/bhp-hr NOx (NTE)

## **CAT® ENGINE SPECIFICATIONS**

#### V-12, 4-Stroke-Cycle

Bore	00 mm (11.8 in.)
Dianlagement 054	(15 500 out in )
	. (15,528 cu. III.)
Aspiration Turbochar	ged-Aftercooled
Digital Engine Management	
Governor and Protection Electron	ic (ADEM™ A3)
Combustion Low Emiss	sion (Lean Burn)
Engine Weight	
net dry (approx) 25,08	4 kg (55,300 lb)
Power Density 8.9 kg	/kW (14.6 lb/hp)
Power per Displacement	14.9 bhp/L
Total Cooling System Capacity7	34.4 L (194 gal)
Jacket Water	670 L (177 gal)
Aftercooler Circuit	64 L (17 gal)
Lube Oil System (refill)	1030 L (272 gal)
Oil Change Interval	5000 hours
Rotation (from flywheel end) C	ounterclockwise
Flywheel Teeth	255

#### **Gas Engine Rating Pro**

GERP is a PC-based program designed to provide site performance capabilities for Cat<sup>®</sup> natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

# Product Support Offered Through Global Cat Dealer Network

More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Cat parts and labor warranty

Preventive maintenance agreements available for repairbefore-failure options

S•O•S<sup>™</sup> program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

#### **Over 80 Years of Engine Manufacturing Experience** Over 60 years of natural gas engine production

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

#### Web Site

For all your petroleum power requirements, visit www.catoilandgas.cat.com.



### G3612 LE GAS PETROLEUM ENGINE 2647-2823 bkW (3550-3785 bhp)

## STANDARD EQUIPMENT

#### Air Inlet System

Air cleaner — standard duty Inlet air adapter

### **Control System**

A3 control system — provides electronic governing integrated with air/fuel ratio control and individual cylinder ignition timing control

#### **Cooling System**

Jacket water pump Jacket water thermostats and housing Aftercooler pump Aftercooler water thermostats and housing Single-stage aftercooler

#### **Exhaust System**

Dry wrapped exhaust manifolds Vertical outlet adapter

Flywheel & Flywheel Housing SAE standard rotation

#### **Fuel System**

Gas admission valves — electronically controlled fuel supply pressure

#### **Ignition System**

A3 control system — senses individual cylinder detonation and controls individual cylinder timing

#### Instrumentation

LCD display panel — monitors engine parameters and displays diagnostic codes

#### Lube System

Crankcase breathers — top mounted Oil cooler Oil filter Oil pan drain valve

#### Mounting System

Engine mounting feet (six total)

#### Protection System

Electronic shutoff system with purge cycle Crankcase explosion relief valves Gas shutoff valve

#### Starting System

Air starting system

#### **General** Paint — Cat yellow Vibration dampers

## **OPTIONAL EQUIPMENT**

#### Air Inlet System

Heavy-duty air cleaner with precleaners Heavy-duty air cleaner with rain protection

Charging System Charging alternators

#### **Control System**

Custom control system software — available for nonstandard ratings, field programmable using flash memory

#### **Cooling System**

Expansion tank Flexible connections Jacket water heater

### Exhaust System Flexible bellows adapters

Exhaust expander Weld flanges

#### Fuel System

Fuel filter Gas pressure regulator Flexible connection Low energy fuel system Corrosive gas fuel system

Ignition System CSA certification

#### Instrumentation

Remote data monitoring and speed control Compatible with Cat Electronic Technician (ET) and Data View Communication Device — PL1000T/E Display panel deletion is optional

#### Lube System

Air or electric motor-driven prelube Duplex oil filter LH or RH service Lube oil makeup system

#### Mounting System Mounting plates (set of six)

Power Take-Offs Front stub shafts

#### **Starting System**

Air pressure reducing valve Natural gas starting system

#### General

Engine barring device Damper guard



## **TECHNICAL DATA**

# G3612 LE Gas Petroleum Engine — 1000 rpm

		DM5134-03	DM5309-06	DM5310-06	DM8607-02
Engine Power @ 100% Load @ 75% Load	bkW (bhp) bkW (bhp)	2733 (3665) 2049 (2749)	2823 (3785) 2117 (2839)	2647 (3550) 1985 (2663)	2647 (3550) 1985 (2663)
Engine Speed	rpm	1000	1000	1000	1000
Max Altitude @ Rated Torque and 38°C (100°F) Speed Turndown @ Max Altitude, Rated Torque,	m (ft)	1219.2 (4000)	1219.2 (4000)	609.6 (2000)	304.8 (1000)
and 38°C (100°F)	%	21	20	23	23
SCAC Temperature	°C (°F)	43 (110)	32 (90)	55 (130)	55 (130)
Emissions* NOx CO CO <sub>2</sub> VOC**	g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr)	0.94 (0.7) 3.4 (2.5) 587 (438) 0.79 (0.59)	0.94 (0.7) 3.4 (2.5) 585 (436) 0.75 (0.56)	0.94 (0.7) 3.4 (2.5) 589 (439) 0.82 (0.61)	0.67 (0.5) 3.7 (2.75) 591 (441) 0.87 (0.65)
Fuel Consumption*** @ 100% Load @ 75% Load	MJ/bkW-hr (Btu/bhp-hr) MJ/bkW-hr (Btu/bhp-hr)	9.31 (6580) 9.7 (6856)	9.28 (6561) 9.66 (6829)	9.34 (6600) 9.74 (6883)	9.38 (6629) 9.78 (6914)
Heat Balance Heat Rejection to Jacket Water @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	656 (37,336) 576 (32,714)	677 (38,539) 594 (33,755)	639 (36,379) 546 (31,052)	638 (36,338) 548 (31,179)
Heat Hejection to Aftercooler @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	515 (29,299) 281 (15,954)	563 (32,045) 310 (17,616)	468 (26,661) 252 (14,361)	488 (27,783) 264 (15,016)
Heat Rejection to Exhaust @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	2705 (153,813) 2152 (122,365)	2743 (156,017) 2184 (124,184)	2664 (151,486) 2132 (121,263)	2673 (152,035) 2141 (121,731)
Exhaust System Exhaust Gas Flow Rate @ 100% Load @ 75% Load	N•m³/bkW-hr (cfm) N•m³/bkW-hr (cfm)	690.14 (24,372) 543.32 (19,187)	705.85 (24,927) 553.65 (19,552)	674.20 (23,809) 532.67 (18,811)	682.15 (24,090) 538.95 (19,033)
Exhaust Stack Temperature @ 100% Load @ 75% Load	°C (°F) °C (°F)	453.30 (848) 472.20 (882)	448 (838) 464 (867)	459 (858) 480 (896)	448 (838) 469 (876)
Intake System Air Inlet Flow Rate @ 100% Load @ 75% Load	N•m³/bkW-hr (scfm) N•m³/bkW-hr (scfm)	265.78 (9386) 203.85 (7199)	273.91 (9673) 210.00 (7416)	257.66 (9099) 197.71 (6982)	264.99 (9358) 203.34 (7181)
Gas Pressure	kPag (psig)	295-324 (42.8-47)	295-324 (42.8-47)	295-324 (42.8-47)	295-324 (42.8-47)

\*at 100% load and speed, all values are listed as not to exceed

\*\*Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ



# GAS PETROLEUM ENGINE



DIMENSIONS							
Length	mm (in)	4735.1 (186.42)					
Width	mm (in)	2379.5 (93.68)					
Height	mm (in)	3219.9 (126.77)					
Shipping Weight	kg (lb)	25,084 (55,300)					

Note: General configuration not to be used for installation. See general dimension drawings for detail.

# **RATING DEFINITIONS AND CONDITIONS**

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

Transient response data is acquired from an engine/ generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions. **Conditions:** Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in. Hg) and  $15^{\circ}$  C ( $59^{\circ}$  F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in. Hg) and  $15.6^{\circ}$  C ( $60.1^{\circ}$  F). Air flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and  $25^{\circ}$  C ( $77^{\circ}$  F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in g) and stack temperature.

Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, S•O•S, ADEM, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

**Turley Pigged Liquids Emissions** 



	ü.	eiso	MMSCFD	
All Vapors	55.35	11.76	9.401e-004	
	Temperature	Pressure	Std Gas Flow	
	ц.	psia	barrel/day	
quids	50.00	98.00	15.18	
inlet li	Temperature	Pressure	Std ideal Liq Vol Flow	

G

11.76 psia 0.8484 lb/hr

Mass Flow Pressure

66.26 F

Temperature

Greenhouse Gases

11.76 psia 1.825 lb/hr

Pressure

Mass Flow

u

60.00

Temperature

VOCs

	Ľ.	psia	barrel/day	
Water	50.00	98.00	10.69	
Inlet \	Temperature	Pressure	Std Ideal Liq Vol Flow	

Gas compositon from "San Juan Compositions saturated at compressor stations.xts\* sent by R. Polston 03/01/10.

Gas flow rate and suction pressure from "Gas Volume and Pressure Input calibrated-1.xls" sent by R. Polston 03/01/10. Condensate and water volumes from "San Juan Basin Liquids Summary -3.xls" forwarded by A. Bennett 03/16/10. Liquids composition taken from Trunk O sample analyzed by AMR Research 02/10.

Mon May 10 12:03:23 2010

Case: Elen 81240 Set MYSYS Stemulations Trudad Trudad Truck to TAMP WAR PARENT PARENT Case: Len 81240 State Parent State 100

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## **GAS SPECIATION SUMMARY**

		Dry Basis Mole %	
Compound	Potter Canyon	3B-1 Turley Gas	Maximum Worst-
	6/15/2009	10/20/2011	Analysis
CO <sub>2</sub>	2.41	1.54	2.415
H₂S	0.000	0.000	0.000
N <sub>2</sub>	0.360	0.326	0.360
Methane	85.824	85.851	85.851
Ethane	6.508	7.134	7.134
Propane	2.664	2.961	2.961
i-butane	0.498	0.559	0.559
n-butane	0.728	0.706	0.728
i-pentane	0.263	0.267	0.267
n-pentane	0.200	0.194	0.200
Cyclopentane	-	0.012	0.012
n-Hexane	0.077	0.065	0.077
Cyclohexane	-	0.037	0.037
Other Hexanes	-	0.154	0.154
Heptanes	-	0.089	0.089
Methylcyclohexane	-	0.028	0.028
Benzene	0.016	0.012	0.016
Toluene	0.020	0.016	0.020
Ethylbenzene	0.001	0.001	0.001
Xylene	0.002	0.006	0.006
C6 <sup>+</sup> /C8+ Heavies	0.423	0.047	0.423
Total	100.00	100.00	101.34

To accommodate variations in gas quality, the maximum worst-case gas analysis will be used for permitting purposes to calculate gas VOC and HAP emissions.

## **Liquid Speciation Summary**

НАР	wt%	Source
n-Hexane	6.460	aspentech report
Benzene	1.050	aspentech report
Toluene	3.200	aspentech report
Ethylbenzene*	0.220	Texas Environmental Research Consortium report
m+p-Xylene	0.250	aspentech report
o-Xylene*	0.150	Texas Environmental Research Consortium report
Total	11.330	

\* Data taken from Texas Environmental Research Consortium report because HAP is not included in aspentech report, but believed to be present in condensate based on process knowledge.

Note: xylene (mixed isomers) is reported in this application and is the combination of m+p-xylene and o-xylene shown above.



EPCO HOLDINGS, INC. Burlington, MA USA

Case Name:

LARGO WINTER TANK VRU WORST CASE (HFB).HSC

USField3 Unit Set:

Date/Time: Thu Sep 09 08:28:38 2010

Fluid Package:

# **Material Stream: TANK FLARE**

Peng-Robinson Property Package:

Basis-1

9 10			CONDITIONS			
11		Overall	Vapour Phase	Liquid Phase		
12	Vapour / Phase Fraction	1.0000	1.0000	0.0000		
13	Temperature: (F)	38.02	38.02	38.02		
14	Pressure: (psig*)	0.0000	0.0000	0.0000		
15	Molar Flow (MMSCFD)	7.947e-002	7.947e-002	7.947e-010		
16	Mass Flow (lb/hr)	350.0	350.0	7.711e-006		
17	Std Ideal Lig Vol Flow (USGPM)	1.473	1.473	2.274e-008		
18	Molar Enthalpy (Btu/lbmole)	-4.587e+004	-4.587e+004	-8.392e+004		
19	Molar Entropy (Btu/Ibmole-F)	43.29	43.29	12.16		
20	Heat Flow (Btu/hr)	-4.002e+005	-4.002e+005	-7.323e-003		
21	Lig Vol Flow @Std Cond (USGPM)	1.485 *	1.485	2.253e-008		
22						
23			PROPERTIES			
24		Overall	Vapour Phase	Liquid Phase		
25	Molecular Weight	40.11	40.11	88.37		
26	Molar Density (lbmole/ft3)	2.169e-003	2.169e-003	0.4908		
27	Mass Density (lb/ft3)	8.699e-002	8.699e-002	43.37		
28	Act. Volume Flow (USGPM)	501.7	501.7	2.217e-008		
29	Mass Enthalpy (Btu/lb)	-1143	-1143	-949.7		
30	Mass Entropy (Btu/lb-F)	1.079	1.079	0.1376		
31	Heat Capacity (Btu/lbmole-F)	15.75	15.75	42.13		
32	Mass Heat Capacity (Btu/lb-F)	0.3927	0.3927	0.4767		
33	Lower Heating Value (Btu/lbmole)	7.910e+005	7.910e+005	1.700e+006		
34	Mass Lower Heating Value (Btu/lb)	1.972e+004	1.972e+004	1.924e+004		
35	Phase Fraction [Vol. Basis]		1.000	1.544e-008		
36	Phase Fraction [Mass Basis]	2.122e-314	1.000	2.203e-008		
37	Partial Pressure of CO2 (psig*)	-11.31				
38	Cost Based on Flow (Cost/s)	0.0000	0.0000	0.0000		
39	Act. Gas Flow (ACFM)		67.07			
40	Avg. Liq. Density (lbmole/ft3)	0.7386	0.7386	0.4784		
41	Specific Heat (Btu/Ibmole-F)	15.75	15.75	42.13		
42	Std. Gas Flow (MMSCFD)	7.947e-002	7.947e-002	7.947e-010		
43	Std. Ideal Liq. Mass Density (lb/ft3)	29.63	29.63	42.28		
44	Act. Liq. Flow (USGPM)					
45	Z Factor		0.9871	4.362e-003		
46	Watson K	15.29	15.29	12.57		
47	User Property					
48	Partial Pressure of H2S (psig*)	-11.43				
49	Cp/(Cp - R)	1.144	1.144	1.049		
50	Cp/Cv	1.152	1.152	1.049		
51	Heat of Vap. (Btu/lbmole)	1.191e+004				
52	Kinematic Viscosity (cSt)	5.973	5.973	0.6357		
53	Liq. Mass Density (Std. Cond) (lb/ft3)	29.39	29.39	42.67		
54	Liq. Vol. Flow (Std. Cond) (USGPM)	1.485	1.485	2.253e-008		
55	Liquid Fraction	0.0000	0.0000	1.000		
56	Molar Volume (ft3/lbmole)	461.1	461.1	2.038		
57	Mass Heat of Vap. (Btu/lb)	297.0				
58	Phase Fraction [Molar Basis]	1.0000	1.0000	0.0000		
59	Surface Tension (dyne/cm)			20.22		
60	Thermal Conductivity (Btu/hr-ft-F)	1.026e-002	1.026e-002	6.924e-002		
61	Viscosity (cP)	8.322e-003	8.322e-003	0.4416		
62	Cv (Semi-Ideal) (Btu/Ibmole-F)	13.77	13.77	40.14		
63	Hyprotech Ltd.	Aspen H	HYSYS Version 7 (2)	2.0.1.7021)	·	Page 1 of 6

Licensed to: EPCO HOLDINGS, INC.

