NMED AIR QUALITY BUREAU
TITLE V SIGNIFICANT REVISION

TARGA MIDSTREAM SERVICES LLC
Monument Gas Plant

Prepared By:

TRINITY CONSULTANTS
9400 Holly Ave NE
Building 3, Suite 300
Albuquerque, NM 87122
(505) 266-6611

November 2021

Project 213201.0079

Trinity Consultants
9400 Holly Ave NE, Bldg 3, Ste 300, Albuquerque, NM 87122 / P 505.266.6611 / **trinityconsultants.com**

November 16, 2021

Permit Programs Manager
NMED Air Quality Bureau
525 Camino de los Marquez Suite 1
Santa Fe, NM 87505-1816

RE: Application for Title V Significant Modification
Targa Midstream Services LLC; Monument Gas Plant

To Whom It May Concern:

On behalf of Targa Midstream Services LLC, Trinity Consultants is submitting an application for the Monument Gas Plant, currently authorized to operate under NSR Permit No. 0110-M11R4 and Title V Operating Permit No. P110-R3. Targa is submitting this application pursuant to 20.2.70.404.C.1.a NMAC to modify the Title V Permit P110-R3 by incorporating the revisions authorized in NSR Permits 0110-M11, 0110-M11R1, 0110-M11R2, 0110-M11R3, 0110-M11R4, and 0110-M11R5.

The format and content of this application are consistent with the Bureau's current policy regarding Title V significant modification applications. Enclosed is the hard copy of the application and original certification. Electronic files will be provided upon request from our assigned permit engineer. Please feel free to contact me by email at rreese@trinityconsultants.com if you have any questions regarding this application.

Sincerely,

TRINITY CONSULTANTS

Rachel Reese
Senior Consultant

Cc: Catherine Schroder (Targa Midstream Services, LLC)
Rob Liles (Trinity Consultants)

Trinity Project File: 213201.0079

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: **20.2.70.404.C(1)(a) NMAC**
(e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known (see 1st 3 to 5 #s of permit IDEA ID No.): 610	Updating Permit/NOI #: P110-R3
1	Facility Name: Monument Gas Plant	Plant primary SIC Code (4 digits): 1321	
		Plant NAIC code (6 digits): 211112	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From the intersection of Highway 8 and Monument Highway, travel west on Monument Highway for approximately 3.4 miles. The plant will be on the left.		
2	Plant Operator Company Name: Targa Midstream Services LLC	Phone/Fax: (575) 631-7093 / (575) 396-7702	
a	Plant Operator Address: PO Box 1689, Lovington, NM 88260		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 1948249	
3	Plant Owner(s) name(s): Versado Gas Processors LLC	Phone/Fax: (432) 688-0542 / (432) 688-0552
a	Plant Owner(s) Mailing Address(s): 6 Desta Drive, Suite 3300, Midland TX 79705	
4	Bill To (Company): Targa Midstream Services LLC	Phone/Fax: (432) 688-0542 / (432) 688-0552
a	Mailing Address: PO Box 1689, Lovington, NM 88260	E-mail: CynthiaKlein@targaresources.com
5	☑ Preparer: Rachel Reese ☑ Consultant: Trinity Consultants	Phone/Fax: (505) 266-6611 / N/A
a	Mailing Address: 9400 Holly Ave NE, Bldg 3 Suite 300, Albuquerque NM 87122	E-mail: rreese@trinityconsultants.com
6	Plant Operator Contact: Cindy Klein	Phone/Fax: (575) 631-7093 / (575) 396-7702
a	Address: PO Box 1689, Lovington, NM 88260	E-mail: CynthiaKlein@targaresources.com
7	Air Permit Contact: Catherine Schroder	Title: Sr. Environmental Specialist
a	E-mail: cschroder@targaresources.com	Phone/Fax: (405) 749-5614
b	Mailing Address: 14000 Quail Springs Pkwy, Ste 215, Oklahoma City, OK 73134	
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: P110-R3
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: 0110-M11R5
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☑ No	If yes, the register No. is: N/A

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 3.75 MMscf	Daily: 90 MMscf	Annually: 32,850 MMscf
b	Proposed	Hourly: 3.75 MMscf	Daily: 90 MMscf	Annually: 32,850 MMscf
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 3.75 MMscf	Daily: 90 MMscf	Annually: 32,850 MMscf
b	Proposed	Hourly: 3.75 MMscf	Daily: 90 MMscf	Annually: 32,850 MMscf

Section 1-D: Facility Location Information

1	Section: 36	Range: 36E	Township: 19S	County: Lea	Elevation (ft): 3,579
2	UTM Zone: ☐ 12 or ☑ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☑ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 658,372 m			UTM N (in meters, to nearest 10 meters): 3,609,365 m	
b	**AND** Latitude (deg., min., sec.): 32° 36' 37.8"			Longitude (deg., min., sec.): -103° 18' 43.7"	
3	Name and zip code of nearest New Mexico town: Monument, NM 88265				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of Highway 8 and Monument Highway, travel west on Monument Highway for approximately 3.4 miles. The plant will be on the left.				
5	The facility is 2.8 miles west of Monument, NM.				
6	Status of land at facility (check one): ☑ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: **Municipalities**: None; **Indian tribes**: None; **Counties**: Lea				
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: Texas, 22 km				
9	Name nearest Class I area: Carlsbad Caverns National Park				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 109.7 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: ~485 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 ($\frac{hours}{day}$): 24	($\frac{days}{week}$): 7	($\frac{weeks}{year}$): 52	($\frac{hours}{year}$): 8,760		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{hours}{day}$)? Start: N/A		☐AM ☐PM	End: N/A	☐AM ☐PM	
3	Month and year of anticipated start of construction: Upon receipt of permit.					
4	Month and year of anticipated construction completion: Upon receipt of permit.					
5	Month and year of anticipated startup of new or modified facility: Upon receipt of permit.					
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: TAR 0610-1701, TAR 0610-1801, & TAR-0610-1802	
a	If yes, NOV date or description of issue: NOV Date: TAR 0610-1701 – 7/17/2017, TAR 0610-1801 – 12/7/2018, TAR-0610-1802 – Not Received	NOV Tracking No: TAR 0610-1701, TAR 0610-1801, & TAR-0610-1802

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	Document Title: 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): Jimmy Oxford	Phone: (713) 220-2493
a	R.O. Title: Vice President Operations	R.O. e-mail: JOxford@targaresources.com
b	R. O. Address: 401 North I-35 Suite 303, Denton, Texas, 76207	
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): N/A	Phone: N/A
a	A. R.O. Title: N/A	A. R.O. e-mail: N/A
b	A. R. O. Address: N/A	
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): Targa Resources, Inc.	
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.): Targa Resources, Inc.	
a	Address of Parent Company: 1000 Louisiana Street; Suite 4300, Houston, TX 77002	
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.): None	
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Cindy Klein, (575) 631-7093	
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: Yes; The facility is 22 km from Texas	

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: Rachel Reese

Email: rreese@trinityconsultants.com

Phone number: 505-920-2177

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

4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.

5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.

6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
   a. one additional CD copy for US EPA,
   b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
   c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

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

1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.

