Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

March 4, 2022

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 P272
Manzanares Compressor Station
Enterprise Field Services, LLC

Dear Sr/Madam:

Enterprise Field Services LLC owns and Enterprise Products Operating LLC (Enterprise) operates the Manzanares Compressor Station. The Manzanares 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 36º44'52.2''N and 107º40'32.1''W, approximately 5 miles south of Navajo Dam, New Mexico in San Juan County. The Station is currently authorized under NSR Permit Number PSD-6703 and Title V Permit Number P272.

This permit application is being submitted under regulation 20.2.70.300.B(2) NMAC, to renew Title V Permit P272 for the Manzanares 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

Pranav Kulkarni Ph.D.
Manager, Environmental Permitting

/bjm
enclosure

P.O. BOX 4324
HOUSTON, TEXAS 77210-4324
713.381.6500

1100 LOUISIANA STREET
HOUSTON, TEXAS 77002-5227
www.enterpriseproducts.com

Mail Application To:		**For Department use only:**
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:
☑ I acknowledge that a pre-application meeting is available to me upon request. ☑ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.
☐ $500 NSR application Filing Fee enclosed OR ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).
☐ Check No.: 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

Section 1-A: Company Information

		AI # if known (see 1st 3 to 5 #s of permit IDEA ID No.): **36504**	Updating Permit/NOI #: **P272**
1	Facility Name: **Manzanares Compressor Station**	Plant primary SIC Code (4 digits): **4922**	
		Plant NAIC code (6 digits): **486210**	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): **From Navajo Dam, head southwest on NM-539 toward US-64. Turn right at US-64 and travel 6.3 miles. Turn right (NE) and travel approximately 1.3 miles. Facility is on the left.**		
2	Plant Operator Company Name: **Enterprise Products Operating, LLC**	Phone/Fax: **(713) 381-5766 / (713) 759-3931**	
a	Plant Operator Address: **P.O. Box 4324, Houston TX 77210-4324**		

b	Plant Operator's New Mexico Corporate ID or Tax ID: **32-89188**	
3	Plant Owner(s) name(s): **Enterprise Field Services, LLC**	Phone/Fax: **(713) 381-5766 / (713) 759-3931**
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) 381-5766 / (713) 759-3931**
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 / (713) 759-3931**
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 / (505) 599-2538**
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 / (713) 759-3931**
b	Mailing Address: **P.O. Box 4324, Houston TX 77210-4324**	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☑ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☑ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☑ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☑ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☑ No	If yes, give month and year of shut down (MM/YY): **N/A**
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☑ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☑ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☑ Yes ☐ No	If yes, the permit No. is: **P-272**
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: **PSD-6703**
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☑ No	If yes, the register No. is: **N/A**

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: **5.6 MMscf**	Daily: **135 MMscf**	Annually: **49,725 MMscf**
b	Proposed	Hourly: **5.6 MMscf**	Daily: **135 MMscf**	Annually: **49,725 MMscf**
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: **2.24 MMscf**	Daily: **54 MMscf**	Annually: **19,710 MMscf**
b	Proposed	Hourly: **2.24 MMscf**	Daily: **54 MMscf**	Annually: **19,710 MMscf**

Section 1-D: Facility Location Information

1	Section: **4**	Range: **8W**	Township: **29N**	County: **San Juan**	Elevation (ft): **6,360**
2	UTM Zone: ☐ 12 or ☑ 13			Datum: ☑ NAD 27 ☐ NAD 83 ☐ WGS 84	
a	UTM E (in meters, to nearest 10 meters): **261,130**			UTM N (in meters, to nearest 10 meters): **4,070,231**	
b	**AND** Latitude (deg., min., sec.): **36° 44' 52"**			Longitude (deg., min., sec.): **107° 40' 32"**	
3	Name and zip code of nearest New Mexico town: **Navajo Dam, 87419**				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): **From Navajo Dam, head southwest on NM-539 toward US-64. Turn right at US-64 W/Knightdale Bypass W and travel 6.3 miles. Turn right (NE) and travel approximately 1.3 miles. Facility is on the left.**				
5	The facility is 5 miles south of Navajo Dam.				
6	Status of land at facility (check one): ☑ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: **Municipalities: None; Indian Tribes: None; Counties: San Juan, Rio Arriba County, Navajo Lake State Park**				
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/aqb/modeling/class1areas.html)? ☐ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: **Colorado 27.36 km**				
9	Name nearest Class I area: **Mesa Verde National Park**				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): **82 km**				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: **2,000 m**				
12	Method(s) used to delineate the Restricted Area: **Fencing** "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☑ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility? **N/A**				

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

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): **24**	($\frac{\text{days}}{\text{week}}$): **7**	($\frac{\text{weeks}}{\text{year}}$): **52**	($\frac{\text{hours}}{\text{year}}$): **8,760**		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: **N/A**	☐AM ☐PM	End: **N/A**	☐AM ☐PM		
3	Month and year of anticipated start of construction: **N/A – no construction proposed**					
4	Month and year of anticipated construction completion: **N/A – no construction proposed**					
5	Month and year of anticipated startup of new or modified facility: **N/A**					
6	Will this facility operate at this site for more than one year? ☑ Yes ☐ No					

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☑ No If yes, specify: **N/A**		
a	If yes, NOV date or description of issue: **N/A**		NOV Tracking No: **N/A**
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☑ No If Yes, provide the 1c & 1d info below:		
c	Document Title: **N/A**	Date: **N/A**	Requirement # (or page # and paragraph #): **N/A**
d	Provide the required text to be inserted in this permit: **N/A**		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☐ Yes ☑ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☑ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☑ Yes ☐ No		
a	If Yes, what type of source? ☐ **Major** (☐ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☑ **Minor** (☑ <10 tpy of any single HAP **AND** ☑ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☑ No		
a	If yes, include the name of company providing commercial electric power to the facility: N/A Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application

(This section applies to 20.2.72.300 NMAC Streamline applications only)

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

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-EHS&T**	R.O. e-mail: **snolan@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): **Ivan W. Zirbes**	Phone: **(713) 381-6595**
a	A. R.O. Title: **VP, EHS & T**	A. R.O. e-mail: **snolan@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 name of the organization that owns the company to be permitted wholly or in part.): **Enterprise Field Services, LLC and Enterprise Products Operating, LLC are subsidiaries of Enterprise Products Partners, LP**	
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 contacts familiar with plant operations: **James Lieb, (505) 599-2159/(505) 599-2538**	
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: **Jicarilla Apache Indian Reservation (51.9 km), Colorado (27.36 km)**	

Section 1-I – Submittal Requirements

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

Hard Copy Submittal Requirements:

1) One hard copy **original signed and notarized application package** **printed double sided** **'head-to-toe'** **2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.

2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This copy should be printed in book form, 3-hole punched, and **must be double sided**. Note that this is in addition to the head-to-to 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, **two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

Electronic files sent by (check one):

☑ CD/DVD attached to paper application

☐ secure electronic transfer. Air Permit Contact Name_____

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.

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
5	Compressor Engine	White Superior	16SGT	333129	2650 hp	2650 hp	Jan 1989 Jan 1989	N/A 5	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
6	Compressor Engine	White Superior	16SGT	321529	2650 hp	2650 hp	Jan 1989 Jan 1989	N/A 6	20200254	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
T-101	Condensate Tank	Permian	N/A	24082	210-barrel	210-barrel	Sept 1989 Sept 1989	N/A T-101	40400311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG	Fugitives	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	31088811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
LOAD	Truck Loading	N/A	N/A	N/A	N/A	2.04 MMgal/yr	N/A N/A	N/A N/A	31088811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM	SSM	N/A	N/A	N/A	N/A	5.24 MMCF/yr	N/A N/A	N/A N/A	31000299	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
MALF	Malfunction Emissions	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	31000299	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

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

[2] Specify dates required to determine regulatory applicability.

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

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

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
T-102	Used Oil Tank	Permian	Unknown 24078	8,812 gallons	20.2.72.202.B.5 Item #1.a	Sept 1989 Sept 1989	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-104	New Lube Oil Tank	Permian	Unknown 24083	8,812 gallons	20.2.72.202.B.5 Item #1.a	Sept 1989 Sept 1989	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-105	Antifreeze Tank	Permian	Unknown 24079	8,812 gallons	20.2.72.202.B.5 Item #1.a	Sept 1989 Sept 1989	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T-106	Produced Water Tank	Permian	Unknown 24087	8,812 gallons	20.2.72.202.B.5 Item #1.a	Sept 1989 Sept 1989	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
GM-1	Methanol Tank	(unknown)	Unknown 24076	500 gallons	20.2.72.202.B.5 Item #1.a	Unknown Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
Sump	Manzanares Sump	(unknown)	Unknown Unknown	264 gallons	20.2.72.202.B.5 Item #1.a	Unknown Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
Not applicable						

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

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

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

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

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals																		

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

Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
5	8.14	35.67	13.68	59.92	3.26	14.27	0.26	1.13	0.18	0.77	0.18	0.77	0.18	0.77	-	-	-	-
6	8.14	35.67	13.68	59.92	3.26	14.27	0.26	1.13	0.18	0.77	0.18	0.77	0.18	0.77	-	-	-	-
T-101	-	-	-	-	38.70	2.40	-	-	-	-	-	-	-	-	-	-	-	-
T-101 (flash)	-	-	-	-	-	19.60	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	0.73	3.18	-	-	-	-	-	-	-	-	-	-	-	-
LOAD	-	-	-	-	57.13	2.49	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	2.50	-	-	-	-	-	-	-	-	-	-	-	-
INST	-	-	-	-	0.51	2.22	-	-	-	-	-	-	-	-	-	-	-	-
Totals	16.28	71.34	27.36	119.84	103.59	60.93	0.51	2.25	0.35	1.53	0.35	1.53	0.35	1.53	-	-	-	-

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

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

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

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

Unit No.	NOx		CO		VOC		SOx		PM[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
SSM	-	-	-	-	156.36	6.45	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	156.36	6.45	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

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

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

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		□ H_2S or □ Lead	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals:																	

Table 2-H: Stack Exit Conditions

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

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
5	5	V	No	40	760	337.61	105.36	12%	168	1.6
6	6	V	No	40	760	337.61	105.36	12%	168	1.6

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		Acetaldehyde ☑ HAP or ☐ TAP		Formaldehyde ☑ HAP or ☐ TAP		n-Hexane ☑ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
5	5	1.36	5.95	0.16	0.69	0.99	4.40	0.02	0.09										
6	6	1.36	5.95	0.16	0.69	0.99	4.40	0.02	0.09										
T-101	T-101	-	2.23	-	-	-	-	-	1.30										
FUG	FUG	0.10	0.31	-	-	-	-	0.10	0.20										
LOAD	Loading	1.70	0.14	-	-	-	-	2.26	0.14										
SSM	SSM	2.99	0.12	-	-	-	-	2.26	0.09										
INST	INST	0.04	0.06	-	-	-	-	0.01	0.03										
Totals:		7.55	14.76	0.31	1.38	1.99	8.80	4.67	1.94										

Table 2-J: Fuel

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

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
5	Natural Gas	Natural Gas	933 Btu/scf	18.82 MMBtu/hr	16,4819 MMBtu/yr	5gr/100ft^3	N/A
6	Natural Gas	Natural Gas	933 Btu/scf	18.82 MMBtu/hr	16,4819 MMBtu/yr	5gr/100ft^3	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.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
T-101	40400311	Natural Gas Condensate	Mixture	5.6	67	64.95	5.14	91.69	8.3

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
T-101	9/1/1989	Natrual Gas Condensate	N.A	FX	210	33	3.048	0.95	LG	LG	Good	1,000,000	113.48

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

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	**Mechanical Shoe Seal**	**Liquid-mounted resilient seal**	**Vapor-mounted resilient seal**	**Seal Type**	**WH**: White	Good
IF: Internal Floating Roof	**A**: Primary only	**A**: Primary only	**A**: Primary only	**A**: Mechanical shoe, primary only	**AS**: Aluminum (specular)	Poor
EF: External Floating Roof	**B**: Shoe-mounted secondary	**B**: Weather shield	**B**: Weather shield	**B**: Shoe-mounted secondary	**AD**: Aluminum (diffuse)	
P: Pressure	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**LG**: Light Gray	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

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

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

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Not applicable							

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. There is no CEM equipment 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. There is no PEM equipment at this facility.								

Table 2-P: Greenhouse Gas Emissions

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

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]						**Total GHG** Mass Basis ton/yr[4]	**Total CO_2e** ton/yr[5]
Unit No.	**GWPs [1]**	**1**	**298**	**25**	**22,800**	**footnote 3**							
5	**mass GHG**	8950.7	0.02	0.2	-	-						8950.92	
	CO_2e	8950.7	6.2	4.2	-	-							8961.1
6	**mass GHG**	8950.7	0.02	0.2	-	-						8950.92	
	CO_2e	8950.7	6.2	4.2	-	-							8961.1
FUG	**mass GHG**	3.2	0	3	-	-						6.2	
	CO_2e	3.2	0	62.4	-	-							65.6
SSM	**mass GHG**	1.2	0	111.1	-	-						112.3	
	CO_2e	1.2	0	2333.1	-	-							2334.3
MALF	**mass GHG**	0.5	0	43.3	-	-						43.8	
	CO_2e	0.5	0	909.3	-	-							909.8
INST	**mass GHG**	0.4	0	38.2	-	-						38.6	
	CO_2e	0.4	0	802.2	-	-							802.6
	mass GHG												
	CO_2e												
	mass GHG												
	CO_2e												
Total	**mass GHG**	17906.7	0.04	196	-	-						18102.74	
	CO_2e	17906.7	12.4	4115.4	-	-							22034.5

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

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

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

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

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

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

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

Facility Description:

Enterprise Field Services LLC owns and Enterprise Products Operating LLC (Enterprise) operates the Manzanares Compressor Station. The Manzanares 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 36º44'52.2''N and 107º40'32.1''W, approximately 5 miles south of Navajo Dam, New Mexico in San Juan County. The Station is currently authorized under NSR Permit Number PSD-6703 and Title V Permit Number P272.

Enterprise has included the following routine and predictable Startup, Shutdown, and Maintenance events in this application: compressor startups, compressor blowdowns, and planned and anticipated station shutdowns.

Application Purpose:

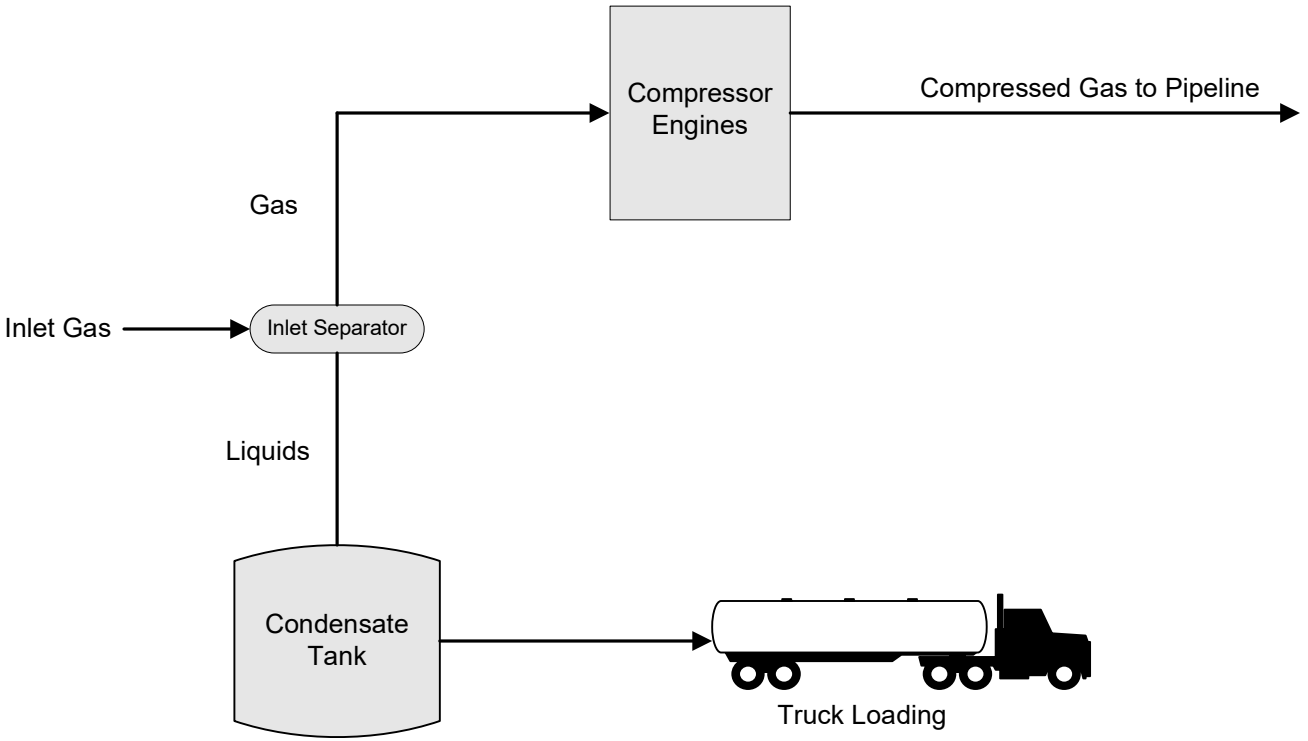
This permit application is being submitted under regulation 20.2.70.300.B(2) NMAC, to renew Title V Permit P272 for the Manzanares Compressor Station. The application is being submitted at least 12 months prior to the date of permit expiration. There are no process or equipment changes being requested in this application and all equipment will remain as currently permitted.