<sup>\*</sup> Specified by user.

1	$\sim$				Case Name: I	LARGO W	/INTER TANK	VRU WORST CASE (H	HFB).HSC
3	aspentech	Burlington, M	NGS, INC. A		Unit Set: I	USField3			
4 5	e e e e e e e e e e e e e e e e e e e	USA			Date/Time:	Thu Sep 0	9 08:28:38 20	10	
6			<b>T</b> A NUZ 1	_			IN F	luid Package:	Basis-1
7 8	Mater	ial Strea	m: IANKI		ARE (cont	inue	d) <sub>P</sub>	roperty Package:	Peng-Robinson
9				F	PROPERTIES				
10 11			Overall	1	/apour Phase	Liquid	Phase		
12	Mass Cv (Semi-Ideal)	(Btu/lb-F)	0.3432		0.3432	Liquit	0.4542		
13	Cv (I	Btu/lbmole-F)	13.68		13.68		40.14		
14	Mass Cv	(Btu/lb-F)	0.3410		0.3410		0.4542		
15	Cv (Ent. Method) (I	Btu/lbmole-F)							
16	Mass Cv (Ent. Method)	(Btu/lb-F)							
17	Cp/Cv (Ent. Method)								
18	Reid VP at 37.8 C	(psig*)					6.977		
19	True VP at 37.8 C	(psig*)	772.6		772.6		13.48		
20	Liq. Vol. Flow - Sum(Std. C	ond(USGPM)	1.485		1.485		0.0000		
21	Viscosity Index						-2.288		
22				С	OMPOSITION				
24								Veneur	Fraction 1 0000
25								vapour	Fraction 1.0000
26 27	COMPONENTS	MOLAR FLOV (lbmole/hr)	MOLE FRACT	ION	MASS FLOW	MAS	SS FRACTION	LIQUID VOLUME	LIQUID VOLUME
28	Nitrogen	0.00	0.0	001	0.0226	6	0 0001	0,0001	1 0,0000
29	CO2	0.08	95 0.0	103	3.9392	2	0.0113	0.0095	5 0.0065
30	Methane	1.64	15 0.1	881	26.333	9	0.0752	0.1757	7 0.1193
31	Ethane	2.37	21 0.2	718	71.3302	2	0.2038	0.4005	5 0.2719
32	Propane	2.47	04 0.2	831	108.935	5	0.3112	0.4294	4 0.2915
33	i-Butane	0.51	43 0.0	589	29.8913	3	0.0854	0.1062	2 0.0721
34	n-Butane	0.83	02 0.0	951	48.2560	0	0.1379	0.1652	2 0.1122
35	i-Pentane	0.29	13 0.0	334	21.0204	4	0.0601	0.0673	3 0.0457
36	n-Pentane	0.21	32 0.0	244	15.3837	7	0.0439	0.0488	3 0.0331
37	n-Hexane	0.05	57 0.0	064	4.7991	1	0.0137	0.0145	5 0.0098
38	n-Heptane	0.03	69 0.0	042	3.702	1	0.0106	0.0108	3 0.0073
39	n-Octane	0.00	48 0.0	005	0.547	/	0.0016	0.0016	0.0011
40	n-Nonane	0.00	00 0.0	000	0.0000		0.0000	0.0000	0.0000
41	22-Mbutane	0.00		000	0.0000		0.0000	0.0000	0.0000
43		0.00	27 0.0	015	0.0000	1	0.0000	0.0000	4 0.0016
44	2-Mpentane	0.00	00 0.0	000	0.000	0	0.0000	0.0000	0.0000
45	3-Mpentane	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
46	22-Mpentane	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
47	MCC5==	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
48	Mcyclopentan	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
49	24-Mpentane	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
50	Benzene	0.00	93 0.0	011	0.7284	4	0.0021	0.0016	3 0.0011
51	33-Mpentane	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
52	Cyclohexane	0.02	63 0.0	030	2.2116	6	0.0063	0.0056	3 0.0038
53	2-Mhexane	0.09	45 0.0	108	9.473	/	0.0271	0.0278	3 0.0188
54	∠3-ivipentane	0.00		000	0.0000		0.0000	0.0000	0.0000
55	3-Mbexane	0.00		000		n l	0.0000	0.0000	, 0.0000
57	1-tr3-MCC5	0.00		000	0.000		0.0000	0.000	, 0.0000
58	1-ci3-MCC5	0.00	00 0.0	000	0.000	0	0.0000	0.000	) 0.000
59	Mcyclohexane	0.01	24 0.0	014	1.2164	4	0.0035	0.0031	1 0.0021
60	113-MCC5	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
61	25-Mhexane	0.00	00 0.0	000	0.0000	0	0.0000	0.0000	0.0000
62	Toluene	0.00	61 0.0	007	0.5614	4	0.0016	0.0013	3 0.0009
63	Hyprotech Ltd.		Aspen	HYS	YS Version 7 (22	.0.1.702	1)		Page 2 of 6

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7

EPCO HOLDINGS, INC. Burlington, MA USA Case Name: I

LARGO WINTER TANK VRU WORST CASE (HFB).HSC

Unit Set: USField3

\_\_\_\_\_

Date/Time: Thu Sep 09 08:28:38 2010

Fluid Package: Basis-1

# Material Stream: TANK FLARE (continued)

Property Package: Peng-Robinson

#### 8 9 COMPOSITION 10 11 **Overall Phase (continued)** Vapour Fraction 1.0000 12 13 COMPONENTS MOLAR FLOW MOLE FRACTION MASS FLOW MASS FRACTION LIQUID VOLUME LIQUID VOLUME 14 (lb/hr) FLOW (USGPM) FRACTION (lbmole/hr) 15 Naphthalene 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 16 Ecyclohexane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 17 p-Xylene 0.0001 0.0000 0.0102 0.0000 0.0000 0.0000 18 m-Xylene 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 19 2-Moctane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 20 o-Xylene 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 21 H2O 0.0440 0.0050 0.7923 0.0023 0.0016 0.0011 22 Methanol 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 23 Total 8.7262 1.0000 350.0457 1.0000 1.4730 1.0000 24 Vapour Phase Phase Fraction 1.000 26 COMPONENTS MOLAR FLOW MOLE FRACTION MASS FLOW MASS FRACTION LIQUID VOLUME LIQUID VOLUME 27 (lbmole/hr) (lb/hr) FLOW (USGPM) FRACTION 28 0.0008 0.0001 0.0226 0.0001 Nitrogen 0.0001 0.0000 29 CO2 0.0895 0.0103 3.9392 0.0113 0.0095 0.0065 30 Methane 1.6415 0.1881 26.3339 0.0752 0.1757 0.1193 31 Ethane 2.3721 0.2718 71.3302 0.2038 0.4005 0.2719 32 2.4704 0.3112 0.2915 Propane 0.2831 108.9355 0.4294 33 i-Butane 0.5143 0.0589 29.8913 0.0854 0.1062 0.0721 34 n-Butane 0.8302 0.0951 48.2560 0.1379 0.1652 0.1122 35 0.2913 0.0457 i-Pentane 0.0334 21.0204 0.0601 0.0673 36 0.2132 n-Pentane 0.0244 15.3837 0.0439 0.0488 0.0331 37 n-Hexane 0.0557 0.0064 4.7991 0.0137 0.0145 0.0098 38 n-Heptane 0.0369 0.0042 3.7021 0.0106 0.0108 0.0073 39 0.0005 0.0016 0.0011 n-Octane 0.0048 0.5477 0.0016 40 n-Nonane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 41 n-C11 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 42 22-Mbutane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 43 0.0025 Cyclopentane 0.0127 0.0015 0.8901 0.0024 0.0016 44 2-Mpentane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 45 3-Mpentane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 46 22-Mpentane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 47 MCC5== 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 48 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 Mcyclopentan 49 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 24-Mpentane 50 0.0093 0.0011 0.7284 0.0021 0.0016 0.0011 Benzene 51 0.0000 0.0000 0.0000 0.0000 0.0000 33-Mpentane 0.0000 52 Cyclohexane 0.0263 0.0030 2.2116 0.0063 0.0056 0.0038 53 0.0108 2-Mhexane 0.0945 9.4737 0.0271 0.0278 0.0188 54 23-Mpentane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 55 11Mcycpentan 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 56 3-Mhexane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 57 1-tr3-MCC5 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 58 1-ci3-MCC5 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 59 Mcyclohexane 0.0124 0.0014 1.2164 0.0035 0.0031 0.0021 60 113-MCC5 0 0000 0 0000 0 0000 0 0000 0.0000 0 0000 61 25-Mhexane 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

Hyprotech Ltd. Licensed to: EPCO HOLDINGS, INC. 0.0061

0.0007

0.5614

Aspen HYSYS Version 7 (22.0.1.7021)

0.0016

Toluene

Page 3 of 6 \* Specified by user.