2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible

format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc,), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

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

Table of Contents

Table 2-A: Regulated Emission Sources

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

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
AM-01	Amine Unit	N/A	N/A	8263	90 MMscfd	90 MMscfd	N/A 1976	AGI AGI	3100 0305	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T-01	Gas Turbines	Solar-Saturn	1200	OHC13-S6665	1,000 hp	1,000 hp	N/A 03/1970	N/A T-01-03	2020 0201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T-02	Gas Turbines	Solar-Saturn	1200	OHA18-S9539	1,000 hp	1,000 hp	N/A 06/1974	N/A T-01-03	2020 0201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T-03	Gas Turbines	Solar-Saturn	1200	OHC11-S7364	1,000 hp	1,000 hp	N/A 12/1982	N/A T-01-03	2020 0201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
T-04	Gas Turbines	Solar-Saturn	1200	OHD16-S0849	1,000 hp	1,000 hp	N/A 06/1983	N/A T-04	2020 0201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
C-01	Compressor Engine	Clark	RA-8	25894	800 hp	800 hp	N/A 1956	N/A C-01	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-02	Compressor Engine	Clark	RA-8	25900	800 hp	800 hp	N/A 1956	N/A C-02	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-04	Compressor Engine	Clark	RA-6	21222	600 hp	600 hp	N/A 1956	N/A C-04	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-05	Compressor Engine	Clark	RA-6	A-21103	600 hp	600 hp	N/A 1956	N/A C-05	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-06	Compressor Engine	Clark	RA-6	A-21102	600 hp	600 hp	N/A 1956	N/A C-06	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-24	Compressor Engine	Clark	HRA-8	A-25850	880 hp	880 hp	N/A 1969	N/A C-24	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
C-28	Compressor Engine	Cooper	GMVA-8	43620	1,100 hp	1,100 hp	N/A 1977	N/A C-28	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	2SLB	N/A
RC-28	Compressor Associated with C-28	-	-	-	-	-	- 2019	N/A -	2020 0202	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
C-40	Electric Compressor	TBD	TBD	TBD	3,000 hp	3,000 hp	est. 2021 TBD	N/A -	2020 0202	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
HB-01	Steam Boiler	Holman Superior	N/A	1543	6.7 MMBtu/hr	6.7 MMBtu/hr	N/A 1978	N/A HB-01	1020 0603	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
BMH-01	Molesieve Heater	Born	N/A	982	3.9 MMBtu/hr	3.9 MMBtu/hr	N/A 1997	N/A BMH-01	3100 0404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-NO	Hot Oil Heater	Born	N/A	2092-A	30 MMBtu/hr	30 MMBtu/hr	N/A 1976	N/A H-NO	3100 0404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
H-SO	Hot Oil Heater	Born	N/A	2092	30 MMBtu/hr	30 MMBtu/hr	N/A 1976	N/A H-SO	3100 0404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
RH-01	Regeneration Gas Heater	Born	N/A	1820	16 MMBtu/hr	16 MMBtu/hr	N/A 1961	N/A RH-01	3100 0404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
RH-02	Regeneration Gas Heater (Standby)	Thermoflux	N/A	7040	4 MMBtu/hr	4 MMBtu/hr	N/A 1997	N/A RH-02	3100 0404	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
F-01	Residue Flare (Plant Flare)	Callidus	NA	085501-B 703	Pilot/Purge 0.61 MMBtu/hr	Pilot/Purge 0.61 MMBtu/hr	2011 2011	NA F-01	3060 0904	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	F-01
F-02	Inlet Flare (Field Gas Flare)	Callidus	NA	A016436.7 01	Pilot/Purge 0.61 MMBtu/hr	Pilot/Purge 0.61 MMBtu/hr	2011 2011	NA F-02	3060 0904	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	F-02
F-03	Acid Gas Flare	John Zink	NA	9171337.00	Pilot/Purge 0.52 MMBtu/hr	Pilot/Purge 0.52 MMBtu/hr	2011 2011	NA F-03	3060 0904	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	NA
T-MD	Tank	Unknown	Unknown	7433	500 bbl	500 bbl	Unknown 2005	VRU T-MD	4040 0311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	NA
T-SO	Tank	Unknown	Unknown	7457	500 bbl	500 bbl	Unknown 2005	VRU T-SO	4040 0311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	NA
T-NO	Tank	Unknown	Unknown	7456.00	500 bbl	500 bbl	Unknown 2005	VRU T-NO	4040 0311	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	NA
CT	Cooling Tower	N/A	N/A	N/A	20,400 gpm	20,400 gpm	Unknown Pre-2000	N/A N/A	3060 0701	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	NA
FG-01*	Process Fugitives	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
L-01	Condensate Loading and Unloading	N/A	N/A	N/A	438,800 bbl/yr	438,800 bbl/yr	N/A N/A	N/A N/A	4040 0250	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SLUG	Slug Catcher	N/A	N/A	185768-01-2	N/A	N/A	11/2015 11/2015	N/A N/A	3100 0211	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
PIG	Pig Receiver	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	31000211	☑ 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	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM - CB	Startup, Shutdown and Maintenance - Compressor Blowdown to Atmosphere	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
SSM - PP	Startup, Shutdown and Maintenance - Pump Purging	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
SSM - VP	Startup, Shutdown and Maintenance - Vessel Purging	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM - VRU	Startup, Shutdown and Maintenance - VRU Downtime	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM - AGI	Startup, Shutdown and Maintenance - AGI Compressor Blowdown to Atmosphere	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM - AGI-C2	Startup, Shutdown and Maintenance - AGI Compressor Blowdown to Atmosphere	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM-SC	Startup, Shutdown and Maintenance - Slug Catcher Blowdown to Flare	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM-Frac	Startup, Shutdown and Maintenance - De-ethanizer and De-propanizer Blowdown to Flare	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-Frac	Fugitive Emissions from De-ethanizer and De-propanizer System	N/A	N/A	N/A	N/A	N/A	- 2017	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-CS	Fugitive Emissions from Condensate Stabilizer	N/A	N/A	N/A	N/A	N/A	TBD TBD	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-SC	Fugitive Emissions from Slug Catcher	N/A	N/A	N/A	N/A	N/A	- 2016	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-C28	Fugitive Emissions from C-28 Propane Service Change	N/A	N/A	N/A	N/A	N/A	- 2016	N/A N/A	3108 8811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-C40	Fugitive Emissions from C-40	N/A	N/A	N/A	N/A	N/A	- est. 2021	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-AGC[5]	Fugitive Emissions from Acid Gas Cooling	N/A	N/A	N/A	N/A	N/A	- est. 2021	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
FUG-GSP[6]	Fugitive Emissions from Gas Subcooled Processes	N/A	N/A	N/A	N/A	N/A	- est. 2021	N/A N/A	3108 8811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

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

[2] Specify dates required to determine regulatory applicability.

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

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

* FG-01 includes emissions from FUG-CS, FUG-SC, FUG-Frac, FUG-C28, FUG-C40, FUG-AGC, and FUG-GSP throughout this application. These fugitive emissions are accounted for separately in this table and in Section 13 for regulatory applicability purposes.

[5] FUG-AGC includes the fugitive emissions from the redundant acid gas cooler.

[6] FUG-GSP includes fugitive emissions from Gas Subcooled Processes (GSP) cryogenic NGL recovery units.