Section 4

Process Flow Sheet

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

A process flow diagram is attached.



Miscellaneous Storage Tanks

Instrument Gas Dryers

ELLIANT ENVIRONMENTAL, LLC
7804 Pan American Fwy., Suite 5
Albuquerque, NM 87109

Scale:	Drawn by:	Date:
Drawing Not to Scale	MDF	2/21/2022
	Chk'd by:	Date:

Process Flow Diagram

Manzanares Compressor Station
Title V Renewal Application
San Juan County, NM

Enterprise Field Services, LLC

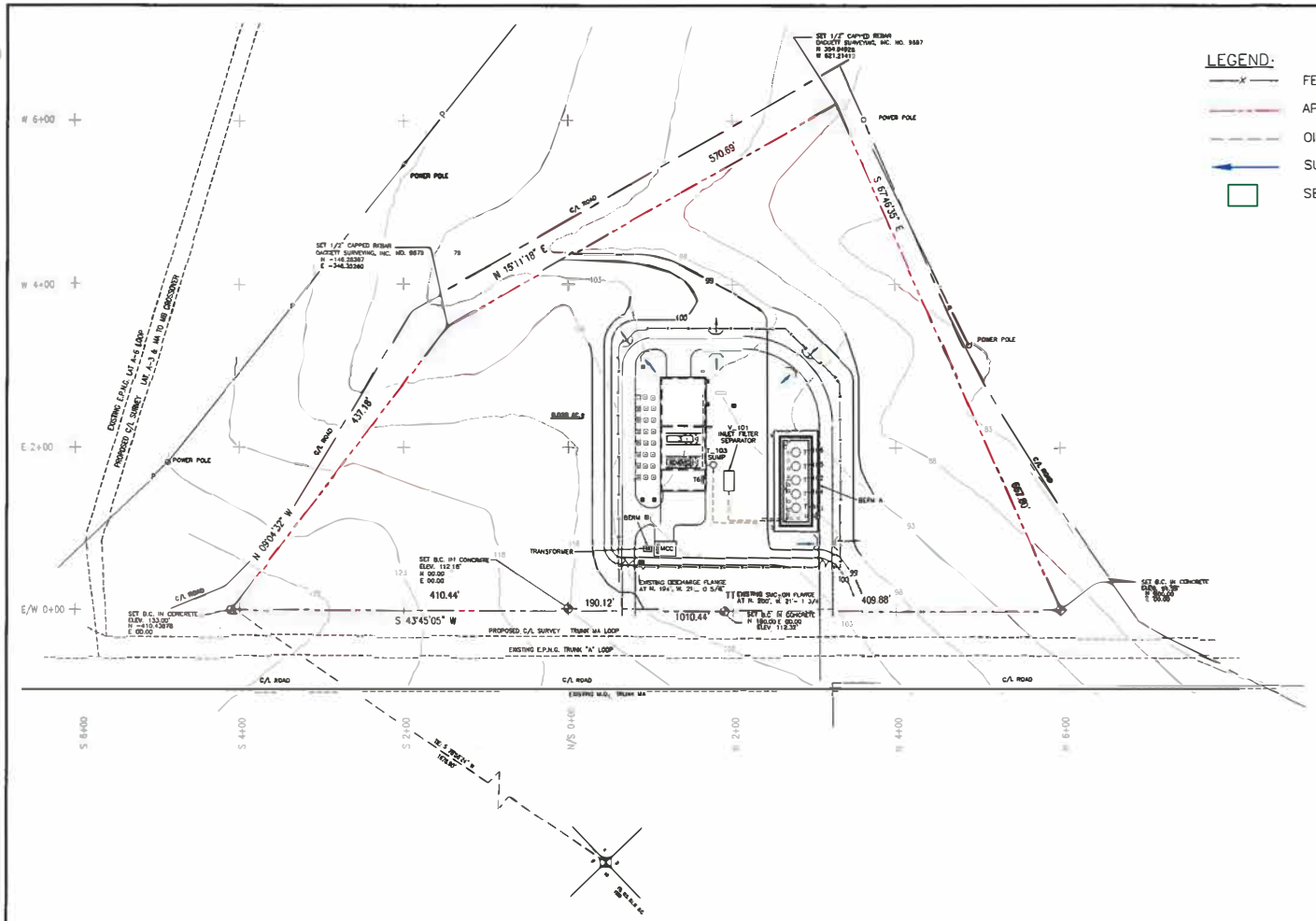
Project No.:	File Name:	Figure:
066-039	**Manzanares Figures**	Section 4

Section 5

Plot Plan Drawn To Scale

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

A plot plan is attached.



Oil Storage Containers

AMS Name	Field Name	Contents Description	Capacity
Manzanares T-102	T-102	Waste Oil	210 bbl
Manzanares T-104	T-104	Lube Oil	210 bbl
Manzanares T-101	T-101	Produced Water	210 bbl
None	T6	Lube Oil	2 bbl

Process Equipment Containing Oils

AMS Name	Field Name	Contents Description	Capacity
V-101	Inlet Filter Separator	Produced Water	1150 gal
T-103	Sump	Wastewater, Used Oil	375 gal

Oil Containing Equipment

AMS Name	Field Name	Contents Description	Capacity
C-Manzanares #1	Compressor 1	Lube Oil	80 gal
Manzanares #1	Engine 1	Lube Oil	220 gal
C-Manzanares #2	Compressor 2	Lube Oil	80 gal
Manzanares #2	Engine 2	Lube Oil	220 gal
C-Manzanares #3	Compressor 3	Lube Oil	80 gal
Manzanares #3	Engine 3	Lube Oil	220 gal
None	Transfonner	Transfonner Oil	339 gal

Non-Oil Storage Containers

AMS Name	Field Name	Contents Description
Manzanares T-106	T-106	Fresh Water
Manzanares T-105	T-105	Glycol

NOT TO SCALE

Note: This drawing is based on a field sketch and depicts the location and contents of each oil containing container, equipment, and piping (as required by 40 CFR 112.7(3)). This drawing should only be used for Spill Prevention Control and Countermeasure Plan(SPCC) purposes. As drawing is not to scale, actual containers, equipment, or piping may vary in size and position from those represented here.

PLOT PLAN

REV	DATE	REVISION	BY	CHK'D	ENGR.	ENGR. MGR.	REV	DATE	REVISION	BY	CHK'D	ENGR.	ENGR. MGR.
0	09/15/03	DRAWN FROM MERIDIAN OIL DRAWING AND FIELD NOTES	P.M.W.	B.R.									

MANZANARES COMPRESSOR STATION
VAL VERDE GATHERING SYSTEM

San Juan County
NEW MEXICO

DWG. NAME: Manzanares Compressor Station_SPCC_Plan.dwg

Section 6

All Calculations

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

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

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

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

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

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

Significant Figures:

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

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

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

(1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;

(2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**

(3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.

(4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device

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

Emission Calculation Details:

A summary of emissions for the Manzanares Compressor Station is included in the Section 2 Tables of this application. There are no revisions to emissions being proposed in this application. All equipment will remain as currently permitted.

Compressor Engines – Unit IDs 5 & 6

The engines in this application are existing sources and the operation of the engines is not being changed with this application. NOx, CO, and VOC emission factors are from vendor data. PM and HAP emissions are based on AP-42 emission factors. The SO2 factor (.0147 lb SO2/MMBtu) is an adjusted AP-42 factor based on 5 gr S/100 scf. The fuel consumption data used in conjunction with AP-42 factors is from the vendor. Engine emission estimates are based on derated horsepower (calculated per NMED guidance). Emission factors for GHG emissions from natural gas combustion are taken from 40 CFR 98, Tables C-1 and C2.

Storage Tanks & Sumps

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. All tanks except T-101 meet the requirements of exemption 20.2.72.202 B.5 as demonstrated in Table 6-4a and TANKS4.0.9d output. VOC and HAP flash emissions are reported on an annual basis only because no realistic hourly volume can be estimated due to the variability of the tank flashing process. Following guidance from NMED, only annual emissions are shown on Tables 2-E and 2-I for flash emissions.

Fugitives, Unit ID FUG

Fugitive VOC emissions are based on an upstream gas analysis and emission factors are from EPA's "Protocol for Equipment Leak Emission Estimates" EPA-453/R-95-017, 11/1995, Table 2-4.

Truck Loading, Unit ID LOAD

Loading emissions are estimated based on the EPA's loading loss equation and relevant saturation factors. Temperature and vapor pressure data is taken from like-product tank values from TANKS 4.0.9.d.

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

This site is expected to experience blowdowns, planned and anticipated maintenance and shut down activities, and compressor engine startup.

Instrument Gas Emissions, Unit ID INST

Manzanares uses dried natural gas for the instrument systems. Purge gas rates have been used to estimate instrument gas emissions.

Malfunction Emissions, Unit ID MALF

This site is expected to experience malfunction emissions from various units. Accordingly, malfunction emissions have already been permitted in Title V Permit P-272, pursuant to the NMED IMPLEMENTATION GUIDANCE FOR PERMITTING SSM EMISSIONS AND EXCESS EMISSIONS (dated June 7, 2012). The allowable MALF emission rate for the Manzanares Compressor Station is 2.5 TPY.

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e 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_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO2e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following □ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

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

Global Warming Potentials (GWP):
Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of 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 Mandatory Greenhouse Reporting requires metric tons.
1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

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

Emissions Summary
Manzanares Compressor Station
Enterprise Field Services LLC

ID	Emissions Source	Description	NOx		CO		VOC		PM		SO2		Included in Facility-wide Potential Emission Total?
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
5	Engine	White Superior 16SGTB	8.14	35.67	13.68	59.92	3.26	14.27	0.17	0.76	0.26	1.13	Yes
6	Engine	White Superior 16SGTB	8.14	35.67	13.68	59.92	3.26	14.27	0.17	0.76	0.26	1.13	Yes
T-106	Tank	Produced Water Tank	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-105	Tank	Antifreeze Tank	-	-	-	-	0.40	0.002	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-102	Tank	Used Oil Tank	-	-	-	-	0.40	0.002	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-104	Tank	New Lube Oil Tank	-	-	-	-	0.40	0.002	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-101	Tank	Condensate Tank	-	-	-	-	38.70	22.00	-	-	-	-	Yes
GM-1	Tank	Methanol Tank	-	-	-	-	1.17	0.03	-	-	-	-	No, Exempt under 20.2.72.202.B.5
Sump	Sump	Sump	-	-	-	-	0.01	0.00004	-	-	-	-	No, Exempt under 20.2.72.202.B.5
FUG	Fugitives	Fugitives	-	-	-	-	0.73	3.18	-	-	-	-	Yes
LOAD	Truck Loading	Truck Loading	-	-	-	-	57.13	2.49	-	-	-	-	Yes
SSM	SSM	SSM	-	-	-	-	156.36	6.45	-	-	-	-	Yes
MALF	Malfunctions	Malfunction Emissions	-	-	-	-	-	2.50	-	-	-	-	Yes
INST	Instrument Gas	Instrument Gas Dryer	-	-	-	-	0.51	2.22	-	-	-	-	Yes
		Facility-wide Potential Emissions	16.29	71.33	27.36	119.84	259.94	67.37	0.35	1.53	0.51	2.25	

* In order to assure compliance with permit representations, lb/hr and tpy emissions which are less than 0.01 are requested to be represented as 0.01.
1) See Section 6 for emission calculation details.
2) See Section 7 for program output reports.

Emissions HAP Summary
Manzanares Compressor Station
Enterprise Field Services LLC

EPN	Emissions Source	Acetaldehyde		Acrolein		Benzene		Formaldehyde		Methanol		n-Hexane		Toluene		Xylene		Total HAPS		Included in Facility-wide Potential Emission Total?
		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**	
5	Engine	0.16	0.69	0.10	0.42	0.01	0.04	0.99	4.40	0.05	0.21	0.02	0.09	0.01	0.03	0.00	0.02	1.36	5.95	Yes
6	Engine	0.16	0.69	0.10	0.42	0.01	0.04	0.99	4.40	0.05	0.21	0.02	0.09	0.01	0.03	0.00	0.02	1.36	5.95	Yes
T-106	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-105	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-102	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-104	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
T-101	Tank	-	-	-	-	-	0.21	-	-	-	-	-	1.28	-	0.63	-	0.08	-	2.23	Yes
GM-1	Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
Sump	Sump	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No, Exempt under 20.2.72.202.B.5
FUG	Fugitives	-	-	-	-	0.01	0.03	-	-	-	-	0.10	0.20	0.02	0.08	0.002	0.01	0.10	0.31	Yes
LOAD	Truck Loading	-	-	-	-	-	-	-	-	1.70	0.00	2.26	0.13	-	-	-	-	3.96	0.14	Yes
SSM	SSM	-	-	-	-	0.30	0.01	-	-	-	-	2.26	0.09	0.25	0.01	0.18	0.01	2.99	0.12	Yes
INST	Instrument Gas	-	-	-	-	0.001	0.004	-	-	-	-	0.007	0.032	0.001	0.004	0.001	0.003	0.04	0.06	Yes
Facility-wide Potential		**0.31**	**1.38**	**0.19**	**0.85**	**0.33**	**0.33**	**1.99**	**8.80**	**1.79**	**0.41**	**4.67**	**1.92**	**0.28**	**0.79**	**0.19**	**0.13**	**9.81**	**14.76**	

NOTE: Per form instructions, only those HAPs which are emitted at levels above 1 TPY are reported on the UA2 form. Additional HAPs are listed on this summary for documentation only.

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

** 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.

*** Flash emissions for Manzanres Tank 101 are reported on an annual basis only. No realistic hourly volume can be estimated due to the variability of the tank flashing process. Hourly non-flash emissions are not shown because they are not needed to determine reporting requirements; the hourly emissions can be provided upon request.

GHG Emissions Summary
Manzanares Compressor Station
Enterprise Field Services LLC

ID	Emission Source	Produced Water	CO2		N2O		CH4	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
5	Engine	Superior 16SGTB	2,043.54	8,950.70	0.004	0.02	0.0	0.2
6	Engine	Superior 16SGTB	2,043.54	8,950.70	0.004	0.02	0.0	0.2
FUG	Fugitives	Fugitive Components	0.73	3.18			0.7	3.0
SSM	SSM	SSM Emissions	28.60	1.18			2,693.9	111.1
MALF	MALF	Malfunctions	11.15	0.46			1,050.6	43.3
INST	INST	Instrument Gas	0.09	0.41			8.8	38.2
		Total	4,127.6	17,906.6	0.008	0.04	3,754.1	196.0
		CO2 Equivalent	4,127.6	17,906.6	2.6	11.2	78,835.3	4,116.6

Total mass GHG	18,102.70 T/yr
Total CO2 Equivalent	22,034.45 T/yr

Compressor Engine Emissions - Criteria Pollutants
Manzanares Compressor Station
Enterprise Field Services LLC

Source No.	5	6
Services Site	Manzanares	Manzanares
Engine Model	White Superior 16SGTB	White Superior 16SGTB
Control Device	(none)	(none)
Fuel Consumption	7,100 Btu/hp-hr	7,100 Btu/hp-hr
Nameplate Horsepower	2,650 HP	2,650 HP
Derated Horsepower	2,462 HP	2,462 HP
Annual Operating Hours	8,760 hours	8,760 hours
NOx Factor	1.500 g/hp-hr	1.500 g/hp-hr
CO Factor	2.520 g/hp-hr	2.520 g/hp-hr
NMNEHC (VOC) Factor	0.600 g/hp-hr	0.600 g/hp-hr
PM10 Factor	9.99E-03 lb/MMBtu	9.99E-03 lb/MMBtu
SO2 Factor	1.47E-02 lb/MMBtu	1.47E-02 lb/MMBtu
CO2 Factor	53.02 *kg/MMBtu*	53.02 *kg/MMBtu*
N2O Factor	0.00010 *kg/MMBtu*	0.00010 *kg/MMBtu*
CH4 Factor	0.0010 *kg/MMBtu*	0.0010 *kg/MMBtu*

Source No	**5**		**6**	
Pollutant	**lb/hr**	**tpy**	**lb/hr**	**tpy**
NOx	8.14	35.67	8.14	35.67
CO	13.68	59.92	13.68	59.92
VOC	3.26	14.27	3.26	14.27
PM10	0.17	0.76	0.17	0.76
SO2	0.26	1.13	0.26	1.13
CO2	2043.54	8950.70	*2,043.54*	8950.70
N2O	*0.004*	*0.02*	*0.004*	*0.02*
CH4	*0.04*	*0.17*	*0.04*	*0.17*

Site Elevation (ft) = 6,360 ft at Manzanares

Engine Derated Horsepower = 2650 hp - [2650 hp x (6360 ft - 4000 ft) / 1000 ft x 3%]
= 2,462 hp

Notes:
1) Emission Factors for NOx, CO, and VOC are from the vendor, see Section 7.
2) PM10 and SO2 factors are from AP-42, Table 3.2-2, 5th Edition, July, 2000.
4) NOx Emissions, lb/hr = Emission Factor, g/hp-hr, x Horse Power, hp / 453.6 g/lb
5) NOx Emissions, tons/yr = NOx Emissions, lb/hr, x 8,760 hrs/yr, / 2,000 lb/ton
4) Fuel Consumption figure is from vendor, see Section 7.
5) Derated horspower was calculated in accordance with NMED guidance (AQB02.07-01, dated December 21, 1998).