0.0009

0.0013



EPCO HOLDINGS, INC. Burlington, MA USA Case Name:

LARGO WINTER TANK VRU WORST CASE (HFB).HSC

Unit Set: USField3

Date/Time: T

: Thu Sep 09 08:28:38 2010

Fluid Package: Basis-1

Property Package: Peng-Robinson

# Material Stream: TANK FLARE (continued)

9 10	COMPOSITION								
11 12			Vapour	Phase (continue	d)	Phase Fra	ction 1.000		
13 14	COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION		
15	Naphthalene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
16	Ecyclohexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
17	p-Xylene	0.0001	0.0000	0.0102	0.0000	0.0000	0.0000		
18	m-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
19	2-Moctane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
20	o-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
21	H2O	0.0440	0.0050	0.7923	0.0023	0.0016	0.0011		
22	Methanol	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
23	Total	8.7262	1.0000	350.0457	1.0000	1.4730	1.0000		
24									
25			L	iquid Phase		Phase Fra	ction 1.000e-008		
26 27	COMPONENTS	MOLAR FLOW (Ibmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION		
28	Nitrogen	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
29	CO2	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001		
30	Methane	0.0000	0.0009	0.0000	0.0002	0.0000	0.0004		
31	Ethane	0.0000	0.0094	0.0000	0.0032	0.0000	0.0061		
32	Propane	0.0000	0.0428	0.0000	0.0213	0.0000	0.0285		
33	i-Butane	0.0000	0.0262	0.0000	0.0172	0.0000	0.0207		
34	n-Butane	0.0000	0.0635	0.0000	0.0417	0.0000	0.0485		
35	i-Pentane	0.0000	0.0635	0.0000	0.0518	0.0000	0.0563		
36	n-Pentane	0.0000	0.0657	0.0000	0.0536	0.0000	0.0577		
37	n-Hexane	0.0000	0.0662	0.0000	0.0646	0.0000	0.0660		
38	n-Heptane	0.0000	0.1600	0.0000	0.1814	0.0000	0.1789		
39	n-Octane	0.0000	0.0752	0.0000	0.0972	0.0000	0.0933		
40	n-Nonane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
41	n-C11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
42	22-Mbutane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
43	Cyclopentane	0.0000	0.0055	0.0000	0.0044	0.0000	0.0039		
44	2-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
45	3-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
46	22-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
47	MCC5==	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
48	Mcyclopentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
49	24-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
50	Benzene	0.0000	0.0119	0.0000	0.0105	0.0000	0.0081		
51	33-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
52	Cyclohexane	0.0000	0.0410	0.0000	0.0390	0.0000	0.0338		
53	2-Mhexane	0.0000	0.2897	0.0000	0.3285	0.0000	0.3264		
54	23-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
55	11Mcycpentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
56	3-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
57	1-tr3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
58	1-ci3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
59	Mcyclohexane	0.0000	0.0457	0.0000	0.0507	0.0000	0.0445		
60	113-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
61	25-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
62	Toluene	0.0000	0.0307	0.0000	0.0320	0.0000	0.0249		
63	Hyprotech Ltd.		Aspen HYS)	'S Version 7 (22.0."	1.7021)		Page 4 of 6		

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EPCO HOLDINGS, INC. Burlington, MA USA Case Name:

LARGO WINTER TANK VRU WORST CASE (HFB).HSC

Unit Set: USField3

Date/Time: Thu Sep 09 08:28:38 2010

Fluid Package: Basis-1

Property Package: Peng-Robinson

# Material Stream: TANK FLARE (continued)

COM	POSI	TION
-----	------	------

11 12			Liquid F	Phase (contin	nued)	)		Phase Fra	ction 1.000e	-008
13 14	COMPONENTS	MOLAR FLOW (Ibmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	'	MASS FRACTION	LIQU FLOW	ID VOLUME / (USGPM)	LIQUID VOLU FRACTION	JME
15	Naphthalene	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
16	Ecyclohexane	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
17	p-Xylene	0.0000	0.0021	0.00	00	0.0025		0.0000	0.0	020
18	m-Xylene	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
19	2-Moctane	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
20	o-Xylene	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
21	H2O	0.0000	0.0001	0.00	00	0.0000		0.0000	0.0	0000
22	Methanol	0.0000	0.0000	0.00	00	0.0000		0.0000	0.0	0000
23	Total	0.0000	1.0000	0.00	00	1.0000		0.0000	1.0	0000
24 25			·	K VALUE	ł					
26	COMPON	ENTS	MIXED	)		LIGHT			HEAVY	
27		Nitrogen				Lioitti	827 6			
28		CO2					66 15			
29		Methane					211.2			
30		Ethane					28.84			
31		Propane					6.618			
32		i-Butane					2.252			
33		n-Butane					1.499			
34		i-Pentane				0	.5261			
35		n-Pentane				0.3719				
36	n-Hevane					9.640	e-002			
37		n-Heptane				2.646	e-002			
38		n-Octane				7.310	e-003			
39		n-Nonane								
40		n-C11								
41		22-Mbutane								
42		Cyclopentane				0	.2652			
43		2-Mpentane								
44		3-Mpentane								
45		22-Mpentane								
46		MCC5==								
47		Mcyclopentan								
48		24-Mpentane								
49		Benzene				8.991	e-002			
50		33-Mpentane								
51		Cyclohexane				7.346	e-002			
52		2-Mhexane				3.740	e-002			
53		23-Mpentane								
54		11Mcycpentan								
55		3-Mhexane								
56		1-tr3-MCC5								
57		1-ci3-MCC5								
58		Mcyclohexane				3.110	e-002			
59		113-MCC5								
61		∠o-Minexane				0.070				
62		I Oluene				2.278	e-002			
63	Hyprotech Ltd	Naphinalelle	Aspen HYSY	'S Version 7 (2'	2.017	7021)			Page 5	of 6

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61 62

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EPCO HOLDINGS, INC. Burlington, MA USA

Case Name:

LARGO WINTER TANK VRU WORST CASE (HFB).HSC

Unit Set: USField3

Date/Time: Thu Sep 09 08:28:38 2010

### **K VALUE**

6				Fluid Packag	ge:	Basis-1	
7	Material Stream:						
8		•		Property Pac	ckage:	Peng-Robinson	
9							
10		K VALUE					
11	COMPONENTS	MIXED	LIGHT			HEAVY	
12	Ecyclohexane						
13	p-Xylene		5.	197e-003			
14	m-Xylene						
15	2-Moctane						
16	o-Xylene						
17	H2O			63.00			
18	Methanol						

# VOC EMISSIONS FROM OIL AND CONDENSATE STORAGE TANKS

# **FINAL REPORT**

**Prepared for:** 

Texas Environmental Research Consortium 4800 Research Forest Drive The Woodlands, TX 77381

Prepared by:

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> Jim Nunn COMM Engineering P.O. Box 53743 Lafayette, LA 70707-3463