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.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]	For Each Piece of Equipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]	
Haul Roads	Haul road activity associated with propane production	N/A	N/A	10	-	N/A	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced
			N/A	trucks/hr	IA List Item #1.a	N/A	
Haul Roads 2	Condensate Loading	N/A	N/A	N/A	-	N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	N/A	IA List Item #1.a	N/A	
N/A	Used Oil Tanks	Various	Unknown	Various	-	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Unknown	Various	IA List Item #5	Unknown	
N/A	Lube Oil Tanks	Various	Unknown	Various	-	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Unknown	Various	IA List Item #5	Unknown	
N/A	Antifreeze Tanks	Various	Unknown	Various	-	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Unknown	Various	IA List Item #5	Unknown	
N/A	Propane Pressure Tanks	Various	Unknown	Various	-	Unknown	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Unknown	Various	IA List Item #1.a	Unknown	
N/A	AGI Electric Compressor	Ingersoll Rand	6 HOS 4	1500 hp	-	TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			7/6/2112	1500 hp	IA List Item #1.a	TBD	
L-02	Propane Pressurized Loading	N/A	N/A	3000	-	N/A	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced
			N/A	loads/yr	IA List Item #1.a	N/A	
BE/BH-01	Dual-use diesel-fired emergency heater with built-in engine	Allmand	Maxi-Heat	1.0 (13.8)	-	TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			TBD	MMBtu/hr (hp)	IA List Item #1.a	TBD	
							☐ 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
VRU (x2)	VRU (x2)	N/A	H_2S, VOC, HAPs	T-SO, T-NO, T-MD	100%	Operational Records
F-01	Plant Flare: Plant/ Facility wide blowdown, Residue, Sour Field Gas		H_2S, VOC, HAPs	Flared gas /blowdown/residue gas –treated gas	98%	Engineering Judgement
F-02	Emergency/Field Gas Flare: Sour Field Gas		H_2S, VOC, HAPs	Facility inlet – sour field gas	98%	Engineering Judgement
F-03	Acid Gas Flare: AGI Acid Gas/Supplemental Fuel		H_2S, VOC, HAPs	AGI, plant shutdown – amine unit - acid gas SSM	98%	Engineering Judgement
AGI	Acid Gas Injection Well		H_2S	Amine Unit	100%	Engineering Judgement

[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
T-01[2]	12.40	54.20	4.50	19.80	0.89	3.90	0.51	2.22	0.25	1.09	0.25	1.09	0.25	1.09	0.0054	0.024	-	-
T-02[2]																		
T-03[2]																		
T-04	2.90	12.70	1.10	4.82	0.20	0.88	0.17	0.74	0.083	0.36	0.083	0.36	0.083	0.36	1.79E-03	7.86E-03	-	-
C-01	27.80	121.80	4.50	19.60	0.93	4.10	0.11	0.47	0.37	1.60	0.37	1.60	0.37	1.60	1.08E-03	4.74E-03	-	-
C-02	27.80	121.80	4.50	19.60	0.93	4.10	0.11	0.47	0.37	1.60	0.37	1.60	0.37	1.60	1.08E-03	4.74E-03	-	-
C-04	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	6.39E-04	2.80E-03	-	-
C-05	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	6.39E-04	2.80E-03	-	-
C-06	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	6.39E-04	2.80E-03	-	-
C-24	41.90	183.50	10.70	46.80	0.78	3.40	0.17	0.76	0.62	2.72	0.62	2.72	0.62	2.72	1.83E-03	8.04E-03	-	-
C-28	16.60	72.70	2.50	10.70	0.78	3.40	0.13	0.58	0.47	2.08	0.47	2.08	0.47	2.08	1.40E-03	6.15E-03	-	-
HB-01	1.10	4.82	0.23	1.00	0.037	0.16	4.8E-05	2.10E-04	0.051	0.22	0.051	0.22	0.051	0.22	9.57E-04	4.19E-03	-	-
BMH-01	0.39	1.71	0.33	1.43	0.021	0.094	0.052	0.23	0.030	0.13	0.030	0.13	0.030	0.13	5.57E-04	2.44E-03	-	-
H-NO	6.90	30.10	1.70	7.50	0.29	1.25	0.40	1.77	0.23	1.00	0.23	1.00	0.23	1.00	4.29E-03	1.88E-02	-	-
H-SO	6.90	30.10	1.70	7.50	0.29	1.25	0.40	1.77	0.23	1.00	0.23	1.00	0.23	1.00	4.29E-03	1.88E-02	-	-
RH-01[3]	3.70	16.21	0.92	4.05	0.15	0.67	0.22	0.94	0.12	0.53	0.12	0.53	0.12	0.53	2.29E-03	1.00E-02	-	-
RH-02[3]																		
F-01[4]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.1E-06	1.8E-05	-	-
F-02[4]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.1E-06	1.8E-05	-	-
F-03[4]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.1E-06	1.8E-05	-	-
T-MD[5]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T-SO[5]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T-NO[5]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT	-	-	-	-	-	-	-	-	4.88	21.38	2.85	12.48	0.011	0.046	-	-	-	-
FG-01**	-	-	-	-	-	77.12	-	-	-	-	-	-	-	-	0.056	0.24	-	-
L-01	-	-	-	-	-	7.10	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**223.94**	**980.42**	**48.17**	**210.37**	**6.45**	**112.52**	**2.46**	**10.79**	**8.35**	**36.55**	**6.32**	**27.66**	**3.48**	**15.22**	**0.082**	**0.36**	**-**	**-**

[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).

[2] Emissions from flare pilot and purge only are indicated in this section.

[3] Unit RH-02, which is a standby for unit RH-01. The permit contains only those emissions from unit RH-01 since higher emissions are associated with this unit.

[4] Emissions from flare pilot and purge only are indicated in this section.

[5] Condensate tanks are continuously controlled by a VRU with 100% control efficiency. No steady-state VOC or H_2S emissions are allowed from these units.

"-" Denotes emissions of this pollutant are not expected.

** FG-01 includes fugitive emissions from the slug catcher (FUG-SC), backup VRU (FUG-VRU), condensate stabilizer (FUG-CS), fractionator (FUG-Frac), C-28 propane service change (FUG-C28), compressor C-40 (FUG-C40), Acid Gas Cooling (FUG-AGC), and Gas Subcooled Processing (FUG-GSP).

Note that fugitives associated with Gas Subcooled Processing are not in VOC service and are therefore not be subject to OOOOa LDAR monitoring.