Compressor Engine HAP Emissions
Manzanares Compressor Station
Enterprise Field Services LLC

ID:	5	6
Compressor Description:	White Superior 16SGTB	White Superior 16SGTB
Compressor Type:	4SLB	4SLB
Annual Operating Hours (hrs/yr):	8,760	8,760
Fuel Consumption (Btu/hp-hr):	7,100	7,100
Rated Compressor Horsepower (hp):	2,650	2,650
Annual Aggregate Heat Input (MMBtu/yr):	164,819	164,819
Hourly Aggregate Heat Input (MMBtu/hr):	18.82	18.82

Pollutant	**Emission Factor lb/MMBtu**	**lb/hr**	**tons/yr**	**lb/hr**	**tons/yr**
1,1,2,2-Tetrachloroethane	4.00E-05	0.0008	0.0033	0.0008	0.0033
1,1,2-Trichloroethane	3.18E-05	0.0006	0.0026	0.0006	0.0026
1,3-Butadiene	2.67E-04	0.0050	0.0220	0.0050	0.0220
1,3-Dichloropropene	2.64E-05	0.0005	0.0022	0.0005	0.0022
2,2,4-Trimethylpentane	2.50E-04	0.0047	0.0206	0.0047	0.0206
2-Methylnaphthalene	3.32E-05	0.0006	0.0027	0.0006	0.0027
Acenaphthylene	5.53E-06	0.0001	0.0005	0.0001	0.0005
Acetaldehyde	8.36E-03	0.1573	0.6889	0.1573	0.6889
Acrolein	5.14E-03	0.0967	0.4236	0.0967	0.4236
Benzene	4.40E-04	0.0083	0.0363	0.0083	0.0363
Biphenyl	2.12E-04	0.0040	0.0175	0.0040	0.0175
Carbon Tetrachloride	3.67E-05	0.0007	0.0030	0.0007	0.0030
Chlorobenzene	3.04E-05	0.0006	0.0025	0.0006	0.0025
Chloroform	2.85E-05	0.0005	0.0023	0.0005	0.0023
Ethylbenzene	3.97E-05	0.0007	0.0033	0.0007	0.0033
Ethylene Dibromide	4.43E-05	0.0008	0.0037	0.0008	0.0037
Formaldehyde	5.28E-02	0.9934	4.3512	0.9934	4.3512
Methanol	2.50E-03	0.0470	0.2060	0.0470	0.2060
Methylene Chloride	2.00E-05	0.0004	0.0016	0.0004	0.0016
n-Hexane	1.11E-03	0.0209	0.0915	0.0209	0.0915
Naphthalene	7.44E-05	0.0014	0.0061	0.0014	0.0061
PAH	2.69E-05	0.0005	0.0022	0.0005	0.0022
Phenanthrene	1.04E-05	0.0002	0.0009	0.0002	0.0009
Phenol	2.40E-05	0.0005	0.0020	0.0005	0.0020
Styrene	2.36E-05	0.0004	0.0019	0.0004	0.0019
Toluene	4.08E-04	0.0077	0.0336	0.0077	0.0336
Vinyl Chloride	1.49E-05	0.0003	0.0012	0.0003	0.0012
Xylene	1.84E-04	0.0035	0.0152	0.0035	0.0152
	Total HAPS	**1.36**	**5.95**	**1.36**	**5.95**

1) HAP Emissions based on AP-42, 5th ed. (July 2000) emission factors for 4SLB engine.
2) Fuel consumption data is from the vendor, see Section 7.

Tank Emissions
Manzanares Compressor Station
Enterprise Field Services LLC

Site	ID	Material Stored	Maximum Pump Rate (gal/hr)	Tank Capacity (Gallons)	No. of Turnovers per year	VOC Short-Term Emission Rates			VOC Annual Emissions Rates		VOC Annual	
						TANKS 4.0 L_w[1] (lbs/month)	TANKS 4.0 Turnover Factor	(lbs/hr)	TANKS 4.0 Total Losses[2] (lbs/yr)	(tpy)	Flash Losses[2] (lbs/yr)	Flash (tpy)
Manzanares	T-106	Produced Water	18,000	8,812	4	-	-	**0**	-	**0**	-	-
	T-105	Antifreeze	18,000	8,812	4	0.13	1.00	**0.40**	3.12	**0.002**	-	-
	T-102	Used Oil	18,000	8,812	4	0.13	1.00	**0.40**	3.12	**0.002**	-	-
	T-104	New Lube Oil	18,000	8,812	4	0.13	1.00	**0.40**	3.12	**0.002**	-	-
	T-101	Condensate	18,000	8,812	4	1.07	1.00	**38.70**	-	**2.400**	-	**19.60**
	GM-1	Methanol	18,000	500	4	0.39	1.00	**1.17**	59.65	**0.03**	-	-
	Sump	Sump	18,000	264	4	0.0029	1.00	**0.01**	0.08	**0.00004**	-	-
							Total lb/hr	**41.07**	***Total tpy***	**2.44**	***Total tpy***	**19.60**

(1) Short term, lb/hr, emissions are based on a maximum of one tank fill per hour, Lmax = highest working loss, lb/month x 12 months / # turnovers
(1) & (2) See TANKS report in Section 7 for emission estimates.
(3) 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. 4.4748858
(4) Only VOC emissions are reported on the above table. For Produced Water tanks, only the VOC portion of emissions is reported (water emissions are not shown). 247.6275

Fugitive Emissions
Manzanares Compressor Station
Enterprise Field Services LLC

Component Type	Service	Oil & Gas Production Operations Fugitive Emission Factors[1], lb/hr/component	Component Count	Total Loss (lb/hr)
Valves	Gas/Vapor	0.00992	60	0.60
	Light Liquid	0.0055	63	0.35
	Heavy Liquid	0.00002	0	0.00
Pumps	Gas Vapor	0.00529	0	0.00
	Light Liquid	0.02866	3	0.09
	Heavy Liquid	0.00113	0	0.00
Flanges	Gas/Vapor	0.00086	150	0.13
	Light Liquid	0.000243	157	0.04
	Heavy Liquid	0.00000086	0	0.00
Compressors	Gas/Vapor	0.0194	2	0.04
	Light Liquid	0.0165	0	0.00
	Heavy Liquid	0.0000683	0	0.00
Relief Valves	Gas/Vapor	0.0194	8	0.16
	Light Liquid	0.0165	0	0.00
	Heavy Liquid	0.0000683	0	0.00
Open Ended Lines	Gas/Vapor	0.00441	7	0.03
	Light Liquid	0.00309	0	0.00
	Heavy Liquid	0.000309	0	0.00
Connectors	Gas/Vapor	0.00044	88	0.04
	Light Liquid	0.000463	130	0.06
	Heavy Liquid	0.0000165	0	0.00
Other[2]	Gas/Vapor	0.0194	0	0.00
	Light Liquid	0.0165	0	0.00
	Heavy Liquid	0.0000683	0	0.00
Process Drains	Gas/Vapor	0.0194	0	0.00
	Light Liquid	0.0165	2	0.03
	Heavy Liquid	0.0000683	0	0.00
			Component Emission Total Losses (lb/hr):	1.55
			Gas/Vapor Emissions (lb/hr):	0.99
			Light Liquid Emissions (lb/hr):	0.56
			Heavy Liquid Emissions (lb/hr):	0.00

Sample Calculations:
Emissions (lb/hr) = Emission Factor (lb/hr/component) x Component Count
Emissions (tons/yr) = Emissions (lb/hr) x 8,760 hrs/yr / 2,000 lb/ton

Speciated Emissions Based on Inlet Gas Analysis[3]

Compound	Dry Mole %	MW	lb/mol	Dry Weight %	lb/hr	tons/year
CO_2	1.329	44.01	0.59	2.95	0.02916	0.12773
N_2	0.274	28.01	0.08	0.39	0.00383	0.01678
Methane	84.875	16.04	13.62	68.70	0.67876	2.97297
Ethane	7.568	30.07	2.28	11.48	0.11344	0.49686
Propane	3.288	44.10	1.45	7.32	0.07227	0.31656
i-butane	0.641	58.12	0.37	1.88	0.01858	0.08138
n-butane	0.866	58.12	0.50	2.54	0.02510	0.10993
i-pentane	0.324	72.15	0.23	1.18	0.01166	0.05109
n-pentane	0.233	72.15	0.17	0.85	0.00838	0.03669
Cyclopentane	0.013	70.10	0.01	0.05	0.00046	0.00204
n-Hexane	0.084	86.18	0.07	0.37	0.00361	0.01582
Cyclohexane	0.048	84.16	0.04	0.20	0.00200	0.00876
Other Hexanes	0.201	86.18	0.17	0.87	0.00863	0.03780
Heptanes	0.116	100.21	0.12	0.58	0.00577	0.02527
Methylcyclohexane	0.042	98.19	0.04	0.21	0.00204	0.00892
Benzene	0.016	78.11	0.01	0.06	0.00062	0.00271
Toluene	0.023	92.14	0.02	0.11	0.00107	0.00471
Ethylbenzene	0.001	106.17	0.00	0.00	0.00005	0.00021
Xylenes	0.001	106.17	0.00	0.01	0.00007	0.00032
non-HAP VOC	0.057	86.117	0.05	0.25	0.00243	0.01062
Total:	5.95		19.82	2.71		
			VOC Total:	16.47%	0.16	0.71
			HAPs Total:	0.55%	0.01	0.02
				check		

Speciated Emissions Based on Liquid Analysis Data[4]

Compound	Weight %	lb/hr	tons/year
n-Hexane	6.46	0.04	0.16
Benzene	1.05	0.01	0.03
Toluene	3.20	0.02	0.08
Ethylbenzene	0.22	0.00	0.01
Xylene	0.40	0.00	0.01
non-HAP[5]	88.67	0.50	2.19
Total:	100.00		
VOC Total:	100.00%	0.56	2.47
HAPs Total:	11.33%	0.06	0.28

Total Fugitive Emissions

	VOC		HAPS	
	lb/hr	tons/year	lb/hr	tons/year
Gas	0.16	0.71	0.01	0.02
Liquid	0.56	2.47	0.06	0.28
Total	**0.73**	**3.18**	**0.07**	**0.30**

(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 analysis in Section 7.
(4) See attached liquid analyses in Section 7.
(5) Non-HAP portion assumed to be 100% VOC.

Truck Loading Emissions
Manzanares 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.
VP based on maximun expected liqui Produced Water

Product	Loading Type	MW	Short-Term Max VP[1], psia	Annual Average VP[2], psia	Bulk Temp, °F	Saturation Factor, S	Short-Term Loading Loss Factor[1]	Annual Loading Loss Factor[2]	Throughput (gal/hr)	Throughput (gal/yr)	lb/hr	tpy
Condensate	Submerged	67	6.43	5.14	58.39	0.6	6.2130 lb/1000 gal	4.9665 lb/1000 gal	8,812	1,000,000	54.75	2.48
Used Oil	Submerged	130	0.04	0.01	58.75	0.6	0.0768 lb/1000 gal	0.0236 lb/1000 gal	8,812	33,600	0.68	0.0004
Methanol	Splash	32.04	3.06	2.11	60.49	1.45	3.3994 lb/1000 gal	2.3425 lb/1000 gal	500	2,000	1.70	0.002
									Totals:	1,033,600	**57.13**	**2.49**

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

$$L = \frac{12.46 * S * P * M}{T}$$

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)

Startup, Shutdown, & Maintenance (SSM) Emissions
Emissions from Scheduled/Routine & Predictable Events
Manzanares Compressor Station
Enterprise Field Services LLC

Event Description	Volume Per Event (MCF)	Produced Water	Events per year	Hourly Volume (MCF)	Annual Volume (MMCF)	Material Vented	Standard scf/lbmol	Total lbmol/hr	Total lbmol/yr
Blowdowns	8.38	2	500	16.76	4.19	Nat. Gas	379.482	44.17	11,041.37
Planned and anticipated maintenance and shut down activities	50.28	1	15	50.28	0.75	Nat. Gas	379.482	132.50	1,987.45
Compressor Engine Startup	1.35	2	600	2.70	0.81	Nat. Gas	379.482	7.11	2,134.49

Speciated Emissions Based on Inlet Gas Analysis[(1)]

Compound	Dry Basis Mole %	MW	lb/lb-mol	lb/hr	tons/yr
CO_2	0.3536	44.01	0.1556	28.597	1.180
N_2	1.4293	28.01	0.4004	73.582	3.036
Methane	91.3687	16.04	14.6583	2693.854	111.134
Ethane	5.2766	30.07	1.5867	291.593	12.030
Propane	0.9311	44.10	0.4106	75.459	3.113
i-butane	0.1669	58.12	0.0970	17.831	0.736
n-butane	0.1909	58.12	0.1109	20.390	0.841
i-pentane	0.0687	72.15	0.0496	9.113	0.376
n-pentane	0.0424	72.15	0.0306	5.622	0.232
Cyclopentane	0.0000	70.10	0.0000	0.000	0.000
n-Hexane	0.0143	86.18	0.0123	2.265	0.093
Cyclohexane	0.0125	84.16	0.0105	1.935	0.080
Other Hexanes	0.0455	86.18	0.0392	7.206	0.297
Heptanes	0.0257	100.21	0.0258	4.739	0.195
Methylcyclohexane	0.0202	98.19	0.0199	3.651	0.151
Benzene	0.0021	78.11	0.0016	0.303	0.012
Toluene	0.0015	92.14	0.0013	0.247	0.010
Ethylbenzene	0.0000	106.17	0.0000	0.000	0.000
Xylenes	0.0009	106.17	0.0010	0.178	0.007
non-HAP VOC	0.0469	86.117	0.0404	7.423	0.306
Total:	**100.00**	Avg. MW =	17.65		
			VOC Total:	**156.36**	**6.45**
			HAP Total:	**2.99**	**0.12**

(1) See attached gas analysis in Section 7.