Joe Lundeen Ray McKaskle Trimeric Corporation P.O. Box 826 Buda, TX 78610

October 31, 2006 Revised April 2, 2009

		Weight %						
	Site 13	Site 14	Site 15	Site 16	Site 17	Site 18	Site 19	Site 20
County:	Denton	Denton	Denton	Denton	Denton	Denton	Denton	Denton
Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon Dioxide	0.65	2.20	0.82	0.59	1.71	0.85	0.67	0.66
Methane	8.53	31.52	6.52	5.83	23.26	20.24	13.81	7.91
Ethane	9.96	12.80	10.93	8.93	9.54	8.53	8.14	11.51
Propane	17.08	12.08	18.67	16.72	10.21	10.19	9.91	17.20
Isobutane	7.02	4.48	7.84	7.48	3.68	4.54	4.76	7.30
n-butane	15.93	9.14	15.50	16.24	8.30	9.53	11.02	14.69
2,2-Dimethylpropane	0.09	0.00	0.00	0.19	0.00	0.00	0.00	0.08
Isopentane	8.52	5.34	8.60	9.25	5.38	6.26	8.90	8.96
n-pentane	9.33	5.73	9.08	10.02	6.66	7.52	10.22	9.53
2,2-Dimethylbutane	0.27	0.18	0.27	0.30	0.19	0.25	0.38	0.32
Cyclopentane	0.19	0.10	0.15	0.20	0.16	0.15	0.20	0.15
2,3-Dimethylbutane	0.43	0.28	0.45	0.48	0.36	0.43	0.59	0.47
2-Methylpentane	3.77	2.55	4.17	4.31	3.58	4.23	5.29	4.08
3-Methylpentane	1.89	1.28	2.11	2.14	1.84	2.16	2.67	2.01
n-Hexane	4.73	3.15	5.26	5.12	5.22	5.98	6.58	4.72
Methylcyclopentane	0.78	0.46	0.76	0.77	0.86	0.83	0.94	0.63
Benzene	0.19	0.13	0.18	0.20	0.22	0.23	0.25	0.17
Cyclohexane	0.94	0.58	0.83	0.88	1.14	1.16	1.17	0.76
2-Methylhexane	1.11	0.84	1.05	1.16	1.44	1.68	1.65	1.05
3-Methylhexane	1.03	0.79	0.95	1.06	1.41	1.54	1.49	0.93
2,2,4-Trimethylpentane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other C7's	1.29	0.92	1.24	1.30	1.75	1.81	1.79	1.12
n-Heptane	1.82	1.43	1.50	1.84	2.77	2.87	2.66	1.57
Methylcyclohexane	1.28	0.97	0.93	1.23	1.98	1.84	1.79	1.03
Toluene	0.40	0.33	0.25	0.41	0.69	0.65	0.58	0.35
Other C8's	1.60	1.46	1.08	1.77	3.10	3.01	2.51	1.45
n-Octane	0.39	0.38	0.26	0.46	0.93	0.91	0.62	0.38
Ethylbenzene	0.01	0.02	0.01	0.02	0.04	0.03	0.02	0.01
m+p-Xylene	0.12	0.14	0.08	0.17	0.42	0.34	0.22	0.16
o-Xylene	0.02	0.02	0.01	0.02	0.07	0.04	0.03	0.02
Other C9's	0.45	0.46	0.28	0.59	1.43	1.36	0.77	0.50
n-Nonane	0.07	0.08	0.07	0.11	0.38	0.30	0.14	0.10
Other C10's	0.09	0.13	0.11	0.17	0.75	0.41	0.21	0.15
n-Decane	0.01	0.02	0.02	0.02	0.17	0.04	0.02	0.02
Undecanes Plus	0.02	0.04	0.04	0.03	0.38	0.09	0.04	0.03
Sum	100	100	100	100	100	100	100	100
Wt% VOC <sup>a</sup>	81%	53%	82%	85%	65%	70%	77%	80%

# Table 3-5. Measured Vent Gas Speciation Profiles inWeight Percent for Condensate Tank Batteries

<sup>a</sup> Weight % VOC excludes nitrogen, carbon dioxide, methane, and ethane.

	Weight %							
	Site 23	Site 24	Site 25	Site 26	Site 27	Site 28	Site 29	Site 30
County:	Parker	Parker	Denton	Denton	Denton	Brazoria	Brazoria	Brazoria
Nitrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon Dioxide	5.13	7.04	0.80	0.57	1.66	1.46	0.45	3.65
Methane	10.28	12.35	0.09	3.93	6.53	31.93	10.04	23.10
Ethane	3.79	10.46	0.19	6.35	5.83	11.46	6.54	11.31
Propane	3.31	12.62	0.43	12.70	9.84	15.54	21.42	16.47
Isobutane	3.58	5.99	0.43	5.82	5.17	7.81	24.37	8.90
n-butane	8.45	10.59	1.88	14.26	12.34	8.23	15.10	10.02
2,2-Dimethylpropane	0.16	0.17	0.02	0.13	0.10	0.10	0.17	0.19
Isopentane	9.76	6.89	4.69	9.59	8.76	4.57	8.77	6.60
n-pentane	9.87	6.44	7.67	11.47	10.03	3.35	4.75	4.37
2,2-Dimethylbutane	0.73	0.38	0.34	0.33	0.35	0.22	0.23	0.39
Cyclopentane	0.13	0.08	0.25	0.30	0.27	0.24	0.16	0.30
2,3-Dimethylbutane	0.84	0.46	0.78	0.62	0.56	0.33	0.45	0.50
2-Methylpentane	7.42	4.13	8.41	6.16	6.02	1.51	1.79	2.01
3-Methylpentane	3.90	2.18	4.31	2.97	2.94	0.78	0.81	1.06
n-Hexane	8.18	4.55	13.84	7.87	7.90	1.65	1.35	1.84
Methylcyclopentane	0.71	0.43	1.97	1.22	1.11	0.89	0.39	1.08
Benzene	0.39	0.19	0.52	0.27	0.27	1.07	0.28	1.35
Cyclohexane	1.39	0.75	3.08	1.37	1.49	1.01	0.51	1.09
2-Methylhexane	3.12	1.82	5.20	1.72	2.27	0.41	0.24	0.43
3-Methylhexane	2.43	1.45	4.43	1.50	1.94	0.40	0.21	0.40
2,2,4-Trimethylpentane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other C7's	1.82	1.00	4.22	1.74	1.94	0.80	0.47	0.87
n-Heptane	3.57	2.24	9.21	2.71	3.65	0.87	0.35	0.67
Methylcyclohexane	2.33	1.43	6.16	1.82	2.52	1.23	0.48	1.13
Toluene	1.08	0.67	2.12	0.56	0.83	0.68	0.10	0.67
Other C8's	4.16	2.82	9.77	2.24	3.34	1.09	0.32	0.73
n-Octane	1.06	0.80	3.05	0.59	0.87	0.45	0.08	0.21
Ethylbenzene	0.03	0.22	0.07	0.01	0.02	0.07	0.02	0.03
m+p-Xylene	0.43	0.32	0.98	0.20	0.29	0.21	0.02	0.13
o-Xylene	0.05	0.04	0.15	0.03	0.04	0.07	0.01	0.03
Other C9's	1.41	0.93	3.23	0.62	0.84	0.55	0.09	0.25
n-Nonane	0.22	0.23	0.64	0.13	0.14	0.23	0.02	0.07
Other C10's	0.25	0.30	0.77	0.18	0.13	0.41	0.03	0.11
n-Decane	0.04	0.06	0.28	0.05	0.02	0.11	0.00	0.02
Undecanes Plus	0.01	0.00	0.03	0.00	0.01	0.26	0.01	0.05
Sum	100	100	100	100	100	100	100	100
Wt% VOC <sup>a</sup>	80%	70%	99%	89%	86%	55%	83%	62%

# Table 3-5. (continued) Measured Vent Gas Speciation Profiles inWeight Percent for Condensate Tank Batteries

<sup>a</sup> Weight % VOC excludes nitrogen, carbon dioxide, methane, and ethane.