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
F-01 (Plant Shutdown to Plant Flare)	522.42	16.45	1042.95	32.83	100.59	3.10	3.06	0.11	-	-	-	-	-	-	0.033	0.0010	-	-
F-02 (Plant Shutdown to Inlet Flare)[3]	631.03	1.97	1259.78	3.94	1063.16	2.36	6865.30	17.50	-	-	-	-	-	-	72.90	0.19	-	-
F-03 (AGI SSM to Acid Gas Flare and Plant Shutdown to Acid Gas Flare)[4]	68.37	3.93	586.18	33.71	31.58	1.82	5817.53	334.51	-	-	-	-	-	-	61.90	3.56	-	-
PIG, SLUG	-	-	-	-	0.012	3.20E-04	-	-	-	-	-	-	-	-	6.70E-04	1.70E-05	-	-
Malf*	631.03	10.00	1259.78	10.00	1063.16	10.00	7022.63	10.00	-	-	-	-	-	-	74.62	5.00	-	-
SSM-PP	-	-	-	-	-	0.12	-	-	-	-	-	-	-	-	-	-	-	-
SSM-VP	-	-	-	-	-	0.0097	-	-	-	-	-	-	-	-	-	1.98E-04	-	-
SSM-VRU**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SSM-AGI	-	-	-	-	-	5.04E-04	-	-	-	-	-	-	-	-	-	-	-	-
SSM-SC	0.21	5.20E-04	0.42	0.0010	0.41	1.20E-04	0.92	0.0023	-	-	-	-	-	-	0.0098	2.45E-05		
SSM-Frac	-	-	-	-	-	2.64	-	-	-	-	-	-	-	-	-	-	-	-
SSM-AGI-C2	-	-	-	-	0.15	0.0011	-	-	-	-	-	-	-	-	1.59E-04	1.10E-06	-	-
SSM-CB	-	-	-	-	-	0.14	-	-	-	-	-	-	-	-	-	0.0076	-	-
Totals[5]	**1222.03**	**32.35**	**2889.33**	**80.47**	**1195.91**	**20.19**	**12686.82**	**362.12**	**-**	**-**	**-**	**-**	**-**	**-**	**134.85**	**8.76**	**-**	**-**

[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).

[3] Emissions from slug catcher SSM will be routed to flare F-02. The flare is currently permitted for it's maximum hourly capacity.

[4] Emissions will normally be from AGI SSM to acid gas flare but this total includes plant shutdown to acid gas flare.

[5] Totals are for information and are not enforceable. The three SSM events for Flare 3 cannot occur simultaneously because they represent a single acid gas source.

"*" Malfunction emissions may result with emissions from venting (VOC or H_2S emissions) or any of the flares (F-01, F02, and F-03 flare emissions of NOx, CO, VOC, SOx, and H_2S). Hourly malfunction emissions shown in the table above are emissions with the highest hourly emissions. **These malfunction emissions are not summed in the totals column since the malfunction unit will not be adding hourly emissions. The flares are already permitted at their max hourly rate.**

"**" A VRU and backup VRU are installed on the condensate tanks. There will be no downtime on the VRU's other than during malfunction.

"-" Denotes emissions of this pollutant are not expected.

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 th "-" 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
T-01-03	T-01, T-02, T-03	12.40	54.20	4.50	19.80	0.89	3.90	0.51	2.22	0.25	1.09	0.25	1.09	0.25	1.09	0.0054	0.024
Totals:		12.40	54.20	4.50	19.80	0.89	3.90	0.51	2.22	0.25	1.09	0.25	1.09	0.25	1.09	0.0054	0.024

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)			
T-01-03	T-01, T-02, T-03	Vertical	No	25	600.00	36.98	N/A	N/A	34.40	1.17
T4	T-04	Vertical	No	35	1000.00	37.31	N/A	N/A	34.70	1.17
C-01	C-01	Vertical	No	33	725.80	61.28	N/A	N/A	90.88	1.17
C-02	C-02	Vertical	No	33	725.80	61.28	N/A	N/A	90.88	1.17
C-04	C-04	Vertical	No	33	723.80	91.39	N/A	N/A	52.17	1.17
C-05	C-05	Vertical	No	33	723.80	91.39	N/A	N/A	52.17	1.17
C-06	C-06	Vertical	No	33	723.80	91.39	N/A	N/A	52.17	1.17
C-24	C-24	Vertical	No	70	568.00	600.83	N/A	N/A	85.00	3.00
C-28	C-28	Vertical	No	70	575.00	305.32	N/A	N/A	62.20	2.50
HB-01	HB-01	Vertical	No	25	756.00	61.28	N/A	N/A	57.00	1.17
BMH-01	BMH-01	Vertical	No	20	600.00	0.54	N/A	N/A	0.50	1.17
H-NO	H-NO	Vertical	No	70	600.00	752.27	N/A	N/A	47.30	4.50
H-SO	H-SO	Vertical	No	70	600.00	279.92	N/A	N/A	17.60	4.50
RH-01	RH-01	Vertical	No	35	600.00	221.17	N/A	N/A	17.60	4.00
RH-02	RH-02	Vertical	No	35	600.00	221.17	N/A	N/A	17.60	4.00
F-01	F-01	Vertical	No	130	1273.00	35.50	N/A	N/A	65.62	0.83
F-02	F-02	Vertical	No	130	1273.00	35.50	N/A	N/A	65.62	0.83
F-03	F-03	Vertical	No	150	1273.00	35.50	N/A	N/A	65.62	0.83

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

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

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☒ HAP or ☐ TAP		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		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
T-01-03	T-01, T-02, T-03	0.030	0.13	-	-														
T-04	T-04	0.010	0.044	-	-														
C-01	C-01	0.67	2.96	0.40	1.73														
C-02	C-02	0.67	2.96	0.40	1.73														
C-04	C-04	0.51	2.22	0.30	1.30														
C-05	C-05	0.51	2.22	0.30	1.30														
C-06	C-06	0.51	2.22	0.30	1.30														
C-24	C-24	0.74	3.25	0.44	1.91														
C-28	C-28	0.51	2.24	0.32	1.39														
HB-01	HB-01	0.012	0.054	-	-														
BMH-01	BMH-01	0.0072	0.032	-	-														
H-NO	H-NO	0.055	0.24	-	-														
H-SO	H-SO	0.055	0.24	-	-														
RH-01	RH-01	0.029	0.13	-	-														
F-01	F-01	-	-	-	-														
F-02	F-02	-	-	-	-														
F-03	F-03	-	-	-	-														
T-MD	T-MD	-	-	-	-														
T-SO	T-SO	-	-	-	-														
T-NO	T-NO	-	-	-	-														
CT	CT	-	-	-	-														
FG-01	FG-01	-	0.28	-	-														
L-01	L-01	1.44	1.00	-	-														
Totals:		5.76	20.21	2.44	10.67														

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
T-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.6 Mscf	110 MMscf	5 grains total sulfur/100 scf	N/A
T-02	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.6 Mscf	110 MMscf	5 grains total sulfur/100 scf	N/A
T-03	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.6 Mscf	110 MMscf	5 grains total sulfur/100 scf	N/A
T-04	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.6 Mscf	110 MMscf	5 grains total sulfur/100 scf	N/A
C-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	7.6 Mscf	66.4 MMscf	5 grains total sulfur/100 scf	N/A
C-02	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	7.6 Mscf	66.4 MMscf	5 grains total sulfur/100 scf	N/A
C-04	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	4.5 Mscf	39.2 MMscf	5 grains total sulfur/100 scf	N/A
C-05	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	4.5 Mscf	39.2 MMscf	5 grains total sulfur/100 scf	N/A
C-06	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	4.5 Mscf	39.2 MMscf	5 grains total sulfur/100 scf	N/A
C-24	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.8 Mscf	112.5 MMscf	5 grains total sulfur/100 scf	N/A
C-27	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	12.8 Mscf	112.5 MMscf	5 grains total sulfur/100 scf	N/A
C-28	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	9.8 Mscf	86.1MMscf	5 grains total sulfur/100 scf	N/A
HB-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	6.7 Mscf	58.7 MMscf	5 grains total sulfur/100 scf	N/A
BMH-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	3.9 Mscf	34.2 MMscf	5 grains total sulfur/100 scf	N/A
H-NO	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	30 Mscf	262.8 MMscf	5 grains total sulfur/100 scf	N/A
H-SO	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	30 Mscf	262.8 MMscf	5 grains total sulfur/100 scf	N/A
RH-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	16 Mscf	140 MMscf	5 grains total sulfur/100 scf	N/A
RH-02	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	4 Mscf	35 MMscf	5 grains total sulfur/100 scf	N/A
F-01	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	605 scf	5.3 MMscf	5 grains total sulfur/100 scf	N/A
F-02	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	605 scf	5.3 MMscf	5 grains total sulfur/100 scf	N/A
F-03	Pipeline Quality Natural Gas	Residue Gas	1,000 Btu/scf	520 scf	4.6 MMscf	5 grains total sulfur/100 scf	N/A