Instrument Gas Emissions
Manzanares Compressor Station
Enterprise Field Services LLC

Event Description	Hourly Volume (MCF)	Annual Volume (MMCF)	Material Vented	Standard scf/lbmol	Total lbmol/hr	Total lbmol/yr
Instrument Air Dryer Purge	0.23	1.98	Nat. Gas	379.482	0.60	5,217.64

Speciated Emissions Based on Inlet Gas Analysis[(1)]

Compound	Dry Basis Mole %	MW	lb/lb-mol	lb/hr	tons/yr
CO_2	0.3536	44.01	0.16	0.0939	0.4059
N_2	1.4293	28.01	0.40	0.2416	1.0445
Methane	91.3687	16.04	14.66	8.8456	38.2408
Ethane	5.2766	30.07	1.59	0.9575	4.1393
Propane	0.9311	44.10	0.41	0.2478	1.0712
i-butane	0.1669	58.12	0.10	0.0586	0.2531
n-butane	0.1909	58.12	0.11	0.0670	0.2894
i-pentane	0.0687	72.15	0.05	0.0299	0.1294
n-pentane	0.0424	72.15	0.03	0.0185	0.0798
Cyclopentane	0.0000	70.10	0.00	0.0000	0.0000
n-Hexane	0.0143	86.18	0.01	0.0074	0.0321
Cyclohexane	0.0125	84.16	0.01	0.0064	0.0275
Other Hexanes	0.0455	86.18	0.04	0.0237	0.1023
Heptanes	0.0257	100.21	0.03	0.0156	0.0673
Methylcyclohexane	0.0202	98.19	0.02	0.0120	0.0518
Benzene	0.0021	78.11	0.00	0.0010	0.0043
Toluene	0.0015	92.14	0.00	0.0008	0.0035
Ethylbenzene	0.0000	106.17	0.00	0.00000	0.0000
Xylenes	0.0009	106.17	0.00	0.0006	0.0025
non-HAP VOC	0.0469	86.117	0.04	0.0244	0.1054
Total:	**100.00**				
			VOC Total:	**0.51**	**2.22**
			HAPs Total:	**0.01**	**0.04**

(1) See attached gas analysis in Section 7.

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- ☑ If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
- ☐ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
- ☑ If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
- ☐ If an older version of AP-42 is used, include a complete copy of the section.
- ☑ If an EPA document or other material is referenced, include a complete copy.
- ☐ Fuel specifications sheet.
- ☑ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

The following information was used to determine emissions from equipment at the Manzanares Compressor Station:

- Engine manufacturer data;
- Copies of applicable sections of AP-42;
- Emission factors for fugitive emission calculations: Table 2-4; Protocol for Equipment Leak Emission estimates, EPA-453/R-95-017, November 1995;
- TANKS4.09d Output reports;
- GRI GLYCalc Version 4.0 reports.

Grand Prairie, TX 75050-1223
214 602-6810
Fax 214 602-6822

October 18, 1994

COOPER
Cooper Energy Services

Mr. Rick Benson
Meridian Oil, Inc.
P. O. Box 4289
Farmington, NM 87499-4289

Re: Frances Mesa Compressor Station
Superior 165GTB/W74 CleanBurn III

Dear Rick:

Cooper Energy Services is pleased to confirm the following rating, fuel consumption and emissions rates for subject engines:

16SGTB engine rating:	2650 HP @ 900 RPM	
Fuel consumption:	7050 BTU/HP-HR	
Emissions:	NO_x	1.5 grs/HP-HR
	CO	1.8 grs/HP-HR → See Attached Graph
	NMHC	0.4 grs/HP-HR

The above is based on typical fuel gas as follows:

Nitrogen	0.17%
Carbon Dioxide	12.55%
Methane	86.70%
Ethane	0.58%

Yours very truly,

K. Thilman

Kard Thilman
Senior Salesman

KT/mwh

12GTLB, 12SGTB, 16GTLB
AND 16SGTB GAS ENGINES

Performance Data (full load):

Models	RPM	BHP (kW)	Fuel Consumption (BTU/BHP-HR) BSFC	*Emissions (Tons/Year) NO_x	CO	**NMHC
6GTLB	900	825 (615)	7150	15.9	27.9	6.0
	750	688 (513)	7050	13.3	19.9	5.0
	600	550 (410)	7400	21.2	18.1	4.0
8GTLB	900	1100 (820)	7100	21.2	31.9	8.0
	750	917 (684)	7000	21.2	26.6	6.6
	600	733 (547)	7400	21.2	24.8	7.1
8SGTB	1000	1500 (1119)	7170	21.7	53.6	13.0
	900	→ 1350 (1007)	7100	19.5	39.1	11.7
	750	1125 (839)	7070	19.5	32.6	9.8
	600	900 (671)	7260	36.5	28.7	9.6
12GTLB	900	1650 (1230)	7350	23.9	25.5	9.6
	750	1375 (1025)	7300	19.9	21.2	8.0
	600	1100 (820)	7820	42.5	14.9	6.4
12SGTB	900	2000 (1491)	7150	29.0	30.9	11.6
	750	1667 (1243)	7150	29.0	25.7	9.7
	600	1333 (994)	7700	90.1	19.3	7.7
16GTLB	900	2200 (1641)	7350	31.9	34.0	12.7
	750	1833 (1367)	7300	26.5	28.3	10.6
	600	1467 (1094)	7880	56.6	21.2	8.5
16SGTB	900	2650 (1976)	7100	38.4	40.9	15.3
	750	2208 (1647)	7150	32.0	34.1	12.8
	600	1767 (1318)	7680	102.3	27.9	10.2

*Exhaust Emissions - full load & sound tgm/bhp-hr) NO_x 1.5, CO 1.6, NMHC 0.60
**Nonmethane nonethane hydrocarbons

CO emissions have been updated.

$lb/hr = \frac{525 \times bhp}{rpm}$

$bhp = \frac{Torque \times 150.8}{824.67 \times (\# \text{ of Cyls.})}$

$gm/bhp\text{-}hr = \frac{103.6 \times lbs}{bhp}$

Qualifying Conditions: Emissions & BSFC
- Ratings based on 130°F air manifold temperature.
- For NO_x requirements less than those expressed above, trade-offs between NO_x and BSFC will be evaluated on a specific case basis.
- Emissions are based on pipeline quality gas - i.e., LHV = 900 BTU/ft³ ± 15% and CH_4 content greater than 90%, NMHC/THC less than 12%, NMEHC less than 5%.

Rating Conditions:
Power rating applied without interruption or load cycling for continuous full load operation, permitting 10% overload for one hour maximum in any 12 hour period.
Ratings are based on pipeline quality gas. Performance may vary depending on fuel composition.
Consult Superior for ratings above 4000' elevation or 100°F.

Standard equipment, specifications and data are subject to change without notice.

SUPERIOR

Cooper Cameron Corporation
Cooper Energy Services
1401 Sheridan Avenue
Springfield, OH 45505
Telephone: (513) 327-4200
Fax: (513) 327-4467

COOPER ENERGY SERVICES

10-281 3M 9/95

Printed in U.S.A.

From: [redacted]
Cc:
Subject: Burlington Emissions
Attachment: BurlingtonEmissions.doc
Date: 7/5/00 4:17 PM

Mr. Hasely,

In response to your fax concerning the emissions levels of several Superior engines, we are providing you with a curve based on analytical predictions for these units. The curves were generated based on hypothetical fuel analyses that you provided and "normal running conditions" which
includes 100% load at 900 rpm, standard fuel header orifice size, and a standard turbo. Keeping this in mind, these numbers should be looked at as guide to emissions output rather than guarantees.

To validate this curve even further, we recommend that Burlington have the emissions analyzed on the units. If we can be of any further assistance, please contact
us.

Thank You,

David Swan

F.L: Gob/Mesa A.c

Actual CO vs. CO2

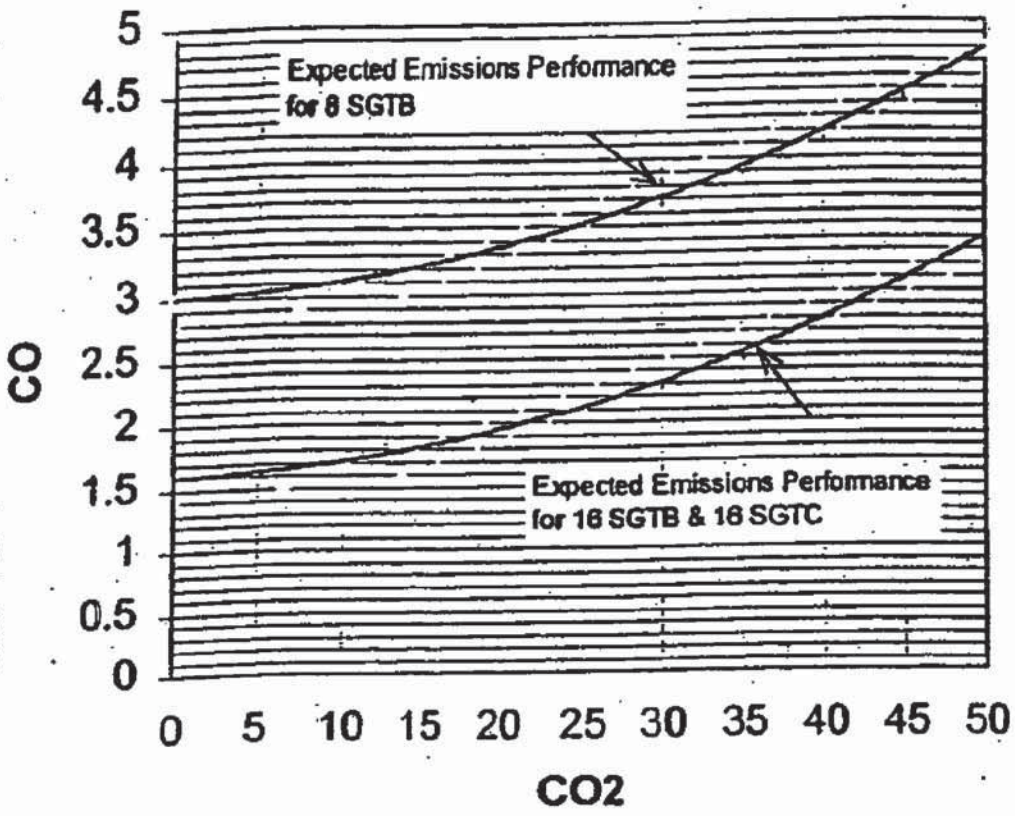


Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES[a]
(SCC 2-02-002-54)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	4.08 E+00	B
NO_x[c] <90% Load	8.47 E-01	B
CO[c] 90 - 105% Load	3.17 E-01	C
CO[c] <90% Load	5.57 E-01	B
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	1.47 E+00	A
Methane[g]	1.25 E+00	C
VOC[h]	1.18 E-01	C
PM10 (filterable)[i]	7.71 E-05	D
PM2.5 (filterable)[i]	7.71 E-05	D
PM Condensable[j]	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[k]	<4.00 E-05	E
1,1,2-Trichloroethane[k]	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene[k]	2.67E-04	D
1,3-Dichloropropene[k]	<2.64 E-05	E
2-Methylnaphthalene[k]	3.32 E-05	C
2,2,4-Trimethylpentane[k]	2.50 E-04	C
Acenaphthene[k]	1.25 E-06	C

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

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

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

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

[a] Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM10, "uncontrolled" means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, "uncontrolled" means no oxidation control; the data set may include units with control techniques used for 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.

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

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

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

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

h = heating value of natural gas (assume 1020 Btu/scf at 60°F).

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

[f] Emission factor for TOC is based on measured emission levels from 22 source tests.

[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.31 lb/MMBtu vs. 1.25 lb/MMBtu, respectively.

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

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

[j] PM Condensable = PM Condensable Inorganic + PM-Condensable Organic

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

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

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 ±30 percent)[4] using the following expression:

$$L_L = 12.46 \frac{SPM}{T} \quad (1)$$

where:

L_L = loading loss, pounds per 1000 gallons ($lb/10^3$ 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, °R (°F + 460)

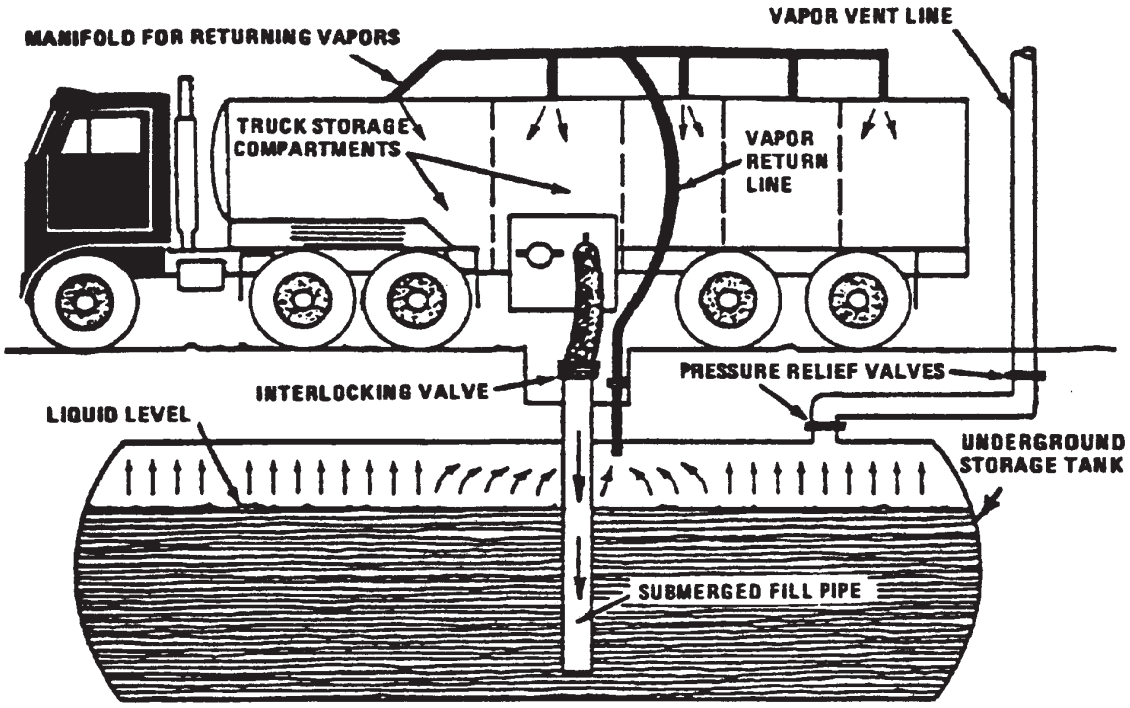


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

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	Submerged loading of a clean cargo tank	0.50
	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[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] 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.

United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

EPA-453/R-95-017
November 1995

Air

EPA

Protocol for Equipment Leak Emission Estimates

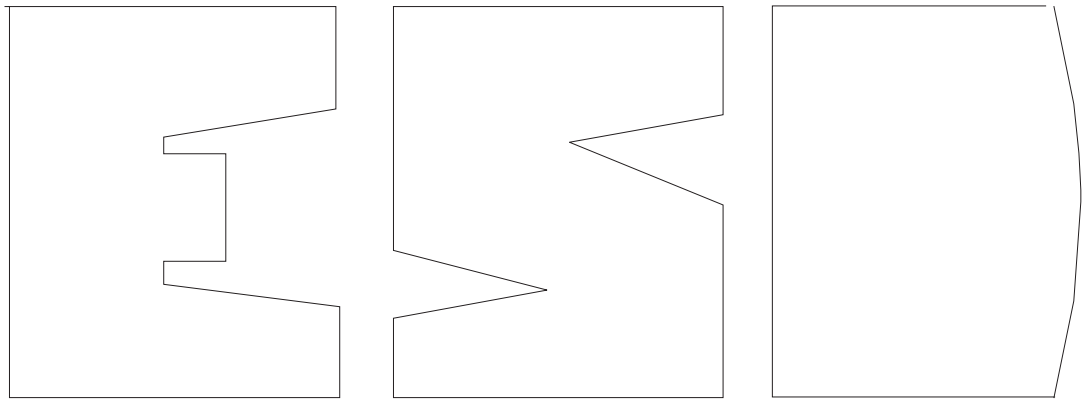


TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

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

[a]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.

[b]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.

[c]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.

GRI GlyCalc Information

Meter Number:	--	**Flow Pressure:**	150
Meter Name:	VV Manzaneres 3-31-15	**Flow Temp:**	55
Location:	VV Manzaneres Station	**H20, Lb/MMCF:**	--
Sample Date:	3/31/2015	**H2S, ppmmol:**	--
File name	VV MANZANERES 3-31-15_1.D	**Type:**	Spot
		Pulled by:	Chris Hi

Component	Mol%	Wt%	LV%
Carbon Dioxide	0.3536	0.8818	0.3430
Hydrogen Sulfide	0.0000	0.0000	0.0000
Nitrogen	1.4293	2.2691	0.8937
Oxygen	0.0269	0.0488	0.0136
Methane	91.3687	83.0706	88.0448
Ethane	5.2766	8.9919	8.0211
Propane	0.9311	2.3269	1.4581
Isobutane	0.1669	0.5499	0.3105
n-Butane	0.1909	0.6287	0.3420
Isopentane	0.0687	0.2810	0.1429
n-Pentane	0.0424	0.1734	0.0874
Cyclopentane	0.0000	0.0000	0.0000
n-Hexane	0.0143	0.0698	0.0334
Cyclohexane	0.0125	0.0597	0.0242
Other Hexanes	0.0455	0.2210	0.1029
Heptanes	0.0257	0.1454	0.0655
Methylcyclohexane	0.0202	0.1126	0.0462
2,2,4 Trimethylpentane	0.0001	0.0004	0.0002
Benzene	0.0021	0.0093	0.0034
Toluene	0.0015	0.0076	0.0028
Ethylbenzene	0.0000	0.0000	0.0000
Xylenes	0.0009	0.0055	0.0020
C8+ Heavies	0.0220	0.1467	0.0625
	0.1448		
Total	**100.0000**	**100.0000**	**100.0000**

Liquid Speciation Summary

HAP	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.