Pollutant	Emission Factor (lb/MMBtu) <sup>b</sup> (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhou	se Gases	
NO <sub>x</sub> <sup>c</sup> 90 - 105% Load	4.08 E+00	В
NO <sub>x</sub> <sup>c</sup> <90% Load	8.47 E-01	В
CO <sup>c</sup> 90 - 105% Load	3.17 E-01	С
CO <sup>c</sup> <90% Load	5.57 E-01	В
$\mathrm{CO_2}^d$	1.10 E+02	А
SO <sub>2</sub> <sup>e</sup>	5.88 E-04	А
TOC <sup>f</sup>	1.47 E+00	А
Methane <sup>g</sup>	1.25 E+00	С
VOC <sup>h</sup>	1.18 E-01	С
PM10 (filterable) <sup>i</sup>	7.71 E-05	D
PM2.5 (filterable) <sup>i</sup>	7.71 E-05	D
PM Condensable <sup>j</sup>	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane <sup>k</sup>	<4.00 E-05	Е
1,1,2-Trichloroethane <sup>k</sup>	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	Е
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	С
1,2-Dichloroethane	<2.36 E-05	Е
1,2-Dichloropropane	<2.69 E-05	Е
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene <sup>k</sup>	2.67E-04	D
1,3-Dichloropropene <sup>k</sup>	<2.64 E-05	Е
2-Methylnaphthalene <sup>k</sup>	3.32 E-05	С
2,2,4-Trimethylpentane <sup>k</sup>	2.50 E-04	С
Acenaphthene <sup>k</sup>	1.25 E-06	С

# Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINESa(SCC 2-02-002-54)

Pollutant	Emission Factor (lb/MMBtu) <sup>b</sup> (fuel input)	Emission Factor
A consultivilana <sup>k</sup>	5 53 E 06	C
Acetaldobudo <sup>k,l</sup>	5.55 E-00	<u>د</u>
A certaineniyde	8.50 E-05	A
Acrolein k	5.14 E-03	A
Benzene	4.40 E-04	A
Benzo(b)fluoranthene	1.66 E-07	D
Benzo(e)pyrene <sup>*</sup>	4.15 E-07	D
Benzo(g,h,i)perylene <sup>k</sup>	4.14 E-07	D
Biphenyl <sup>K</sup>	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	С
Carbon Tetrachloride <sup>k</sup>	<3.67 E-05	Е
Chlorobenzene <sup>k</sup>	<3.04 E-05	Е
Chloroethane	1.87 E-06	D
Chloroform <sup>k</sup>	<2.85 E-05	Е
Chrysene <sup>k</sup>	6.93 E-07	С
Cyclopentane	2.27 E-04	С
Ethane	1.05 E-01	С
Ethylbenzene <sup>k</sup>	3.97 E-05	В
Ethylene Dibromide <sup>k</sup>	<4.43 E-05	Е
Fluoranthene <sup>k</sup>	1.11 E-06	С
Fluorene <sup>k</sup>	5.67 E-06	С
Formaldehyde <sup>k,1</sup>	5.28 E-02	А
Methanol <sup>k</sup>	2.50 E-03	В
Methylcyclohexane	1.23 E-03	С
Methylene Chloride <sup>k</sup>	2.00 E-05	С
n-Hexane <sup>k</sup>	1.11 E-03	С
n-Nonane	1.10 E-04	С

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

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

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

<sup>a</sup> Reference 7. Factors represent uncontrolled levels. For NO<sub>x</sub>, CO, and PM10, "uncontrolled" means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, "uncontrolled" means no oxidation control; the data set may include units with control techniques used for NOx control, such as PCC and SCR for lean burn engines, and PSC for rich burn engines. Factors are based on large population of engines. Factors are for engines at all loads, except as indicated. SCC = Source Classification Code. TOC = Total Organic Compounds. PM-10 = Particulate Matter ≤ 10 microns (µm) aerodynamic diameter. A "<" sign in front of a factor means that the corresponding emission factor is based on one-half of the method detection limit.</li>
<sup>b</sup> Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10<sup>6</sup> scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

lb/hp-hr = (lb/MMBtu) (heat input, MMBtu/hr) (1/operating HP, 1/hp)

<sup>c</sup> Emission tests with unreported load conditions were not included in the data set.

- <sup>d</sup> Based on 99.5% conversion of the fuel carbon to  $CO_2$ .  $CO_2$  [lb/MMBtu] =
- (3.67)(% CON)(C)(D)(1/h), where  $\% \text{CON} = \text{percent conversion of fuel carbon to CO}_2$ , C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10<sup>6</sup> scf, and

h = heating value of natural gas (assume 1020 Btu/scf at  $60^{\circ}$ F).

- Based on 100% conversion of fuel sulfur to SO<sub>2</sub>. Assumes sulfur content in natural gas of  $2,000 \text{ gr}/10^6 \text{scf.}$
- Emission factor for TOC is based on measured emission levels from 22 source tests.
- <sup>g</sup> Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.31 lb/MMBtu vs. 1.25 lb/MMBtu, respectively.
- $^{\rm h}$  VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.
- Considered  $\leq 1 \ \mu m$  in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).
- <sup>j</sup> PM Condensable = PM Condensable Inorganic + PM-Condensable Organic
- Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.
- For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.

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

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

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

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

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

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

$$L_{L} = 12.46 \frac{SPM}{T}$$

where:

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

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

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

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

(1)



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

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

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

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

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

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Air



# **Protocol for Equipment Leak** Emission Estimates



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

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

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

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

<sup>C</sup>The "other" equipment type was derived from compressors, diaphrams, drains, dump arms, hatches, instruments, meters, pressure relief valves, polished rods, relief valves, and vents. This "other" equipment type should be applied for any equipment type other than connectors, flanges, open-ended lines, pumps, or valves.

# 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		

An area map for the 3B-1 Turley Compressor Station is included on the following page.



# 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")

As this is a Title V application (under 20.2.70 NMAC), public notice is not required by the applicant.
### 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.

Enterprise Field Services, LLC owns, and Enterprise Products Operating LLC operates (collectively "Enterprise") two adjacent natural gas compressor stations, collectively permitted as the 3B-1 Turley Compressor Station.

The 3B-1 Turley Compressor Station compresses natural gas through underground natural gas pipelines using one reciprocal internal combustion engine-driven compressor and one electric compressor. Additional activities at the site include the storage and loading of condensate liquids, removed from the gas stream.

### Source Determination

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

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

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

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

The 3B-1 Turley Compressor Station. Equipment is listed in the Section 2 Tables.

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

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

☑ Yes □ No

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

☑ Yes □ No

### C. Make a determination:

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

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

(Submitting under 20.2.72, 20.2.74 NMAC)

As this is a Title V application (under 20.2.70 NMAC), this section is not applicable.

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

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

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

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

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

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

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

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

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

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

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

#### Federally Enforceable Conditions:

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

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

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

### Table for STATE REGULATIONS:

STATE REGU- LATIONS 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	As this is a Title V application, the requirements of this part are not applicable to this application (exemption at 20.2.3.9 NMAC). But as s the facility does have an NSR permit, 20.2.3 NMAC is applicable to the site. 20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	Yes	Facility	All Title V major sources are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject to the requirements of this regulation.
20.2.23 NMAC	Fugitive Dust Control	No	N/A	This regulation may apply if, this is an application for a notice of intent (NOI) per 20.2.73 NMAC, if the activity or facility is a fugitive dust source listed at 20.2.23.108.A NMAC, <b>and</b> if the activity or facility is located in an area subject to a mitigation plan pursuant to 40 CFR 51.930. As the 3B-1 Turley Compressor Station is a permitted facility and is located in San Juan County 20.2.23 NMAC does not apply
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have new or existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.34 NMAC	Oil Burning Equipment: NO <sub>2</sub>	No	N/A	This facility does not have oil burning equipment with a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation could apply to existing (prior to July 1, 1974) or new (on or after July 1, 1974) natural gas processing plants that use a Sulfur Recovery Unit to reduce sulfur emissions.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	Not applicable as this site is not a natural gas processing plant. These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
20.2.38 NMAC	Hydrocarbon Storage Facility	No	N/A	This facility does not store hydrocarbons containing hydrogen sulfide.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	N/A	This facility is not a sulfur recovery plant, nor does it contain a sulfur recovery plant.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	1	Unit 1 fires pipeline natural gas. No visible emissions are expected.
20.2.70 NMAC	Operating Permits	Yes	Facility	Source is major for VOCs and operates under Title V Operating Permit number P256R1.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	This facility is subject to 20.2.72 NMAC and NSR Permit number 1569-M3R2.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	All facilities that are a Title V Major Source as defined at 20.2.70.7.R NMAC, are subject to Emissions Inventory Reporting.