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-SO	2005	Condensate	N/A	FX	500	79	N/A	2.4	AS	AS	Good	18,429,600	292.5
T-NO	2005	Condensate	N/A	FX	500	79	N/A	2.4	AS	AS	Good		292.5
T-MD	2005	Condensate	N/A	FX	500	79	N/A	2.4	AS	AS	Good		292.5

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-SO	40400311	Condensate	Condensate	5.08	80.98	63.28	30	100	30
T-NO	40400311	Condensate	Condensate	5.08	80.98	63.28	30	100	30
T-MD	40400311	Condensate	Condensate	5.08	80.98	63.28	30	100	30

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)**
Natural Gas	H_2S, CO_2, HC	Gas	90,000 Mscfd	Natural Gas Liquids	C2, C3, C4, and C5	Liquid	10,250 bbl/day
				Residue Gas	Pipeline Quality	Gas	90 MMscf/d
				Condensate	Mixed HC and H_2S	Liquid	1202.2 bbl/day

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 federa 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 - No continuous emissions measurement equipment is used at the facility.									

Table 2-O: Parametric Emissions Measurement Equipment

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

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 - No parametric emissions measurement equipment is used at the 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**										
T-01, T-02, T-03	**mass GHG**	6433.7	0.012	0.12											6433.9	
	CO_2e	6433.7	3.6	3.0												6440.4
T-04	**mass GHG**	6433.7	0.012	0.12											6433.9	
	CO_2e	6433.7	3.6	3.0												6440.4
C-01	**mass GHG**	3884.1	0.0073	0.073											3884.2	
	CO_2e	3884.1	2.2	1.8												3888.1
C-02	**mass GHG**	3884.1	0.0073	0.073											3884.2	
	CO_2e	3884.1	2.2	1.8												3888.1
C-04	**mass GHG**	2290.6	0.0043	0.043											2290.6	
	CO_2e	2290.6	1.3	1.1												2292.9
C-05	**mass GHG**	2290.6	0.0043	0.043											2290.6	
	CO_2e	2290.6	1.3	1.1												2292.9
C-06	**mass GHG**	2290.6	0.0043	0.043											2290.6	
	CO_2e	2290.6	1.3	1.1												2292.9
C-24	**mass GHG**	6579.6	0.012	0.12											6579.8	
	CO_2e	6579.6	3.7	3.1												6586.4
C-28	**mass GHG**	5035.2	0.0095	0.095											5035.3	
	CO_2e	5035.2	2.8	2.4												5040.4
HB-01	**mass GHG**	3432.8	0.0065	0.065											3432.9	
	CO_2e	3432.8	1.9	1.6												3436.4
BMH-01	**mass GHG**	1998.2	0.0038	0.038											1998.2	
	CO_2e	1998.2	1.1	0.94												2000.3
H-NO	**mass GHG**	15370.8	0.029	0.29											15371.1	
	CO_2e	15370.8	8.6	7.2												15386.7
H-SO	**mass GHG**	15370.8	0.029	0.29											15371.1	
	CO_2e	15370.8	8.6	7.2												15386.7
RH-01	**mass GHG**	8197.8	0.015	0.15											8197.9	
	CO_2e	8197.8	4.6	3.9												8206.2
RH-02	**mass GHG**	2049.4	0.0039	0.039											2049.5	
	CO2e	2049.4	1.2	0.97												2051.6
SLUG2	**mass GHG**	0.042	-	0.88											0.93	
	CO_2e	0.042	-	22.1												22.2
F-01	**mass GHG**	12839.7	0.0314	89.4											12929.2	
	CO2e	12839.7	9.4	2235.8												15084.9
F-02	**mass GHG**	1566.4	0.0030	6.7											1573.0	
	CO_2e	1566.4	0.88	166.3												1733.5
F-03	**mass GHG**	19937.2	0.051	127.3											20064.6	
	CO2e	19937.2	15.1	3182.5												23134.9
Total	**mass GHG**	85542.0	0.16	2.5											120111.4	
	CO_2e	85542.0	48.0	62.4												125605.7

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

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

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

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

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

Targa Midstream Services, LLC
Monument Gas Plant

Description: Summary of Project Emissions

C-40 Submittal

Unit	NOX		CO		VOC		SOX		PM		HAP		H2S	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
FG-01	-	-	-	-	0.0080	0.035	-	-	-	-	5.98E-05	2.62E-04	-	-
SSM-CB	-	-	-	-	0.93	0.016	-	-	-	-	-	-	-	-
Project Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.94	0.051	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.0E-05	2.6E-04	0.0E+00	0.0E+00

Fugitives Submittal

Unit	NOx		CO		VOC		SOx		PM		H_2S	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
FG-01	-	-	-	-	0.22	0.97	-	-	-	-	0.053	0.23
SSM-IS	-	-	-	-	0.67	0.0023	-	-	-	-	9.31E-06	3.16E-08
F-01 SSM	0.059	2.50E-04	0.12	4.98E-04	0.0061	2.58E-05	9.60E-05	4.80E-08	-	-	1.02E-06	5.10E-10
F-02 SSM	0.12	3.70E-04	0.24	7.38E-04	0.0024	7.24E-06	0.74	0.0023	-	-	0.0078	2.40E-05
Project Total	0.18	6.19E-04	0.36	0.0012	0.9	0.98	0.74	0.0023	-	-	0.061	0.23

Redundant AGI Submittal

Unit	NOX		CO		VOC		SOX		PM		HAP		H2S	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
FG-01	-	-	-	-	0.046	0.203	-	-	-	-	1.79E-03	7.85E-03	4.14E-05	1.81E-04

Acid Gas Submittal

Unit	NOX		CO		VOC		SOX		PM		HAP		H2S		C_6H_{12}	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
FG-01	-	-	-	-	8.39E-04	3.68E-03	-	-	-	-	6.26E-04	2.74E-03	0.041	0.180	1.73E-05	7.57E-05
Project Total	-	-	-	-	8.39E-04	3.68E-03	-	-	-	-	6.26E-04	2.74E-03	0.041	0.180	1.73E-05	7.57E-05

Cryo GSP Submittal

Unit	NOX		CO		VOC		SOX		PM_{10}		$PM_{2.5}$		HAP		H2S		CO2e
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy
FG-01	-	-	-	-	0.43	1.90	-	-	-	-	-	-	0.0056	0.025	0.0010	0.0046	21.55
SSM-PP	-	-	-	-	*	0.11	-	-	-	-	-	-	*	8.30E-04	*	0.00E+00	0.0057
L-02	-	-	-	-	0.11	0.16	-	-	-	-	-	-	-	-	-	-	-
Haul Roads									0.11	0.398	0.027	0.0977					
Project Total	-	-	-	-	0.54	2.17	-	-	0.11	0.014	0.027	0.0033	0.0056	0.025	0.0010	0.0046	21.55

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.