Material Stream: TANK FLARE

Fluid Package: Basis-1
Property Package: Peng-Robinson

CONDITIONS

	Overall	Vapour Phase	Liquid Phase		
Vapour / Phase Fraction	1.0000	1.0000	0.0000		
Temperature: (F)	38.02	38.02	38.02		
Pressure: (psig*)	0.0000	0.0000	0.0000		
Molar Flow (MMSCFD)	7.947e-002	7.947e-002	7.947e-010		
Mass Flow (lb/hr)	350.0	350.0	7.711e-006		
Std Ideal Liq Vol Flow (USGPM)	1.473	1.473	2.274e-008		
Molar Enthalpy (Btu/lbmole)	-4.587e+004	-4.587e+004	-8.392e+004		
Molar Entropy (Btu/lbmole-F)	43.29	43.29	12.16		
Heat Flow (Btu/hr)	-4.002e+005	-4.002e+005	-7.323e-003		
Liq Vol Flow @Std Cond (USGPM)	1.485 *	1.485	2.253e-008		

PROPERTIES

	Overall	Vapour Phase	Liquid Phase		
Molecular Weight	40.11	40.11	88.37		
Molar Density (lbmole/ft3)	2.169e-003	2.169e-003	0.4908		
Mass Density (lb/ft3)	8.699e-002	8.699e-002	43.37		
Act. Volume Flow (USGPM)	501.7	501.7	2.217e-008		
Mass Enthalpy (Btu/lb)	-1143	-1143	-949.7		
Mass Entropy (Btu/lb-F)	1.079	1.079	0.1376		
Heat Capacity (Btu/lbmole-F)	15.75	15.75	42.13		
Mass Heat Capacity (Btu/lb-F)	0.3927	0.3927	0.4767		
Lower Heating Value (Btu/lbmole)	7.910e+005	7.910e+005	1.700e+006		
Mass Lower Heating Value (Btu/lb)	1.972e+004	1.972e+004	1.924e+004		
Phase Fraction [Vol. Basis]	---	1.000	1.544e-008		
Phase Fraction [Mass Basis]	2.122e-314	1.000	2.203e-008		
Partial Pressure of CO2 (psig*)	-11.31	---	---		
Cost Based on Flow (Cost/s)	0.0000	0.0000	0.0000		
Act. Gas Flow (ACFM)	---	67.07	---		
Avg. Liq. Density (lbmole/ft3)	0.7386	0.7386	0.4784		
Specific Heat (Btu/lbmole-F)	15.75	15.75	42.13		
Std. Gas Flow (MMSCFD)	7.947e-002	7.947e-002	7.947e-010		
Std. Ideal Liq. Mass Density (lb/ft3)	29.63	29.63	42.28		
Act. Liq. Flow (USGPM)	---	---	---		
Z Factor	---	0.9871	4.362e-003		
Watson K	15.29	15.29	12.57		
User Property	---	---	---		
Partial Pressure of H2S (psig*)	-11.43	---	---		
Cp/(Cp - R)	1.144	1.144	1.049		
Cp/Cv	1.152	1.152	1.049		
Heat of Vap. (Btu/lbmole)	1.191e+004	---	---		
Kinematic Viscosity (cSt)	5.973	5.973	0.6357		
Liq. Mass Density (Std. Cond) (lb/ft3)	29.39	29.39	42.67		
Liq. Vol. Flow (Std. Cond) (USGPM)	1.485	1.485	2.253e-008		
Liquid Fraction	0.0000	0.0000	1.000		
Molar Volume (ft3/lbmole)	461.1	461.1	2.038		
Mass Heat of Vap. (Btu/lb)	297.0	---	---		
Phase Fraction [Molar Basis]	1.0000	1.0000	0.0000		
Surface Tension (dyne/cm)	---	---	20.22		
Thermal Conductivity (Btu/hr-ft-F)	1.026e-002	1.026e-002	6.924e-002		
Viscosity (cP)	8.322e-003	8.322e-003	0.4416		
Cv (Semi-Ideal) (Btu/lbmole-F)	13.77	13.77	40.14		

* Specified by user.

Material Stream: TANK FLARE (continued)

Fluid Package: Basis-1
Property Package: Peng-Robinson

PROPERTIES

		Overall	Vapour Phase	Liquid Phase		
Mass Cv (Semi-Ideal)	(Btu/lb-F)	0.3432	0.3432	0.4542		
Cv	(Btu/lbmole-F)	13.68	13.68	40.14		
Mass Cv	(Btu/lb-F)	0.3410	0.3410	0.4542		
Cv (Ent. Method)	(Btu/lbmole-F)	---	---	---		
Mass Cv (Ent. Method)	(Btu/lb-F)	---	---	---		
Cp/Cv (Ent. Method)		---	---	---		
Reid VP at 37.8 C	(psig*)	---	---	6.977		
True VP at 37.8 C	(psig*)	772.6	772.6	13.48		
Liq. Vol. Flow - Sum(Std. Cond)	(USGPM)	1.485	1.485	0.0000		
Viscosity Index		---	---	-2.288		

COMPOSITION

Overall Phase

Vapour Fraction 1.0000

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Nitrogen	0.0008	0.0001	0.0226	0.0001	0.0001	0.0000
CO2	0.0895	0.0103	3.9392	0.0113	0.0095	0.0065
Methane	1.6415	0.1881	26.3339	0.0752	0.1757	0.1193
Ethane	2.3721	0.2718	71.3302	0.2038	0.4005	0.2719
Propane	2.4704	0.2831	108.9355	0.3112	0.4294	0.2915
i-Butane	0.5143	0.0589	29.8913	0.0854	0.1062	0.0721
n-Butane	0.8302	0.0951	48.2560	0.1379	0.1652	0.1122
i-Pentane	0.2913	0.0334	21.0204	0.0601	0.0673	0.0457
n-Pentane	0.2132	0.0244	15.3837	0.0439	0.0488	0.0331
n-Hexane	0.0557	0.0064	4.7991	0.0137	0.0145	0.0098
n-Heptane	0.0369	0.0042	3.7021	0.0106	0.0108	0.0073
n-Octane	0.0048	0.0005	0.5477	0.0016	0.0016	0.0011
n-Nonane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
n-C11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mbutane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclopentane	0.0127	0.0015	0.8901	0.0025	0.0024	0.0016
2-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MCC5==	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclopentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzene	0.0093	0.0011	0.7284	0.0021	0.0016	0.0011
33-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclohexane	0.0263	0.0030	2.2116	0.0063	0.0056	0.0038
2-Mhexane	0.0945	0.0108	9.4737	0.0271	0.0278	0.0188
23-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11Mcycpentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-tr3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-ci3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclohexane	0.0124	0.0014	1.2164	0.0035	0.0031	0.0021
113-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Toluene	0.0061	0.0007	0.5614	0.0016	0.0013	0.0009

* Specified by user.

Material Stream: TANK FLARE (continued)

Fluid Package: Basis-1
Property Package: Peng-Robinson

COMPOSITION

Overall Phase (continued)

Vapour Fraction 1.0000

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Naphthalene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ecyclohexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
p-Xylene	0.0001	0.0000	0.0102	0.0000	0.0000	0.0000
m-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2-Moctane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
o-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
H2O	0.0440	0.0050	0.7923	0.0023	0.0016	0.0011
Methanol	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7262	1.0000	350.0457	1.0000	1.4730	1.0000

Vapour Phase

Phase Fraction 1.000

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Nitrogen	0.0008	0.0001	0.0226	0.0001	0.0001	0.0000
CO2	0.0895	0.0103	3.9392	0.0113	0.0095	0.0065
Methane	1.6415	0.1881	26.3339	0.0752	0.1757	0.1193
Ethane	2.3721	0.2718	71.3302	0.2038	0.4005	0.2719
Propane	2.4704	0.2831	108.9355	0.3112	0.4294	0.2915
i-Butane	0.5143	0.0589	29.8913	0.0854	0.1062	0.0721
n-Butane	0.8302	0.0951	48.2560	0.1379	0.1652	0.1122
i-Pentane	0.2913	0.0334	21.0204	0.0601	0.0673	0.0457
n-Pentane	0.2132	0.0244	15.3837	0.0439	0.0488	0.0331
n-Hexane	0.0557	0.0064	4.7991	0.0137	0.0145	0.0098
n-Heptane	0.0369	0.0042	3.7021	0.0106	0.0108	0.0073
n-Octane	0.0048	0.0005	0.5477	0.0016	0.0016	0.0011
n-Nonane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
n-C11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mbutane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclopentane	0.0127	0.0015	0.8901	0.0025	0.0024	0.0016
2-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MCC5==	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclopentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzene	0.0093	0.0011	0.7284	0.0021	0.0016	0.0011
33-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclohexane	0.0263	0.0030	2.2116	0.0063	0.0056	0.0038
2-Mhexane	0.0945	0.0108	9.4737	0.0271	0.0278	0.0188
23-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11Mcycpentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-tr3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-ci3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclohexane	0.0124	0.0014	1.2164	0.0035	0.0031	0.0021
113-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Toluene	0.0061	0.0007	0.5614	0.0016	0.0013	0.0009

* Specified by user.

Material Stream: TANK FLARE (continued)

Fluid Package: Basis-1
Property Package: Peng-Robinson

COMPOSITION

Vapour Phase (continued)

Phase Fraction 1.000

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Naphthalene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ecyclohexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
p-Xylene	0.0001	0.0000	0.0102	0.0000	0.0000	0.0000
m-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2-Moctane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
o-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
H2O	0.0440	0.0050	0.7923	0.0023	0.0016	0.0011
Methanol	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7262	1.0000	350.0457	1.0000	1.4730	1.0000

Liquid Phase

Phase Fraction 1.000e-008

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Nitrogen	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO2	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
Methane	0.0000	0.0009	0.0000	0.0002	0.0000	0.0004
Ethane	0.0000	0.0094	0.0000	0.0032	0.0000	0.0061
Propane	0.0000	0.0428	0.0000	0.0213	0.0000	0.0285
i-Butane	0.0000	0.0262	0.0000	0.0172	0.0000	0.0207
n-Butane	0.0000	0.0635	0.0000	0.0417	0.0000	0.0485
i-Pentane	0.0000	0.0635	0.0000	0.0518	0.0000	0.0563
n-Pentane	0.0000	0.0657	0.0000	0.0536	0.0000	0.0577
n-Hexane	0.0000	0.0662	0.0000	0.0646	0.0000	0.0660
n-Heptane	0.0000	0.1600	0.0000	0.1814	0.0000	0.1789
n-Octane	0.0000	0.0752	0.0000	0.0972	0.0000	0.0933
n-Nonane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
n-C11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mbutane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclopentane	0.0000	0.0055	0.0000	0.0044	0.0000	0.0039
2-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MCC5==	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclopentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzene	0.0000	0.0119	0.0000	0.0105	0.0000	0.0081
33-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclohexane	0.0000	0.0410	0.0000	0.0390	0.0000	0.0338
2-Mhexane	0.0000	0.2897	0.0000	0.3285	0.0000	0.3264
23-Mpentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11Mcycpentan	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-tr3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-ci3-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mcyclohexane	0.0000	0.0457	0.0000	0.0507	0.0000	0.0445
113-MCC5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25-Mhexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Toluene	0.0000	0.0307	0.0000	0.0320	0.0000	0.0249

* Specified by user.

Material Stream: TANK FLARE (continued)

Fluid Package: Basis-1
Property Package: Peng-Robinson

COMPOSITION

Liquid Phase (continued)

Phase Fraction 1.000e-008

COMPONENTS	MOLAR FLOW (lbmole/hr)	MOLE FRACTION	MASS FLOW (lb/hr)	MASS FRACTION	LIQUID VOLUME FLOW (USGPM)	LIQUID VOLUME FRACTION
Naphthalene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ecyclohexane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
p-Xylene	0.0000	0.0021	0.0000	0.0025	0.0000	0.0020
m-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2-Moctane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
o-Xylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
H2O	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Methanol	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	1.0000	0.0000	1.0000	0.0000	1.0000

K VALUE

COMPONENTS	MIXED	LIGHT	HEAVY
Nitrogen	---	827.6	---
CO2	---	66.15	---
Methane	---	211.2	---
Ethane	---	28.84	---
Propane	---	6.618	---
i-Butane	---	2.252	---
n-Butane	---	1.499	---
i-Pentane	---	0.5261	---
n-Pentane	---	0.3719	---
n-Hexane	---	9.640e-002	---
n-Heptane	---	2.646e-002	---
n-Octane	---	7.310e-003	---
n-Nonane	---	---	---
n-C11	---	---	---
22-Mbutane	---	---	---
Cyclopentane	---	0.2652	---
2-Mpentane	---	---	---
3-Mpentane	---	---	---
22-Mpentane	---	---	---
MCC5==	---	---	---
Mcyclopentan	---	---	---
24-Mpentane	---	---	---
Benzene	---	8.991e-002	---
33-Mpentane	---	---	---
Cyclohexane	---	7.346e-002	---
2-Mhexane	---	3.740e-002	---
23-Mpentane	---	---	---
11Mcycpentan	---	---	---
3-Mhexane	---	---	---
1-tr3-MCC5	---	---	---
1-ci3-MCC5	---	---	---
Mcyclohexane	---	3.110e-002	---
113-MCC5	---	---	---
25-Mhexane	---	---	---
Toluene	---	2.278e-002	---
Naphthalene	---	---	---

* Specified by user.

Material Stream: TANK FLARE (continued)

Fluid Package: Basis-1
Property Package: Peng-Robinson

K VALUE

COMPONENTS	MIXED	LIGHT	HEAVY
Ecyclohexane	---	---	---
p-Xylene	---	5.197e-003	---
m-Xylene	---	---	---
2-Moctane	---	---	---
o-Xylene	---	---	---
H2O	---	63.00	---
Methanol	---	---	---

* Specified by user.

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:

Albert Hendler
URS Corporation
9400 Amberglen Boulevard (78729)
P.O. Box 201088
Austin, TX 78720-1088

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

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Table 3-5. Measured Vent Gas Speciation Profiles in Weight Percent for Condensate Tank Batteries

	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 [a]	**81%**	**53%**	**82%**	**85%**	**65%**	**70%**	**77%**	**80%**

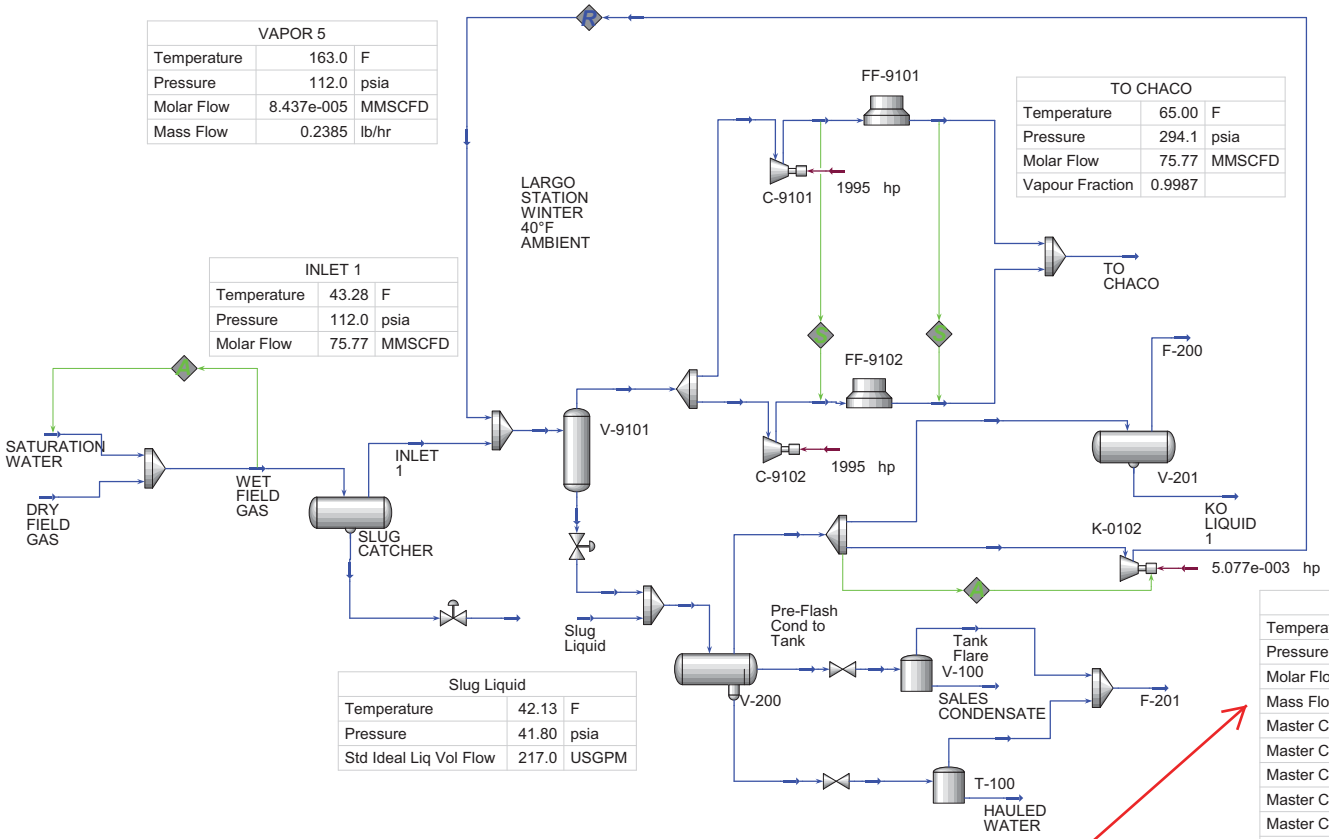
[a] Weight % VOC excludes nitrogen, carbon dioxide, methane, and ethane.