STATE REGU- LATIONS 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.)
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	N/A	Not applicable as the site is not a major PSD source.
20.2.75 NMAC	Construction Permit Fees	No	N/A As this Title V renewal application is being submitted under 20.2.7 construction permit fees do not apply.	
20.2.77 NMAC	New Source Performance	No	N/A	There is no equipment subject to the requirements of 40 CFR Part 60.
20.2.78 NMAC	Emission Standards for HAPS	No	N/A	This facility is not subject to the requirements of 40 CFR Part 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	N/A	This facility is not located in a non-attainment area.
20.2.80 NMAC	Stack Heights	No	N/A	Not applicable as this is a Title V application.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	5 and 6	Unit 1 is subject to the requirements of 40 CFR Part 63, Subpart A and Subpart ZZZZ.

### Table for FEDERAL REGULATIONS:

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:	
40 CFR 50	NAAQS	Yes	Facility	This applies if you are subject to 20.2.70, 20.2.72, 20.2.74, and/or 20.2.79 NMAC.	
NSPS 40 CFR 60, Subpart A	General Provisions	No	N/A	This regulation is not applicable since there are no applicable NSPS subparts.	
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	Not applicable as the site does not have any electric utility steam generating units.	
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No	N/A	Not applicable as the site does not have any electric utility steam generating units.	

<u>FEDERAL</u> <u>REGU-</u> <u>LATIONS</u> CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial- Commercial- Institutional Steam Generating Units	No	N/A	Not applicable as this facility does not have 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).
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for <b>Storage Vessels</b> <b>for Petroleum</b> <b>Liquids</b> for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and <b>Prior</b> to July 23, 1984	No	N/A	The tanks at this site have storage capacities less than the applicable volumes listed under this subpart.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No	N/A	The tanks at this site have storage capacities less than the applicable volumes listed under this subpart.
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No	N/A	There are no turbines at this site.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from <b>Onshore</b> <b>Gas Plants</b>	No	N/A	Not applicable as the site is not an onshore gas plant.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for <b>Onshore Natural</b> <b>Gas Processing</b> : SO <sub>2</sub> Emissions	No	N/A	This site is not a natural gas processing plant as defined by this regulation.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	This site does not include any "affected" facilities that were constructed, modified, or reconstructed after Aug 23, 2011 and before September 18, 2015.

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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	No	N/A	This site does not include any "affected" facilities that were constructed, modified, or reconstructed after September 18, 2015.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	There are no compression ignition engines onsite.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	N/A	Unit 1 is not subject to JJJJ because it was constructed, modified, or reconstructed before the June 12, 2006 applicability date.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	Not applicable as there are not any electric generating units at this site.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	Not applicable as there are not any electric utility generating units at this site.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	Site is not a MSW landfill.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	N/A	Not applicable as no other Subpart in 40 CFR 61 applies.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for <b>Mercury</b>	No	N/A	Not applicable as there are no stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for <b>Equipment Leaks</b> (Fugitive Emission Sources)	No	N/A	The site does not have any equipment in VHAP service (≥10% VHAP).

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63, Subpart A	General Provisions	Yes	1	The regulation is applicable since MACT ZZZZ applies.
MACT 40 CFR 63.760 Subpart HH	ACT CFR 760 bopart HH Oil and Natural Gas Production Facilities No N/A		N/A	This site is not major for HAPs and there are no dehydrator units onsite.
MACT 40 CFR 63 Subpart HHH	ACT CFR 63 bpart HH Natural Gas Transmission and Storage Facilities		Site is not an Oil and Natural Gas Production Facility and is not a major source of HAPs.	
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	Facility does not have boilers or process heaters.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	Not applicable as there are not any electric utility steam generating units at this site.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines ( <b>RICE</b> <b>MACT</b> )	Yes	1	Unit 1 is subject to this regulation. The engine is an existing stationary RICE located at an area source of HAP emissions and is considered an affected source under this part.
40 CFR 64	Compliance Assurance Monitoring	No	N/A	Not applicable as the site does not include an emissions unit that is major in and of itself.
40 CFR 68	Chemical Accident Prevention	No	N/A	This facility does not have more than a threshold quantity of a regulated substance subject to this regulation.
Title IV – Acid Rain 40 CFR 72	Acid Rain	No	N/A	This site does not meet the applicability requirements of 40 CFR 72.6.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	No	N/A	Does not apply as this facility does not generate commercial electric power or electric power for sale.

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	No	N/A	Not applicable as this facility does not generate commercial electric power or electric power for sale.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	No	N/A	This site does not meet the applicability requirements of 40 CFR 76.1, nor does it include any coal-fired utility units.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	Not Applicable –facility does not "service", "maintain" or "repair" class I or class II appliances nor "disposes" of the appliances.

### **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.

Enterprise maintains the required plans to mitigate emissions during routine or predicable SSM and malfunction events at the nearest field office.

### **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: <a href="https://www.env.nm.gov/aqb/permit/aqb\_pol.html">https://www.env.nm.gov/aqb/permit/aqb\_pol.html</a>. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

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

No alternative operating scenarios are being requested in this application.

## 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).	
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	Х
above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application	
(20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	

### Check each box that applies:

- □ See attached, approved modeling **waiver for all** pollutants from the facility.
- □ See attached, approved modeling **waiver for some** pollutants from the facility.
- □ Attached in Universal Application Form 4 (UA4) is a modeling report for all pollutants from the facility.
- □ Attached in UA4 is a **modeling report for some** pollutants from the facility.
- $\square$  No modeling is required.

Air dispersion modeling is not required for this application as it is for a Title V permit renewal. Modeling was last submitted for NSR Permit Number 1569-M1.

### **Compliance Test History**

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

### **Compliance Test History Table**

Unit No.	Test Description	Test Date						
1	Compliance test	7/25/2017						
1	Compliance test	5/14/2019						
1	Compliance test	5/12/2020						
1	Compliance test	5/12/2021						
1	Compliance test	5/11/2022						

### **Addendum for Streamline Applications**

Do not print this section unless this is a streamline application.

Not applicable as this is not a Streamline application.

### **Requirements for Title V Program**

Do not print this section unless this is a Title V application.

#### Who Must Use this Attachment:

\* Any major source as defined in 20.2.70 NMAC.

- \* Any source, including an area source, subject to a standard or other requirement promulgated under Section 111 Standards of Performance for New Stationary Sources, or Section 112 Hazardous Air Pollutants, of the 1990 federal Clean Air Act ("federal Act"). Non-major sources subject to Sections 111 or 112 of the federal Act are exempt from the obligation to obtain an 20.2.70 NMAC operating permit until such time that the EPA Administrator completes rulemakings that require such sources to obtain operating permits. In addition, sources that would be required to obtain an operating permit solely because they are subject to regulations or requirements under Section 112(r) of the federal Act are exempt from the requirement to obtain an Operating Permit.
- \* Any Acid Rain source as defined under title IV of the federal Act. The Acid Rain program has additional forms. See <u>http://www.env.nm.gov/aqb/index.html</u>. Sources that are subject to both the Title V and Acid Rain regulations are encouraged to submit both applications simultaneously.