The Monument Gas Plant (Monument) is owned by Versado Gas Processors, LLC, operated by Targa Midstream Services, LLC (Targa), and located in Lea County, New Mexico. The facility is currently authorized to operate under NSR Permit No. 0110-M11R5 and Title V Operating Permit No. P110-R3. Monument Gas Plant processes natural gas through inlet separation, dehydration, acid gas removal, and separation of methane from natural gas liquids.

Targa is submitting this application pursuant to 20.2.70.404.C.1.a NMAC to modify the Title V Permit P110-R3 by incorporating the revisions authorized in NSR Permits 0110-M11, 0110-M11R1, 0110-M11R2, 0110-M11R3, 0110-M11R4, and 0110-M11R5. Below is a discussion of the updates made in these NSR revision applications.

NSR Permit 0110-M11R5 Revisions

The following are changes made in the application for NSR Permit 0110-M11R5:

- Permit one dual-use diesel-fired emergency heater with a built-in engine (Unit BE/BH-1).
- The heater will be used during extreme cold to help heat up equipment throughout the plant and will be limited to operating 500 hours per year.

NSR Permit 0110-M11R4 Revisions

The following are changes made in the application for NSR Permit 0110-M11R4:

- Permit Gas Subcooled Processes (GSP) for cryogenic NGL recovery (FG-01; FUG-GSP).
- Permit increased pump purging SSM emissions (SSM-PP).
- Permit an increase to the pressurized propane loadout and hauling (L-02, Haul Roads). These activities are Insignificant per IA List Item #1.a.

NSR Permit 0110-M11R3 Revisions

The following are changes made in the application for NSR Permit 0110-M11R3:

- Permit increased fugitive component emissions for the addition of redundant acid gas cooling (FG-01; FUG-AGC).

NSR Permit 0110-M11R2 Revisions

The following are changes made in the application for NSR Permit 0110-M11R2:

- Permit additional fugitive emissions (FG-01) with additions to the fugitive counts at the monument gas plant.

NSR Permit 0110-M11R1 Revisions

The following are changes made in the application for NSR Permit 0110-M11R1:

- Permit additional fugitive and SSM blowdown emissions associated with the installation of a new electric compressor (C-40).
- Permit increased total fugitive emissions (FG-01; FUG-C40).
- Permit compressor blowdown SSM emissions (SSM-CB).

NSR Permit 0110-M11 Revisions

The following are changes made in the application for NSR Permit 0110-M11:

- Permit redundant acid gas compression (AGI-C2) as required by the Settlement Agreement and Stipulated Final Compliance Order between the Environmental Protection Division of the New Mexico Environment Department and Targa Midstream Services LLC. The Notice of Violation Number is: AQB TAR-0610-1701.
- Reduce flaring during acid gas compressor planned maintenance events as the redundant compression will allow for acid gas compression and injection during those activities (F-03).
- Permit increased fugitive emissions associated with the redundant AGI compressor (FG-01).
- Permit compressor blowdown SSM emissions (SSM-AGI-C2).

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 sheet is attached.

118-101-E

MONUMENT GAS PLANT
GAS STREAM PROCESS FLOW DIAGRAM

F-02 FIELD FLARE
FIELD
PIC 1200
FE-XXX
PSV 1006 SET @ 50 PSIG
1829
1830
PV-102 EAST INLET SCRUBBER
TO CONDENSATE TANK
PSV 1008 SET @ 15 PSIG
PV-103 EAST INLET SCRUBBER
TO CONDENSATE TANK
PSV 1012 SET @ 15 PSIG
PV-104 WEST INLET SCRUBBER
TO CONDENSATE TANK
FE-1826
FE-1811
PSV 1346 SET @ 60 PSIG
FLASH GAS
SEAL GAS
PROPANE BLOWDOWN
REGEN GAS FR. BUT
ENGINE BLOWDOWN
PV-244 VAPOR RECOVERY SCRUBBER
TO CONDENSATE SHARED TANK
1ST STAGE COMPRESSION UNITS 33 THRU 36
PSV 3511 SET @ 150 PSIG
PSV 644 SET @ 75-80 PSIG
1ST STAGE COMPRESSION UNITS 24,28,30,31
CWR
CWS
EX-100A, B, C 1ST STAGE COOLERS
PSV 1143 SET @ 80 PSIG
PV-138 2ND STAGE SCRUBBER
TO CONDENSATE SHARED TANK
LCV-1202
2ND STAGE COMPRESSION UNITS 33 THRU 36
PSV 3421 SET @ 290 PSIG
SET @ 280 PSIG
PSV 643
2ND STAGE COMPRESSION UNITS 9 THRU 31
EX-101A & B 2ND STAGE COOLERS
PSV 1400 SET @ 300 PSIG
FE-1850
PV-175 SKAGGS/JOY INLET SCRUBBER
SKAGGS/JOY
LCV-1400 TO CONDENSATE TANK
PSV 1014 SET @ 400 PSIG
PIC
FE-XXX
SAUNDERS
PCV-1014
PV-105 SAUNDERS INLET SCRUBBER
TO CONDENSATE TANK
PV-173 2ND STAGE DISCHARGE SCRUBBER
FC-1192 TO 2ND STAGE SUCTION SCRUBBER
PSV 1402 SET @ 300 PSIG
TO PLANT FLARE
EL PASO
ZZP
PV-174 EL PASO GREEN GAS INLET SCRUBBER
LCV-1402 TO CONDENSATE TANK
Brinkstool
PCV-XXX
TO PLANT FLARE
PSV 1403 SET @ 310 PSIG
FE-1403
PV-254,261,268,275 3RD STG SUCTION SCRUBBERS
PSV 1583 SET @ 635 PSIG
TO 2ND STG SCRUB 1189
3431, 3631 3331, 3531 1163
SET @ 1000 PSIG
PSV
3RD STAGE COMPRESSION UNITS 33 THRU 36 1173 1181 1177 645 564
SET @ 920 PSIG
PSV
3RD STAGE COMPRESSION UNITS 1,2,4,5,6, 30 & 31
PSV 1204 SET @ 275 PSIG
N.C.
PV-179 3RD STG SUCTION SCRUBBER
PV-180 3RD STG SUCTION SCRUBBER
TO 2ND STAGE SUCTION SCRUBBER
LCV-1250
LCV-1204
TO 2ND STAGE SUCTION SCRUBBER
RECYCLE BYPASS
PIC 1579
CWR
CWS
EX-102 3RD STG SUCTION COOLER
PV-178 AMINE CONTACTOR OUTLET SCRUBBER
PV-177 AMINE CONTACTOR
PV-176 AMINE CONTACTOR INLET SCRUBBER
PSV 400 SET @ 100 PSIG
PSV 1256 SET @ 1000 PSIG
PSV 1205 SET @ 825 PSIG
HOT GAS BYPASS
EX-103A & B 3RD STG DISCHARGE COOLERS
PV-207 3RD STG DISCHARGE SCRUBBER
TO 2ND STG DISCHARGE SCRUBBER
FC LCV-1205
PSV 1257 SET @ 1000 PSIG
F-100 CRYO INLET FILTER/SEP
TO VRU SCRUBBER
PV-209 CRYO INLET SCRUBBER
TO VRU SCRUBBER
SET @ 1000 PSIG PSV 1256
SET @ 950 PSIG PSV 1250
PV-210A DEHYDRATOR
PV-210B DEHYDRATOR
PSV 1265 SET @ 1000 PSIG
F-101 INLET DUST FILTER
PIC 1101
CV 1101
TOTAL BYPASS
CV 1103
CRYO BYPASS
PSV 1290 SET @ 325 PSIG
PV-211 CRYO PLANT BYPASS SCRUBBER
TO VRU SCRUBBER
CRYO PLANT
PIC 1203
PV-215 DEMETHANIZER
PV-105A & B DEMETHANIZER BOTTOMS TRANSFER PUMPS
PCV 1579
PSV 4401 SET @ 250 PSIG
PV-223 RAW PRODUCT STORAGE TANK
RECOMPRESSION COMPRESSOR UNITS 5,6
PSV HH/HH SET @ 920 PSIG
EX-104 RECOMPRESSION COOLER
PSV 1111 SET @ 935 PSIG
PV-208 RECOMPRESSION DISCHARGE SCRUBBER
TO N. NATURAL
FE-XXXX
CPL/FRACTIONATION
FUEL GAS
RESIDUE SALES
FE-XXXX
PSV 1504 SET @ 300 PSIG
REGEN GAS RETURN
TIC
FLARE
PSV 1326 SET @ 300 PSIG
N.C.
EX-112 REGEN GAS COOLER
REFRIG
EX-113 REGEN GAS CHILLER
PV-222 CHILLER OUTLET SCRUBBER
LCV-1504 TO CONDENSATE SHARED TANK
PV-220 REGEN GAS SCRUBBER
PV-221 IRON SPONAGE
REGEN GAS SUPPLY
CM-32 REGEN GAS COMPRESSOR
PIC 1107
PCV 1207
CV 1329A
CV 1329B
FE-1330
FE-1331
F-01 PLANT FLARE
H-101 REGEN GAS HEATER
FT-221 REGEN COALESCER
PV-304 POLISHER OVERHEAD COALESCER
PV-232 AGI STILLER
PCV 401
EX-125A,B&C
PSV 409
PCV 2428
PCV 242A
F-03 AGI FLARE
ESD V-269
AGI COMPRESSOR C-38
AGI WELL
PV-241
C-40 COOLER DISCH. SCRUBBER