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

	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 [a]	**80%**	**70%**	**99%**	**89%**	**86%**	**55%**	**83%**	**62%**

[a] Weight % VOC excludes nitrogen, carbon dioxide, methane, and ethane.

Largo VOC Mitigation
Tank VOC with V-200 at 30 psig



VAPOR 5		
Temperature	163.0	F
Pressure	112.0	psia
Molar Flow	8.437e-005	MMSCFD
Mass Flow	0.2385	lb/hr

TO CHACO		
Temperature	65.00	F
Pressure	294.1	psia
Molar Flow	75.77	MMSCFD
Vapour Fraction	0.9987	

INLET 1		
Temperature	43.28	F
Pressure	112.0	psia
Molar Flow	75.77	MMSCFD

F-200		
Temperature	42.13	F
Pressure	41.80	psia
Molar Flow	0.2142	MMSCFD
Mass Flow	605.5	lb/hr

KO LIQUID 1		
Temperature	42.13	F
Pressure	41.80	psia
Std Ideal Liq Vol Flow	0.0000	USGPM

Slug Liquid		
Temperature	42.13	F
Pressure	41.80	psia
Std Ideal Liq Vol Flow	217.0	USGPM

Flash emissions per flashing event

F-201		
Temperature	35.40	F
Pressure	11.43	psia
Molar Flow	0.2173	MMSCFD
Mass Flow	935.3	lb/hr
Master Comp Mass Flow (Propane)	288.3088	lb/hr
Master Comp Mass Flow (i-Butane)	78.0803	lb/hr
Master Comp Mass Flow (n-Butane)	125.4776	lb/hr
Master Comp Mass Flow (i-Pentane)	54.1538	lb/hr
Master Comp Mass Flow (n-Pentane)	39.4718	lb/hr
Master Comp Mass Flow (n-Hexane)	12.1699	lb/hr
Master Comp Mass Flow (n-Heptane)	9.2853	lb/hr
Master Comp Mass Flow (n-Octane)	1.3587	lb/hr
Master Comp Mass Flow (Cyclopentane)	2.2799	lb/hr
Master Comp Mass Flow (Benzene)	1.8481	lb/hr
Master Comp Mass Flow (Cyclohexane)	5.6075	lb/hr
Master Comp Mass Flow (2-Mhexane)	23.8324	lb/hr
Master Comp Mass Flow (Mcyclohexane)	3.0650	lb/hr
Master Comp Mass Flow (Toluene)	1.4086	lb/hr
Master Comp Mass Flow (p-Xylene)	0.0252	lb/hr

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

Identification

User Identification:	GM-1 Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Horizontal Tank
Description:	Methanol Tank

Tank Dimensions

Shell Length (ft):		6.00
Diameter (ft):		3.80
Volume (gallons):		500.00
Turnovers:		4.00
Net Throughput(gal/yr):		2,000.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	Red/Primer
Shell Condition	Good

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

GM-1 Manzanares - Horizontal Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	Jan	56.10	45.24	66.95	60.49	1.2740	0.8916	1.7891	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Feb	60.74	47.63	73.85	60.49	1.4762	0.9660	2.2014	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Mar	66.49	50.58	82.40	60.49	1.7639	1.0650	2.8219	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Apr	73.42	54.29	92.55	60.49	2.1733	1.2018	3.7462	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	May	79.29	58.46	100.11	60.49	2.5807	1.3737	4.5903	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Jun	84.56	62.85	106.26	60.49	3.0002	1.5768	5.3901	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Jul	85.22	65.25	105.18	60.49	3.0566	1.6983	5.2419	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Aug	82.59	64.23	100.96	60.49	2.8377	1.6454	4.6946	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Sep	77.12	60.72	93.52	60.49	2.4235	1.4753	3.8466	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Oct	69.50	55.12	83.88	60.49	1.9327	1.2344	2.9430	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Nov	61.09	49.53	72.65	60.49	1.4923	1.0288	2.1241	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13
Methyl alcohol	Dec	55.85	45.75	65.94	60.49	1.2637	0.9069	1.7346	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

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

GM-1 Manzanares - Horizontal Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	1.4155	1.8868	3.2468	5.0974	7.3852	9.3632	9.1132	7.4526	5.0692	3.3119	1.7982	1.2986
Vapor Space Volume (cu ft):	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420
Vapor Density (lb/cu ft):	0.0074	0.0085	0.0100	0.0122	0.0143	0.0165	0.0167	0.0156	0.0135	0.0109	0.0086	0.0073
Vapor Space Expansion Factor:	0.1612	0.2109	0.2843	0.3926	0.4844	0.5697	0.5296	0.4564	0.3598	0.2700	0.1859	0.1489
Vented Vapor Saturation Factor:	0.8863	0.8706	0.8492	0.8204	0.7937	0.7680	0.7646	0.7778	0.8038	0.8371	0.8694	0.8871
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420	43.3420
Tank Diameter (ft):	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000
Effective Diameter (ft):	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893	5.3893
Vapor Space Outage (ft):	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000
Tank Shell Length (ft):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0074	0.0085	0.0100	0.0122	0.0143	0.0165	0.0167	0.0156	0.0135	0.0109	0.0086	0.0073
Vapor Molecular Weight (lb/lb-mole):	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.2740	1.4762	1.7639	2.1733	2.5807	3.0002	3.0566	2.8377	2.4235	1.9327	1.4923	1.2637
Daily Avg. Liquid Surface Temp. (deg. R):	515.7684	520.4135	526.1601	533.0884	538.9560	544.2260	544.8866	542.2640	536.7919	529.1669	520.7596	515.5166
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642	520.1642
Tank Paint Solar Absorptance (Shell):	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.1612	0.2109	0.2843	0.3926	0.4844	0.5697	0.5296	0.4564	0.3598	0.2700	0.1859	0.1489
Daily Vapor Temperature Range (deg. R):	43.4198	52.4341	63.6314	76.5277	83.2948	86.8102	79.8539	73.4671	65.5949	57.5176	46.2350	40.3858
Daily Vapor Pressure Range (psia):	0.8975	1.2354	1.7568	2.5444	3.2166	3.8133	3.5437	3.0492	2.3713	1.7086	1.0954	0.8277
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.2740	1.4762	1.7639	2.1733	2.5807	3.0002	3.0566	2.8377	2.4235	1.9327	1.4923	1.2637
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8916	0.9660	1.0650	1.2018	1.3737	1.5768	1.6983	1.6454	1.4753	1.2344	1.0288	0.9069
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	1.7891	2.2014	2.8219	3.7462	4.5903	5.3901	5.2419	4.6946	3.8466	2.9430	2.1241	1.7346
Daily Avg. Liquid Surface Temp. (deg R):	515.7684	520.4135	526.1601	533.0884	538.9560	544.2260	544.8866	542.2640	536.7919	529.1669	520.7596	515.5166
Daily Min. Liquid Surface Temp. (deg R):	504.9135	507.3049	510.2523	513.9565	518.1323	522.5234	524.9232	523.8972	520.3932	514.7875	509.2008	505.4202
Daily Max. Liquid Surface Temp. (deg R):	526.6234	533.5220	542.0680	552.2204	559.7797	565.9286	564.8501	560.6307	553.1907	543.5463	532.3183	525.6131
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.8863	0.8706	0.8492	0.8204	0.7937	0.7680	0.7646	0.7778	0.8038	0.8371	0.8694	0.8871
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	1.2740	1.4762	1.7639	2.1733	2.5807	3.0002	3.0566	2.8377	2.4235	1.9327	1.4923	1.2637
Vapor Space Outage (ft):	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000	1.9000
Working Losses (lb):	0.1620	0.1877	0.2243	0.2763	0.3281	0.3815	0.3886	0.3608	0.3081	0.2457	0.1897	0.1607
Vapor Molecular Weight (lb/lb-mole):	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.2740	1.4762	1.7639	2.1733	2.5807	3.0002	3.0566	2.8377	2.4235	1.9327	1.4923	1.2637
Net Throughput (gal/mo.):	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667	166.6667

Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Diameter (ft):	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000	3.8000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	1.5775	2.0745	3.4711	5.3737	7.7133	9.7447	9.5018	7.8134	5.3774	3.5576	1.9879	1.4593

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

GM-1 Manzanares - Horizontal Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	3.21	56.44	59.65

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

Identification

User Identification:	Sump Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Vertical Fixed Roof Tank
Description:	Sump

Tank Dimensions

Shell Height (ft):	5.00
Diameter (ft):	3.00
Liquid Height (ft) :	5.00
Avg. Liquid Height (ft):	3.00
Volume (gallons):	264.00
Turnovers:	4.00
Net Throughput(gal/yr):	1,056.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.09
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

Sump Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Spent Oil	Jan	47.89	42.17	53.62	56.17	0.0056	0.0045	0.0069	130.0000			162.00	Option 1: VP40 = .0041 VP50 = .006
Spent Oil	Feb	50.81	44.36	57.26	56.17	0.0062	0.0049	0.0078	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Mar	54.35	47.06	61.64	56.17	0.0071	0.0054	0.0089	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Apr	58.66	50.46	66.86	56.17	0.0082	0.0061	0.0102	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	May	62.97	54.46	71.47	56.17	0.0092	0.0071	0.0116	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Jun	67.53	58.77	76.29	56.17	0.0104	0.0082	0.0135	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Jul	69.19	61.28	77.09	56.17	0.0108	0.0088	0.0138	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Aug	67.74	60.39	75.10	56.17	0.0104	0.0086	0.0130	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Sep	64.12	57.10	71.14	56.17	0.0095	0.0078	0.0115	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Oct	58.55	51.73	65.37	56.17	0.0081	0.0064	0.0098	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Nov	52.41	46.40	58.41	56.17	0.0066	0.0053	0.0081	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Dec	48.22	42.74	53.70	56.17	0.0057	0.0046	0.0069	130.0000			162.00	Option 1: VP40 = .0041 VP50 = .006

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

Sump Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0024	0.0027	0.0039	0.0048	0.0058	0.0064	0.0061	0.0055	0.0046	0.0041	0.0028	0.0023
Vapor Space Volume (cu ft):	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001
Vapor Space Expansion Factor:	0.0404	0.0458	0.0521	0.0587	0.0605	0.0620	0.0553	0.0512	0.0490	0.0480	0.0422	0.0384
Vented Vapor Saturation Factor:	0.9994	0.9993	0.9992	0.9991	0.9990	0.9989	0.9988	0.9989	0.9990	0.9991	0.9993	0.9994
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581	14.3581
Tank Diameter (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Vapor Space Outage (ft):	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313
Tank Shell Height (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Average Liquid Height (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Roof Outage (ft):	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313
Roof Height (ft):	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938	0.0938
Roof Slope (ft/ft):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Shell Radius (ft):	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000
Vapor Density												
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0056	0.0062	0.0071	0.0082	0.0092	0.0104	0.0108	0.0104	0.0095	0.0081	0.0066	0.0057
Daily Avg. Liquid Surface Temp. (deg. R):	507.5636	510.4798	514.0158	518.3292	522.6357	527.2019	528.8587	527.4145	523.7886	518.2208	512.0765	507.8892
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0404	0.0458	0.0521	0.0587	0.0605	0.0620	0.0553	0.0512	0.0490	0.0480	0.0422	0.0384
Daily Vapor Temperature Range (deg. R):	22.9137	25.8005	29.1625	32.7908	34.0251	35.0461	31.6205	29.4103	28.0814	27.2957	24.0339	21.9265
Daily Vapor Pressure Range (psia):	0.0024	0.0029	0.0035	0.0041	0.0045	0.0053	0.0050	0.0044	0.0037	0.0034	0.0028	0.0023
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0056	0.0062	0.0071	0.0082	0.0092	0.0104	0.0108	0.0104	0.0095	0.0081	0.0066	0.0057
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0045	0.0049	0.0054	0.0061	0.0071	0.0082	0.0088	0.0086	0.0078	0.0064	0.0053	0.0046
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0069	0.0078	0.0089	0.0102	0.0116	0.0135	0.0138	0.0130	0.0115	0.0098	0.0081	0.0069
Daily Avg. Liquid Surface Temp. (deg R):	507.5636	510.4798	514.0158	518.3292	522.6357	527.2019	528.8587	527.4145	523.7886	518.2208	512.0765	507.8892
Daily Min. Liquid Surface Temp. (deg R):	501.8352	504.0297	506.7251	510.1315	514.1295	518.4404	520.9536	520.0619	516.7682	511.3969	506.0680	502.4076
Daily Max. Liquid Surface Temp. (deg R):	513.2920	516.9299	521.3064	526.5269	531.1420	535.9634	536.7638	534.7670	530.8089	525.0448	518.0850	513.3709
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9994	0.9993	0.9992	0.9991	0.9990	0.9989	0.9988	0.9989	0.9990	0.9991	0.9993	0.9994
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0056	0.0062	0.0071	0.0082	0.0092	0.0104	0.0108	0.0104	0.0095	0.0081	0.0066	0.0057

Vapor Space Outage (ft):	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313	2.0313
Working Losses (lb):	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029	0.0028	0.0026	0.0022	0.0018	0.0015
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0056	0.0062	0.0071	0.0082	0.0092	0.0104	0.0108	0.0104	0.0095	0.0081	0.0066	0.0057
Net Throughput (gal/mo.):	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000	88.0000
Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000	264.0000
Maximum Liquid Height (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Tank Diameter (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0039	0.0044	0.0058	0.0070	0.0083	0.0092	0.0090	0.0083	0.0072	0.0063	0.0046	0.0039

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Sump Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Spent Oil	0.03	0.05	0.08

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

Identification

User Identification:	T-101 Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Vertical Fixed Roof Tank
Description:	Condensate Storage

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	10.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	12.00
Volume (gallons):	8,812.00
Turnovers:	113.48
Net Throughput(gal/yr):	1,000,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.31
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