\* Any source in a source category designated by the EPA Administrator ("Administrator"), in whole or in part, by regulation, after notice and comment.

### 19.1 - 40 CFR 64, Compliance Assurance Monitoring (CAM) (20.2.70.300.D.10.e NMAC)

Any source subject to 40CFR, Part 64 (Compliance Assurance Monitoring) must submit all the information required by section 64.7 with the operating permit application. The applicant must prepare a separate section of the application package for this purpose; if the information is already listed elsewhere in the application package, make reference to that location. Facilities not subject to Part 64 are invited to submit periodic monitoring protocols with the application to help the AQB to comply with 20.2.70 NMAC. Sources subject to 40 CFR Part 64, must submit a statement indicating your source's compliance status with any enhanced monitoring and compliance certification requirements of the federal Act.

This site does not include any emission source that is major source in and of itself; therefore, 40 CFR Part 64 does not apply.

### **19.2** - Compliance Status (20.2.70.300.D.10.a & 10.b NMAC)

Describe the facility's compliance status with each applicable requirement at the time this permit application is submitted. This statement should include descriptions of or references to all methods used for determining compliance. This statement should include descriptions of monitoring, recordkeeping and reporting requirements and test methods used to determine compliance with all applicable requirements. Refer to Section 2, Tables 2-N and 2-O of the Application Form as necessary. (20.2.70.300.D.11 NMAC) For facilities with existing Title V permits, refer to most recent Compliance Certification for existing requirements. Address new requirements such as CAM, here, including steps being taken to achieve compliance.

Enterprise is in compliance and will continue to be in compliance with the requirements of the Title V permit. Title V Permit Compliance Certifications have been submitted, as required.

### **19.3 - Continued Compliance** (20.2.70.300.D.10.c NMAC)

Provide a statement that your facility will continue to be in compliance with requirements for which it is in compliance at the time of permit application. This statement must also include a commitment to comply with other applicable requirements as they come into effect during the permit term. This compliance must occur in a timely manner or be consistent with such schedule expressly required by the applicable requirement.

Enterprise believes that the 3B-1 Turley Compressor Station is in compliance with all applicable requirements. Furthermore, Enterprise will continue to comply with all applicable requirements and will comply in a timely manner with any new applicable requirements that may come in to effect during the permit term.

#### **19.4** - Schedule for Submission of Compliance (20.2.70.300.D.10.d NMAC)

You must provide a proposed schedule for submission to the department of compliance certifications during the permit term. This certification must be submitted annually unless the applicable requirement or the department specifies a more frequent period. A sample form for these certifications will be attached to the permit.

As stated in the 3B-1 Turley Compressor Station's Title V Permit (Number P256), Enterprise will submit the ACC to NMED by August 30 of each year, which is 30 days from the end of the 12-month reporting period (July 31). Enterprise will submit semiannual reports (SAR) by March 17 and September 14 of each year, which is 45 days from the end of the reporting period (January 31 and July 31).

### **19.5** - Stratospheric Ozone and Climate Protection

In addition to completing the four (4) questions below, you must submit a statement indicating your source's compliance status with requirements of Title VI, Section 608 (National Recycling and Emissions Reduction Program) and Section 609 (Servicing of Motor Vehicle Air Conditioners).

- Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozonedepleting substances?
   ✓ Yes □ No
- Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs?
  □ Yes ☑ No

(If the answer is yes, describe the type of equipment and how many units are at the facility.)

- 3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)? □ Yes ☑ No
- 4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G.)

The 3B-1 Turley Compressor Station does not produce, manufacture, transform, destroy, import, or export any stratospheric ozone-depleting substances (CFCs, HCFCs); does not maintain or service motor vehicle air conditioning units or refrigeration equipment; and does not sell, distribute, or offer for sale any product that may contain stratospheric ozone-depleting substances. The facility will continue to maintain compliance with the conditions stipulated in 40 CFR 82, Subparts A-G of the Stratospheric Ozone Protection Program (Title VI of the Clean Air Act Amendments).

### **19.6 - Compliance Plan and Schedule**

Applications for sources, which are not in compliance with all applicable requirements at the time the permit application is submitted to the department, must include a proposed compliance plan as part of the permit application package. This plan shall include the information requested below:

#### A. Description of Compliance Status: (20.2.70.300.D.11.a NMAC)

A narrative description of your facility's compliance status with respect to all applicable requirements (as defined in 20.2.70 NMAC) at the time this permit application is submitted to the department.

#### **B.** Compliance plan: (20.2.70.300.D.11.B NMAC)

A narrative description of the means by which your facility will achieve compliance with applicable requirements with which it is not in compliance at the time you submit your permit application package.

#### C. Compliance schedule: (20.2.70.300D.11.c NMAC)

A schedule of remedial measures that you plan to take, including an enforceable sequence of actions with milestones, which will lead to compliance with all applicable requirements for your source. This schedule of compliance must be at least as stringent as that contained in any consent decree or administrative order to which your source is subject. The obligations of any consent decree or administrative order are not in any way diminished by the schedule of compliance.

#### D. Schedule of Certified Progress Reports: (20.2.70.300.D.11.d NMAC)

A proposed schedule for submission to the department of certified progress reports must also be included in the compliance schedule. The proposed schedule must call for these reports to be submitted at least every six (6) months.

#### E. Acid Rain Sources: (20.2.70.300.D.11.e NMAC)

If your source is an acid rain source as defined by EPA, the following applies to you. For the portion of your acid rain source subject to the acid rain provisions of title IV of the federal Act, the compliance plan must also include any additional requirements under the acid rain provisions of title IV of the federal Act. Some requirements of title IV regarding the schedule and methods the source will use to achieve compliance with the acid rain emissions limitations may supersede the requirements of title V and 20.2.70 NMAC. You will need to consult with the Air Quality Bureau permitting staff concerning how to properly meet this requirement.

**NOTE**: The Acid Rain program has additional forms. See <u>http://www.env.nm.gov/aqb/index.html</u>. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

3B-1 Turley Compressor Station is in compliance with applicable regulations at the time this application is submitted, thus there is no need for a compliance plan at this time.

### 19.7 - 112(r) Risk Management Plan (RMP)

Any major sources subject to section 112(r) of the Clean Air Act must list all substances that cause the source to be subject to section 112(r) in the application. The permittee must state when the RMP was submitted to and approved by EPA.

Chemical Accident Prevention Provisions, 40 CFR 68, is not applicable to the 3B-1 Turley Compressor Station as the facility does not store designated toxic and flammable chemicals in quantities exceeding the applicable thresholds.

### 19.8 - Distance to Other States, Bernalillo, Indian Tribes and Pueblos

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 NMAC)?

(If the answer is yes, state which apply and provide the distances.)

Yes. Colorado -30 km; Jicarilla Apache Indian Reservation -70 km; Southern Ute Indian Reservation -40 km; Ute Mountain Indian Reservation -45 km; Navajo Nation -40 km. (Note: Stated distances are estimates only).

### **19.9 - Responsible Official**

Provide the Responsible Official as defined in 20.2.70.7.AD NMAC:

Graham W. Bacon - Executive Vice President-EHS&T

### **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.

No other relevant information is being submitted with this application.

### **Addendum for Landfill Applications**

Do not print this section unless this is a landfill application.

Not applicable as this is not a landfill application.

## **Section 22: Certification**

Company Name: \_\_\_\_\_\_ Enterprise Field Services, LLC\_\_\_\_

I, <u>Rodney M. Sartor</u>, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 18 day of <u>anualy</u>, <u>2023</u>, upon my oath or affirmation, before a notary of the State of las \*Signature Date Rodney M. Sartor Senior Director Printed Name Title Scribed and sworn before me on this day of anuarih 2023 My authorization as a notary of the State of \_\_\_\_\_ expires on the bruary, 2026. \_\_\_ day of \_\_\_\_\_l 13 Notary's Signature **BRENDA J. MENDEZ** Notary Public, State of Texas Comm. Expires 02-23-2026 Notary ID 10264322 Notary's Printed Name

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