REFERENCE DWGS:	REV	DESCRIPTION	DWN	CHKD	DATE

REV	DESCRIPTION	DWN	CHKD	DATE
5	REVISED AS MARKED - PER JOE C.	FRD	JG	5/20/16
4	REVISED PER FIELD MARKUPS	NWD		11/29/10
3	BORDER CHANGED	NWD		5/23/07
2	UPDATED AND CHANGE DRAWING BORDER	ATM		9/04
1	REVISED PER MARKUPS	PAC		1/98

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PREPARED BY:

PROJECT NUMBER:

SCALE: NONE
DWN BY: ATM
CHKD BY:
FINAL CK:
ENGR:
APPRV:
APPRV:

PLANT NAME: MONUMENT GAS PLANT LEA COUNTY, NEW MEXICO

TARGA

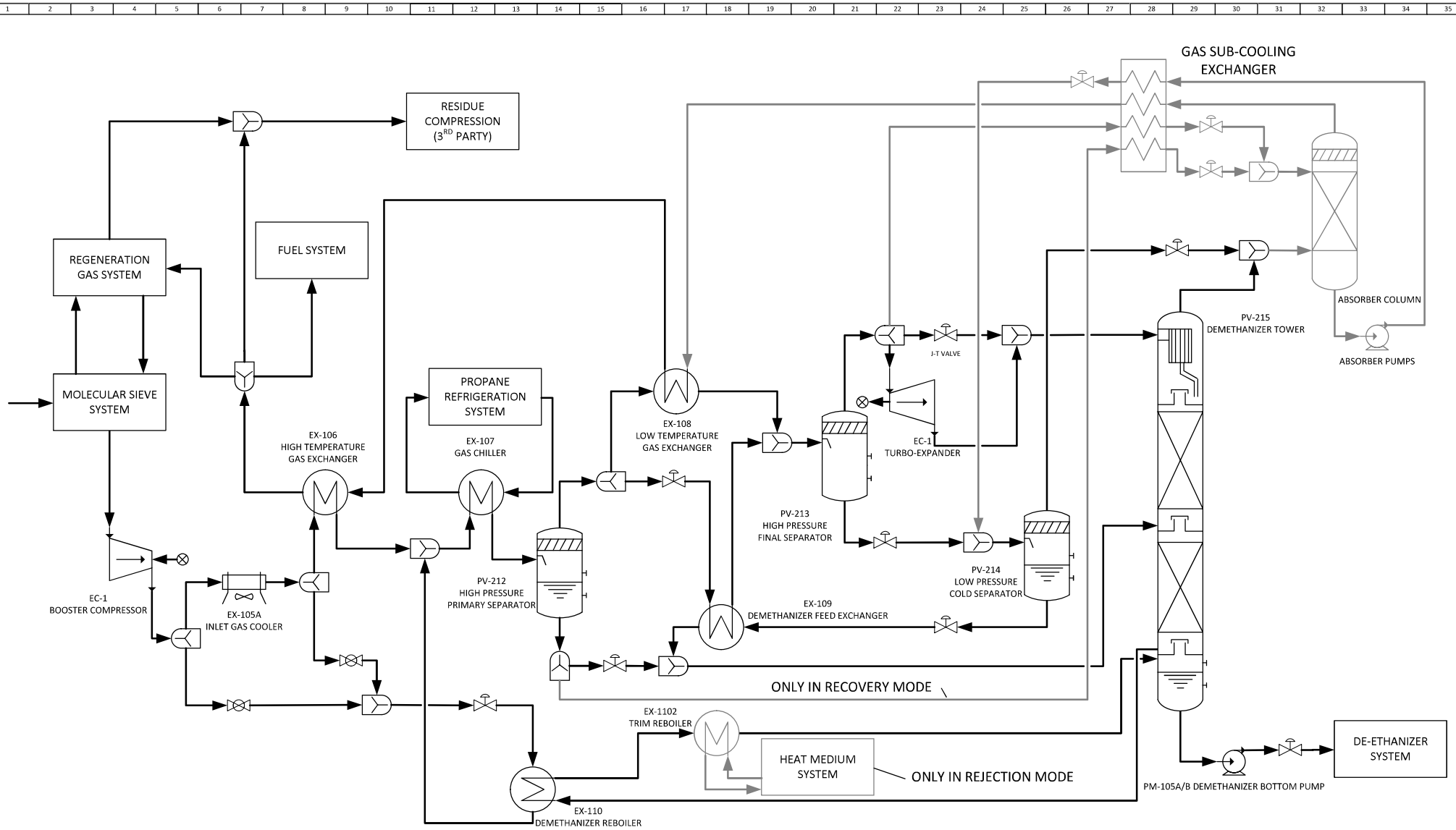
DRAWING NUMBER: 118-101-E
CAD FILE NAME: MN101E
REVISION: 5

GAS STREAM PROCESS FLOW DIAGRAM

PLOT DATE: 11/29/10

G:\CAD\MONUMENT\FLOWSHEETS\PSM FLOWSHEETS\MN101E.DWG

(NWD 11/29/10)



NOTES:	REVISION LOG:
1.	
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7.	
8.	