T-101 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Produced Water/Condensate	Jan	52.11	43.75	60.47	58.39	3.9100	3.2898	4.6213	67.0514			91.96	
Benzene						0.9345	0.7309	1.1833	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.0820	0.0602	0.1103	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.5524	1.2331	1.9371	86.1700	0.0054	0.0029	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						3.9385	3.3144	4.6542	67.0000	0.9905	0.9965	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.2570	0.1950	0.3350	92.1300	0.0027	0.0002	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.0681	0.0499	0.0919	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Feb	55.91	46.04	65.79	58.39	4.2217	3.4515	5.1249	67.0529			91.96	
Benzene						1.0416	0.7827	1.3682	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.0940	0.0656	0.1324	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.7187	1.3147	2.2199	86.1700	0.0054	0.0030	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						4.2522	3.4771	5.1609	67.0000	0.9905	0.9964	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.2903	0.2106	0.3944	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.0782	0.0544	0.1105	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Mar	60.59	48.87	72.31	58.39	4.6316	3.6592	5.8020	67.0546			91.96	
Benzene						1.1870	0.8506	1.6272	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1108	0.0729	0.1645	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.9428	1.4213	2.6122	86.1700	0.0054	0.0031	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						4.6646	3.6862	5.8420	67.0000	0.9905	0.9963	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.3362	0.2312	0.4791	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.0923	0.0605	0.1376	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Apr	66.24	52.43	80.06	58.39	5.1702	3.9352	6.6986	67.0568			91.96	
Benzene						1.3852	0.9430	1.9867	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1344	0.0830	0.2112	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.2457	1.5657	3.1508	86.1700	0.0054	0.0032	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						5.2065	3.9639	6.7438	67.0000	0.9905	0.9962	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.3999	0.2597	0.5994	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1122	0.0689	0.1771	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	May	71.35	56.52	86.19	58.39	5.6987	4.2728	7.4826	67.0587			91.96	
Benzene						1.5870	1.0595	2.3149	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1594	0.0960	0.2558	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.5515	1.7463	3.6375	86.1700	0.0054	0.0033	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						5.7381	4.3036	7.5321	67.0000	0.9905	0.9960	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.4658	0.2959	0.7116	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1333	0.0799	0.2149	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Jun	76.28	60.87	91.69	58.39	6.2487	4.6574	8.2473	67.0606			91.96	
Benzene						1.8041	1.1963	2.6463	78.1100	0.0009	0.0004	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1872	0.1119	0.3023	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.8780	1.9571	4.1251	86.1700	0.0054	0.0034	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						6.2913	4.6905	8.3009	67.0000	0.9905	0.9959	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.5379	0.3392	0.8269	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48

Xylenes (mixed isomers)						0.1568	0.0932	0.2545	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Jul	77.43	63.32	91.53	58.39	6.3823	4.8863	8.2235	67.0610			91.96	
Benzene						1.8579	1.2797	2.6359	78.1100	0.0009	0.0004	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1942	0.1217	0.3008	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.9585	2.0849	4.1097	86.1700	0.0054	0.0034	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						6.4257	4.9208	8.2770	67.0000	0.9905	0.9959	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.5560	0.3658	0.8232	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1627	0.1015	0.2532	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Aug	75.38	62.36	88.39	58.39	6.1447	4.7956	7.7811	67.0602			91.96	
Benzene						1.7625	1.2465	2.4430	78.1100	0.0009	0.0004	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1818	0.1178	0.2736	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.8156	2.0341	3.8264	86.1700	0.0054	0.0034	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						6.1866	4.8296	7.8323	67.0000	0.9905	0.9959	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.5240	0.3552	0.7559	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1522	0.0982	0.2300	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Sep	70.80	58.96	82.64	58.39	5.6397	4.4855	7.0203	67.0585			91.96	
Benzene						1.5641	1.1346	2.1199	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1566	0.1047	0.2291	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.5169	1.8623	3.3488	86.1700	0.0054	0.0033	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						5.6787	4.5176	7.0673	67.0000	0.9905	0.9960	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.4583	0.3196	0.6447	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1309	0.0871	0.1922	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Oct	64.18	53.47	74.88	58.39	4.9678	4.0191	6.0886	67.0560			91.96	
Benzene						1.3098	0.9716	1.7401	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1253	0.0861	0.1789	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.1308	1.6102	2.7821	86.1700	0.0054	0.0032	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						5.0029	4.0484	6.1302	67.0000	0.9905	0.9962	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.3755	0.2685	0.5166	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.1045	0.0716	0.1498	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Nov	56.87	48.01	65.73	58.39	4.3030	3.5950	5.1193	67.0532			91.96	
Benzene						1.0700	0.8294	1.3661	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.0972	0.0706	0.1321	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.7627	1.3882	2.2167	86.1700	0.0054	0.0030	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						4.3339	3.6215	5.1552	67.0000	0.9905	0.9964	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.2992	0.2248	0.3937	92.1300	0.0027	0.0003	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.0809	0.0585	0.1102	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11
Produced Water/Condensate	Dec	52.14	44.29	59.99	58.39	3.9123	3.3272	4.5777	67.0515			91.96	
Benzene						0.9352	0.7428	1.1676	78.1100	0.0009	0.0003	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.0821	0.0615	0.1085	106.1700	0.0002	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.5536	1.2518	1.9130	86.1700	0.0054	0.0029	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Natural Gas Condensate						3.9408	3.3520	4.6104	67.0000	0.9905	0.9965	92.00	Option 4: RVP=9, ASTM Slope=3
Toluene						0.2573	0.1986	0.3301	92.1300	0.0027	0.0002	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylenes (mixed isomers)						0.0682	0.0509	0.0904	106.1700	0.0003	0.0000	106.17	Option 2: A=7.009, B=1462.266, C=215.11

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

T-101 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	48.2245	57.7232	87.5912	119.5403	156.9338	187.3738	184.2860	157.6178	118.3006	89.0897	56.8860	45.2158
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Vapor Density (lb/cu ft):	0.0477	0.0512	0.0556	0.0614	0.0671	0.0729	0.0743	0.0718	0.0664	0.0593	0.0521	0.0478
Vapor Space Expansion Factor:	0.2196	0.2801	0.3671	0.4924	0.5999	0.7131	0.6731	0.5843	0.4694	0.3615	0.2552	0.2059
Vented Vapor Saturation Factor:	0.6085	0.5901	0.5675	0.5404	0.5161	0.4931	0.4878	0.4973	0.5187	0.5503	0.5855	0.6084
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Tank Shell Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Average Liquid Height (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Height (ft):	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125
Roof Slope (ft/ft):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Shell Radius (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0477	0.0512	0.0556	0.0614	0.0671	0.0729	0.0743	0.0718	0.0664	0.0593	0.0521	0.0478
Vapor Molecular Weight (lb/lb-mole):	67.0514	67.0529	67.0546	67.0568	67.0587	67.0606	67.0610	67.0602	67.0585	67.0560	67.0532	67.0515
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9100	4.2217	4.6316	5.1702	5.6987	6.2487	6.3823	6.1447	5.6397	4.9678	4.3030	3.9123
Daily Avg. Liquid Surface Temp. (deg. R):	511.7800	515.5846	520.2566	525.9138	531.0225	535.9504	537.0953	535.0455	530.4709	523.8459	516.5386	511.8089
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642	518.0642
Tank Paint Solar Absorptance (Shell):	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.2196	0.2801	0.3671	0.4924	0.5999	0.7131	0.6731	0.5843	0.4694	0.3615	0.2552	0.2059
Daily Vapor Temperature Range (deg. R):	33.4516	39.4872	46.8757	55.2667	59.3442	61.6471	56.4071	52.0506	47.3591	42.8264	35.4428	31.4125
Daily Vapor Pressure Range (psia):	1.3314	1.6734	2.1427	2.7634	3.2098	3.5899	3.3372	2.9855	2.5348	2.0694	1.5243	1.2505
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9100	4.2217	4.6316	5.1702	5.6987	6.2487	6.3823	6.1447	5.6397	4.9678	4.3030	3.9123
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	3.2898	3.4515	3.6592	3.9352	4.2728	4.6574	4.8863	4.7956	4.4855	4.0191	3.5950	3.3272
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	4.6213	5.1249	5.8020	6.6986	7.4826	8.2473	8.2235	7.7811	7.0203	6.0886	5.1193	4.5777
Daily Avg. Liquid Surface Temp. (deg R):	511.7800	515.5846	520.2566	525.9138	531.0225	535.9504	537.0953	535.0455	530.4709	523.8459	516.5386	511.8089
Daily Min. Liquid Surface Temp. (deg R):	503.4171	505.7128	508.5377	512.0971	516.1865	520.5386	522.9935	522.0328	518.6311	513.1393	507.6779	503.9557
Daily Max. Liquid Surface Temp. (deg R):	520.1429	525.4564	531.9755	539.7305	545.8586	551.3622	551.1971	548.0581	542.3106	534.5525	525.3993	519.6620
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.6085	0.5901	0.5675	0.5404	0.5161	0.4931	0.4878	0.4973	0.5187	0.5503	0.5855	0.6084
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	3.9100	4.2217	4.6316	5.1702	5.6987	6.2487	6.3823	6.1447	5.6397	4.9678	4.3030	3.9123

Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Working Losses (lb):	224.2101	242.0918	265.6051	296.5006	326.8195	358.3690	366.0360	352.4001	323.4306	284.8896	246.7514	224.3417
Vapor Molecular Weight (lb/lb-mole):	67.0514	67.0529	67.0546	67.0568	67.0587	67.0606	67.0610	67.0602	67.0585	67.0560	67.0532	67.0515
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9100	4.2217	4.6316	5.1702	5.6987	6.2487	6.3823	6.1447	5.6397	4.9678	4.3030	3.9123
Net Throughput (gal/mo.):	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333
Annual Turnovers:	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816	113.4816
Turnover Factor:	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310	0.4310
Maximum Liquid Volume (gal):	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000
Maximum Liquid Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	272.4346	299.8150	353.1963	416.0409	483.7534	545.7428	550.3220	510.0180	441.7313	373.9792	303.6374	269.5576

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

T-101 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Produced Water/Condensate	3,511.45	1,308.78	4,820.23
Benzene	1.16	0.44	1.61
Ethylbenzene	0.03	0.01	0.03
Hexane (-n)	11.31	4.28	15.59
Natural Gas Condensate	3,497.91	1,303.65	4,801.56
Toluene	1.01	0.39	1.40
Xylenes (mixed isomers)	0.03	0.01	0.04

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

Identification

User Identification:	T-102 Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Vertical Fixed Roof Tank
Description:	Used Oil Tank

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	10.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	12.00
Volume (gallons):	8,812.00
Turnovers:	4.00
Net Throughput(gal/yr):	35,248.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Aluminum/Diffuse
Shell Condition	Good
Roof Color/Shade:	Aluminum/Diffuse
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.31
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

T-102 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Spent Oil	Jan	52.79	44.00	61.58	58.75	0.0067	0.0049	0.0089	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Feb	56.74	46.32	67.17	58.75	0.0077	0.0053	0.0103	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Mar	61.60	49.16	74.04	58.75	0.0089	0.0058	0.0126	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Apr	67.47	52.75	82.20	58.75	0.0104	0.0067	0.0163	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	May	72.71	56.85	88.58	58.75	0.0121	0.0077	0.0201	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Spent Oil	Jun	77.70	61.21	94.19	58.75	0.0141	0.0088	0.0244	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Spent Oil	Jul	78.76	63.65	93.87	58.75	0.0145	0.0094	0.0241	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Spent Oil	Aug	76.61	62.68	90.54	58.75	0.0136	0.0092	0.0214	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Spent Oil	Sep	71.88	59.26	84.51	58.75	0.0118	0.0083	0.0177	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Spent Oil	Oct	65.09	53.75	76.42	58.75	0.0098	0.0069	0.0136	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Spent Oil	Nov	57.59	48.27	66.92	58.75	0.0079	0.0057	0.0102	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Spent Oil	Dec	52.77	44.54	61.01	58.75	0.0067	0.0050	0.0088	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085

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

T-102 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0765	0.0937	0.1421	0.1872	0.2391	0.2758	0.2670	0.2324	0.1776	0.1396	0.0912	0.0713
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Tank Shell Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Average Liquid Height (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Height (ft):	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125
Roof Slope (ft/ft):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Shell Radius (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Daily Avg. Liquid Surface Temp. (deg. R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242
Tank Paint Solar Absorptance (Shell):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Tank Paint Solar Absorptance (Roof):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Daily Vapor Temperature Range (deg. R):	35.1604	41.7067	49.7481	58.9115	63.4500	65.9608	60.4266	55.7220	50.4852	45.3449	37.2929	32.9508
Daily Vapor Pressure Range (psia):	0.0040	0.0050	0.0068	0.0096	0.0124	0.0155	0.0147	0.0123	0.0094	0.0066	0.0046	0.0038
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0049	0.0053	0.0058	0.0067	0.0077	0.0088	0.0094	0.0092	0.0083	0.0069	0.0057	0.0050
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0089	0.0103	0.0126	0.0163	0.0201	0.0244	0.0241	0.0214	0.0177	0.0136	0.0102	0.0088
Daily Avg. Liquid Surface Temp. (deg R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Min. Liquid Surface Temp. (deg R):	503.6736	505.9857	508.8316	512.4159	516.5201	520.8789	523.3243	522.3524	518.9332	513.4218	507.9390	504.2068
Daily Max. Liquid Surface Temp. (deg R):	521.2538	526.8391	533.7057	541.8716	548.2451	553.8593	553.5376	550.2134	544.1758	536.0943	526.5855	520.6822
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067

Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Working Losses (lb):	0.0609	0.0699	0.0809	0.0943	0.1099	0.1280	0.1319	0.1241	0.1069	0.0888	0.0718	0.0609
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Net Throughput (gal/mo.):	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333
Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000
Maximum Liquid Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.1374	0.1636	0.2230	0.2815	0.3490	0.4038	0.3988	0.3564	0.2844	0.2285	0.1631	0.1321

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

T-102 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Spent Oil	1.13	1.99	3.12

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

Identification

User Identification:	T-104 Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Vertical Fixed Roof Tank
Description:	New Lube Oil Tank

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	10.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	12.00
Volume (gallons):	8,812.00
Turnovers:	4.00
Net Throughput(gal/yr):	35,248.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Aluminum/Diffuse
Shell Condition	Good
Roof Color/Shade:	Aluminum/Diffuse
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.31
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

T-104 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Lube Oil	Jan	52.79	44.00	61.58	58.75	0.0067	0.0049	0.0089	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Lube Oil	Feb	56.74	46.32	67.17	58.75	0.0077	0.0053	0.0103	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Lube Oil	Mar	61.60	49.16	74.04	58.75	0.0089	0.0058	0.0126	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Lube Oil	Apr	67.47	52.75	82.20	58.75	0.0104	0.0067	0.0163	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Lube Oil	May	72.71	56.85	88.58	58.75	0.0121	0.0077	0.0201	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Lube Oil	Jun	77.70	61.21	94.19	58.75	0.0141	0.0088	0.0244	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Lube Oil	Jul	78.76	63.65	93.87	58.75	0.0145	0.0094	0.0241	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Lube Oil	Aug	76.61	62.68	90.54	58.75	0.0136	0.0092	0.0214	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Lube Oil	Sep	71.88	59.26	84.51	58.75	0.0118	0.0083	0.0177	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Lube Oil	Oct	65.09	53.75	76.42	58.75	0.0098	0.0069	0.0136	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Lube Oil	Nov	57.59	48.27	66.92	58.75	0.0079	0.0057	0.0102	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Lube Oil	Dec	52.77	44.54	61.01	58.75	0.0067	0.0050	0.0088	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085

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

T-104 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0765	0.0937	0.1421	0.1872	0.2391	0.2758	0.2670	0.2324	0.1776	0.1396	0.0912	0.0713
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Tank Shell Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Average Liquid Height (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Height (ft):	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125
Roof Slope (ft/ft):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Shell Radius (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Daily Avg. Liquid Surface Temp. (deg. R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242
Tank Paint Solar Absorptance (Shell):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Tank Paint Solar Absorptance (Roof):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Daily Vapor Temperature Range (deg. R):	35.1604	41.7067	49.7481	58.9115	63.4500	65.9608	60.4266	55.7220	50.4852	45.3449	37.2929	32.9508
Daily Vapor Pressure Range (psia):	0.0040	0.0050	0.0068	0.0096	0.0124	0.0155	0.0147	0.0123	0.0094	0.0066	0.0046	0.0038
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0049	0.0053	0.0058	0.0067	0.0077	0.0088	0.0094	0.0092	0.0083	0.0069	0.0057	0.0050
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0089	0.0103	0.0126	0.0163	0.0201	0.0244	0.0241	0.0214	0.0177	0.0136	0.0102	0.0088
Daily Avg. Liquid Surface Temp. (deg R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Min. Liquid Surface Temp. (deg R):	503.6736	505.9857	508.8316	512.4159	516.5201	520.8789	523.3243	522.3524	518.9332	513.4218	507.9390	504.2068
Daily Max. Liquid Surface Temp. (deg R):	521.2538	526.8391	533.7057	541.8716	548.2451	553.8593	553.5376	550.2134	544.1758	536.0943	526.5855	520.6822
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067

Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Working Losses (lb):	0.0609	0.0699	0.0809	0.0943	0.1099	0.1280	0.1319	0.1241	0.1069	0.0888	0.0718	0.0609
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Net Throughput (gal/mo.):	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333
Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000
Maximum Liquid Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.1374	0.1636	0.2230	0.2815	0.3490	0.4038	0.3988	0.3564	0.2844	0.2285	0.1631	0.1321

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

T-104 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Lube Oil	1.13	1.99	3.12

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

Identification

User Identification:	T-105 Manzanares
City:	Navajo Dam
State:	New Mexico
Company:	Val Verde Gas Gathering Company, LP
Type of Tank:	Vertical Fixed Roof Tank
Description:	Antifreeze Tank

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	10.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	12.00
Volume (gallons):	8,812.00
Turnovers:	4.00
Net Throughput(gal/yr):	35,248.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Aluminum/Diffuse
Shell Condition	Good
Roof Color/Shade:	Aluminum/Diffuse
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.31
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

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

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

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

T-105 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Antifreeze	Jan	52.79	44.00	61.58	58.75	0.0067	0.0049	0.0089	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Antifreeze	Feb	56.74	46.32	67.17	58.75	0.0077	0.0053	0.0103	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Antifreeze	Mar	61.60	49.16	74.04	58.75	0.0089	0.0058	0.0126	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Antifreeze	Apr	67.47	52.75	82.20	58.75	0.0104	0.0067	0.0163	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Antifreeze	May	72.71	56.85	88.58	58.75	0.0121	0.0077	0.0201	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Antifreeze	Jun	77.70	61.21	94.19	58.75	0.0141	0.0088	0.0244	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Antifreeze	Jul	78.76	63.65	93.87	58.75	0.0145	0.0094	0.0241	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Antifreeze	Aug	76.61	62.68	90.54	58.75	0.0136	0.0092	0.0214	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Antifreeze	Sep	71.88	59.26	84.51	58.75	0.0118	0.0083	0.0177	130.0000			162.00	Option 1: VP70 = .011 VP80 = .015
Antifreeze	Oct	65.09	53.75	76.42	58.75	0.0098	0.0069	0.0136	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011
Antifreeze	Nov	57.59	48.27	66.92	58.75	0.0079	0.0057	0.0102	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085
Antifreeze	Dec	52.77	44.54	61.01	58.75	0.0067	0.0050	0.0088	130.0000			162.00	Option 1: VP50 = .006 VP60 = .0085

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

T-105 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0765	0.0937	0.1421	0.1872	0.2391	0.2758	0.2670	0.2324	0.1776	0.1396	0.0912	0.0713
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007	243.8007
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Tank Shell Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Average Liquid Height (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042	0.1042
Roof Height (ft):	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125	0.3125
Roof Slope (ft/ft):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Shell Radius (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Daily Avg. Liquid Surface Temp. (deg. R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Average Ambient Temp. (deg. F):	34.2500	39.9500	46.8000	55.2000	64.1500	74.1500	78.4500	75.8000	68.5500	57.0000	44.2500	35.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242	518.4242
Tank Paint Solar Absorptance (Shell):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Tank Paint Solar Absorptance (Roof):	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Daily Total Solar Insulation Factor (Btu/sqft day):	1,017.1676	1,321.1123	1,709.7680	2,169.4923	2,443.9308	2,567.6661	2,392.5331	2,185.3558	1,860.7886	1,499.1008	1,101.2442	915.6412
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0640	0.0762	0.0911	0.1076	0.1153	0.1191	0.1085	0.1000	0.0908	0.0820	0.0675	0.0597
Daily Vapor Temperature Range (deg. R):	35.1604	41.7067	49.7481	58.9115	63.4500	65.9608	60.4266	55.7220	50.4852	45.3449	37.2929	32.9508
Daily Vapor Pressure Range (psia):	0.0040	0.0050	0.0068	0.0096	0.0124	0.0155	0.0147	0.0123	0.0094	0.0066	0.0046	0.0038
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0049	0.0053	0.0058	0.0067	0.0077	0.0088	0.0094	0.0092	0.0083	0.0069	0.0057	0.0050
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0089	0.0103	0.0126	0.0163	0.0201	0.0244	0.0241	0.0214	0.0177	0.0136	0.0102	0.0088
Daily Avg. Liquid Surface Temp. (deg R):	512.4637	516.4124	521.2686	527.1437	532.3826	537.3691	538.4309	536.2829	531.5545	524.7581	517.2622	512.4445
Daily Min. Liquid Surface Temp. (deg R):	503.6736	505.9857	508.8316	512.4159	516.5201	520.8789	523.3243	522.3524	518.9332	513.4218	507.9390	504.2068
Daily Max. Liquid Surface Temp. (deg R):	521.2538	526.8391	533.7057	541.8716	548.2451	553.8593	553.5376	550.2134	544.1758	536.0943	526.5855	520.6822
Daily Ambient Temp. Range (deg. R):	25.1000	27.1000	29.2000	31.2000	31.1000	31.7000	28.1000	26.4000	26.7000	28.0000	26.1000	24.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9989	0.9987	0.9985	0.9983	0.9980	0.9977	0.9976	0.9978	0.9981	0.9984	0.9987	0.9989
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067

Vapor Space Outage (ft):	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042	3.1042
Working Losses (lb):	0.0609	0.0699	0.0809	0.0943	0.1099	0.1280	0.1319	0.1241	0.1069	0.0888	0.0718	0.0609
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0067	0.0077	0.0089	0.0104	0.0121	0.0141	0.0145	0.0136	0.0118	0.0098	0.0079	0.0067
Net Throughput (gal/mo.):	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333	2,937.3333
Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000	8,812.0000
Maximum Liquid Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.1374	0.1636	0.2230	0.2815	0.3490	0.4038	0.3988	0.3564	0.2844	0.2285	0.1631	0.1321

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

T-105 Manzanares - Vertical Fixed Roof Tank
Navajo Dam, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Antifreeze	1.13	1.99	3.12

TANKS 4.0.9d
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Tank Identification				Losses (lbs)
GM-1 Manzanares	Val Verde Gas Gathering Company, LP	Horizontal Tank	Navajo Dam, New Mexico	59.65
Sump Manzanares	Val Verde Gas Gathering Company, LP	Vertical Fixed Roof Tank	Navajo Dam, New Mexico	0.08
T-101 Manzanares	Val Verde Gas Gathering Company, LP	Vertical Fixed Roof Tank	Navajo Dam, New Mexico	4,820.23
T-102 Manzanares	Val Verde Gas Gathering Company, LP	Vertical Fixed Roof Tank	Navajo Dam, New Mexico	3.12
T-104 Manzanares	Val Verde Gas Gathering Company, LP	Vertical Fixed Roof Tank	Navajo Dam, New Mexico	3.12
T-105 Manzanares	Val Verde Gas Gathering Company, LP	Vertical Fixed Roof Tank	Navajo Dam, New Mexico	3.12
Total Emissions for all Tanks:				4,889.32

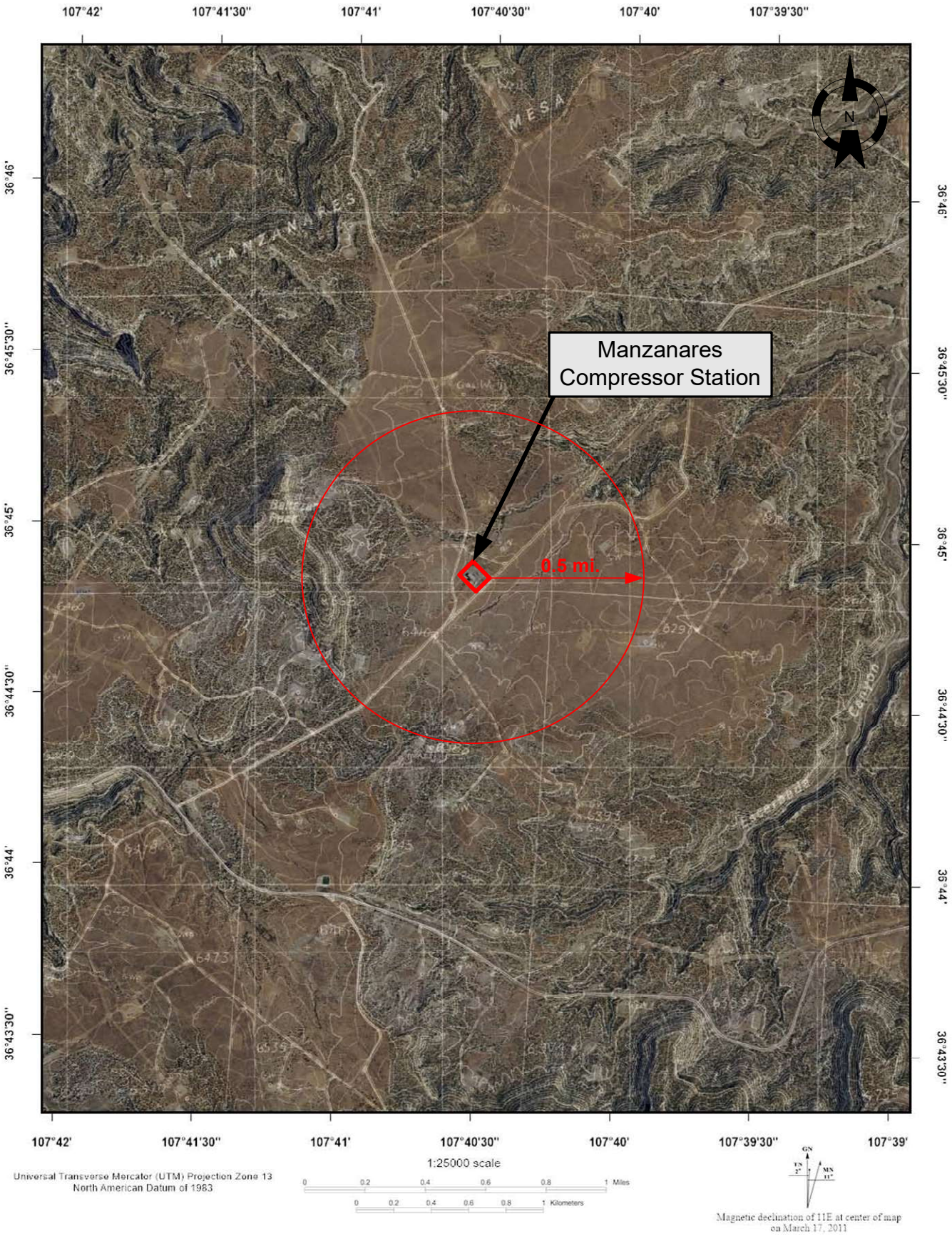
Section 8

Map(s)

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

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

An area map is attached.



ALLIANT ENVIRONMENTAL, LLC			**Area Map**	**Enterprise Field Services, LLC**		
Scale: **1:25,000**	Drawn by: MDF	Date: 2/21/2022	**Manzanares Compressor Station** N 36° 44' 52.0" Latitude W 107° 40' 32.1" Longitude	Project No.: 066-039	File Name: **Manzanares Figures**	Figure: Section 8
	Chk'd by:	Date:				

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")

Public notice is not required with this Title V permit renewal application as it is being submitted under 20.2.70 NMAC. Public notice has been completed in the past for NSR Permit number PSD-6703.

Section 10

Written Description of the Routine Operations of the Facility

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A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

The Manzanares Compressor Station receives natural gas via a gathering system pipeline. The Station then compresses the gas reciprocating, natural gas-fired compressor engines. The compressed natural gas is then transported to downstream facilities via pipeline for further processing and compression.

Manzanares processes conventional gas. The Manzanares Compressor Station also has several storage tanks (condensate, methanol, used oil, new lube oil, antifreeze, and produced water). Manzanares is permitted for operation of two Superior 16SG reciprocating internal combustion engines (RICE), a condensate storage tank, and an instrument gas dryer. The facility can operate continuously, 24 hours per day, seven days per week, 52 weeks per year, and 8,760 hours per year.

Section 11
Source Determination

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

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

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

A. Identify the emission sources evaluated in this section (list and describe)**:**
The Manzanares Compressor Station. Equipment is listed in the Section 2 Tables.

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

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

☑ **Yes** ☐ **No**

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

☑ **Yes** ☐ **No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

☑ **Yes** ☐ **No**

C. Make a determination:

☑ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A
PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

Not applicable as this is a Title V permit renewal application, being submitted under 20.2.70 NMAC.

Section 13

Determination of State & Federal Air Quality Regulations

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

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

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

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

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

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

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

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS 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	No	N/A	As stated under 20.2.3.9 NMAC, this rule does not apply to Title V applications.
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, **and** if the activity or facility is located in an area subject to a mitigation plan pursuant to 40 CFR 51.930. As the Manzanares 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 regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers. As this site does not include gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit, this regulation does not apply.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers. Aa this site does not have oil burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit, this regulation does not apply.
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. Not applicable as this site is not a natural gas processing plant.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	N/A	N/A	These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.
20.2.38 NMAC	Hydrocarbon Storage Facility	No	N/A	This facility does not 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	1-3	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).
20.2.70 NMAC	Operating Permits	Yes	Facility	This site operates under Title V Permit number P-272.
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 operates under NSR Permit number PSD-6703.
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. As the Manzanares Compressor Station was once considered a single source in conjunction with the Gobernador Compressor Station, a PSD permit is currently active for the site. The site operates under NSR Permit number PSD-6703.
20.2.75 NMAC	Construction Permit Fees	No	N/A	As this Title V renewal application is being submitted under 20.2.70 NMAC, construction permit fees do not apply.
20.2.77 NMAC	New Source Performance	No	N/A	Engine Unit IDs 5 and 6 are not subject to Subpart JJJJ due to construction dates in 1989.
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	The listed engines are subject to 40 CFR 63 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.

FEDERAL REGU-LATIONS 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 **Storage Vessels for Petroleum Liquids** for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and **Prior** to July 23, 1984	No	N/A	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 **Onshore Gas Plants**	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 **Onshore Natural Gas Processing**: SO_2 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	All engines were last constructed/reconstructed/modified in 1989; therefore, NSPS JJJJ does not apply.
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 **Mercury**	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 **Equipment Leaks** (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	5 and 6	The regulation is applicable since MACT ZZZZ applies.
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	No	N/A	This site is not major for HAPs and there are no dehydrator units onsite.
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities	No	N/A	Not applicable as this site is not a natural gas transmission and storage facility that transports or store natural gas prior to entering the pipeline to a local distribution company or to a final end user.
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 (**RICE MACT**)	Yes	5 and 6	The listed engines are existing stationary RICE, located at an area source of HAP emissions.
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.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

☑ **Title V Sources** (20.2.70 NMAC)**:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☐ **NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☑ **Title V** (20.2.70 NMAC)**, NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

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

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: https://www.env.nm.gov/aqb/permit/aqb_pol.html. 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

1) Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.
3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC). See #1 above. **Note:** Neither modeling nor a modeling waiver is required for VOC emissions.	
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	X
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	

Check each box that applies:

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

Air dispersion modeling is not required for this application as it is for a Title V permit renewal. Air dispersion modeling has been submitted within NSR permit (Permit No. 6703/0742) applications in the past.

Section 17

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
5	Biennial emission testing	5/30/2007
5	Biennial emission testing	5/10/2011
5 and 6	Annual portable analyzer testing	5/8/2013
5 and 6	Annual portable analyzer testing	4/10/2017
5 and 6	Annual portable analyzer testing	5/15/2019

Section 18

Addendum for Streamline Applications

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

Not applicable as this is not a Streamline application.

Section 19

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 http://www.env.nm.gov/aqb/index.html. 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.

The Manzanares Compressor Station will continue to be in compliance with applicable requirements for which it is in compliance at the time of this permit application. In addition, the Manzanares Compressor Station will, in a timely manner or consistent with such schedule expressly required by the applicable requirement, comply with other applicable requirements as they come into 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.

The submittal of annual compliance certifications will occur annually, within 30 days of the end of every 12-month reporting period, as specified by the facility's operating permit. Enterprise will also submit semiannual reports within 45 days from the end of the reporting period.

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).

---

1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances? ☑ **Yes** ☐ **No**

2. 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 Manzanares 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 http://www.env.nm.gov/aqb/index.html. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

Manzanares 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 Manzanares 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.)

Colorado (27.36 km) and the Jicarilla Apache Indian Reservation (51.9 km).

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

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

No other relevant information is being submitted with this application.

Section 21

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, Ivan W. Zirbes, 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 1st day of March, 2022, upon my oath or affirmation, before a notary of the State of Texas.

*Signature

3/1/2022
Date

Ivan W. Zirbes
Printed Name

Vice President
Title

Scribed and sworn before me on this 1st day of March, 2022.

My authorization as a notary of the State of Texas expires on the 23rd day of February, 2026.

Brenda J. Mendez
Notary's Signature

Date

Brenda J. Mendez
Notary's Printed Name

BRENDA J. MENDEZ
Notary Public, State of Texas
Comm. Expires 02-23-2026
Notary ID 10264322

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