REVISION	ISSUED FOR	DRAWN BY	CHECKED BY	DATE

SCALE: NOT TO SCALE	DATE
DRAWN BY	
CHECKED BY	
FINAL CHECK	
ENGINEER	
APPROVER	

PREPARED BY: TARGA RESOURCES, INC. AFE NO. PLANT NAME & LOCATION

ISSUED FOR: FOR INFORMATION ONLY

TARGA

DRAWING NUMBER

REVISION

DOCUMENT DESCRIPTION

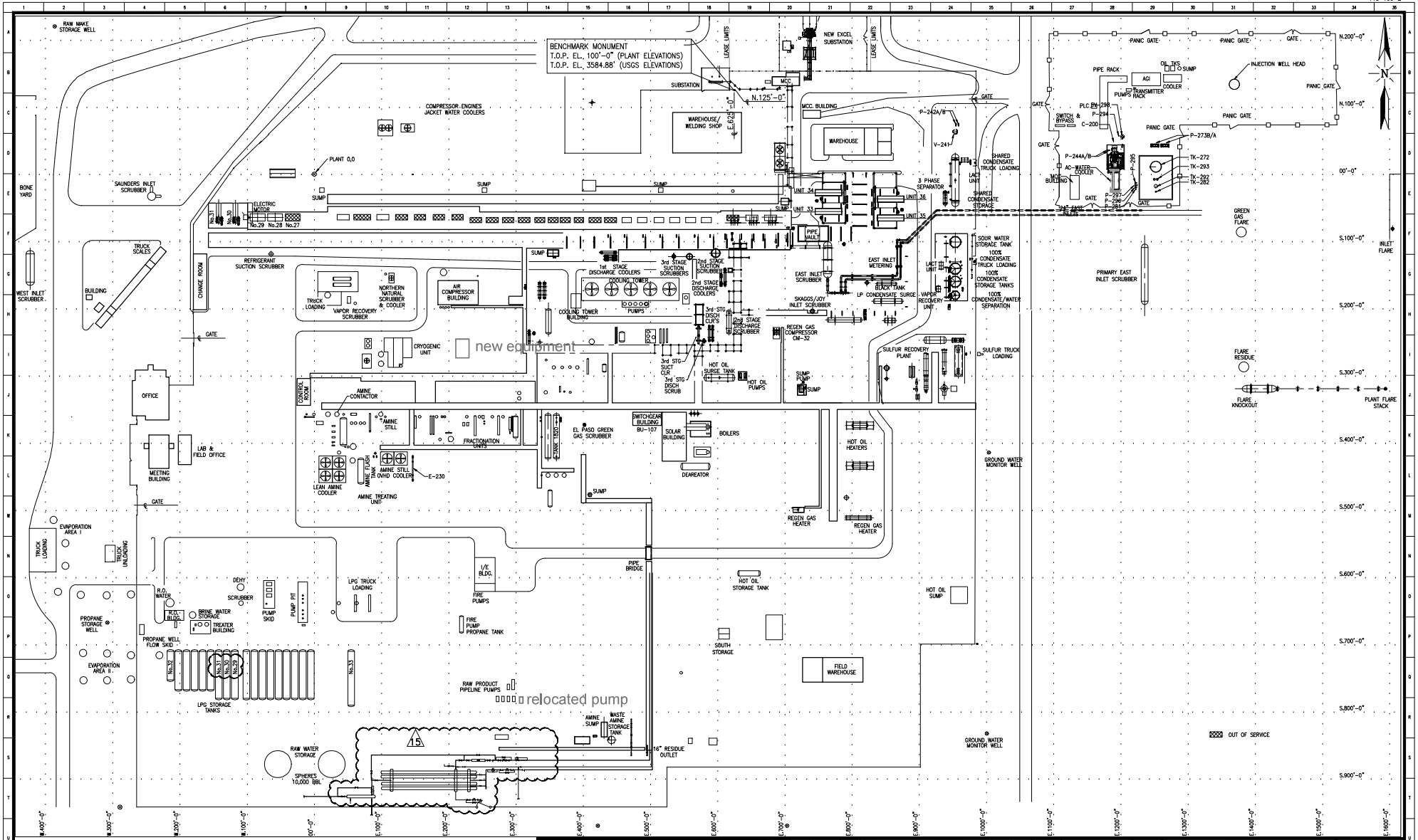
MONUMENT GAS PLANT (RETROFITTED)

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.



REFERENCE DWGS.	REV	DESCRIPTION	DWN	CHKD	DATE	REV	DESCRIPTION	DWN	CHKD	DATE
	10	UPDATED AND ISSUED	ATM		1/11/06	15	ADDED SLUG CATCHER - PER J. YORK	FRD	JY	2/1/17
	9	UPDATED	ATM		1/10/06	14	ADDED BLACK TANK EQUIP - PER JOE G.	FRD	JG	6/3/16
	8	UPDATED WITH NEW CONDENSATE PROJECT	ATM		7/15/05	13	REVISED AS MARKED - PER JOE G.	FRD	JG	5/19/16
	7	UPDATED WITH COMPRESSORS	ATM		5/04	12	REVISED PER NEW AGI PROJECT	JLM		9/19/11
	16	MOC# MOC2020-05 - AFE 104349 NEW AGI ADDED	AT	DB	12/03/20	11	REVISED PER FIELD MARKUPS	NMD		7/30/07

PREPARED BY: DYNEGY TECHNICAL SERVICES

PROJECT NUMBER:

SCALE: 1"=60'-0" | DATE: 7/89

DWN BY: LPS

CHKD BY:

FINAL CK:

ENGR.:

APPRV:

APPRV:

PLANT NAME: MONUMENT GAS PLANT, LEA COUNTY, NM

TARGA

DRAWING NUMBER: 118-100-E

CAD FILE NAME: MN100E

REVISION: 16

OVERALL PLOT PLAN

PLOT DATE: 7/30/07

118-100-E

(NAD 7/30/07)

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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.

Emissions affected by the NSR Permit changes are detailed in this section. All facility emission calculations are included and labeled Unchanged, Updated or New in this section.

NSR Permit 0110-M11R5 Revisions:

Extreme Cold Emergency Heater (Unit BE/BH-1) – Insignificant per IA List Item #1.a
Emissions from one dual-use diesel-fired emergency heater with a built-in engine. throughout the plant and will be limited to operating 500 hours per year. Emissions were estimated using EPA Tier IV diesel engines and AP-42 emission factors. These emissions are insignificant per IA List Item #1.a.

NSR Permit 0110-M11R4 Revisions:

Fugitives Associated with Additional Components Installation (Unit: FG-01; FUG-GSP)
The emissions from fugitive components associated with this project are calculated using emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995. Representative gas analyses for the inlet gas, residue gas, and NGLs are used.

Pump Purging SSM Emissions (SSM-PP)
The emissions from Pump Purging are calculated using manufacturer specifications, component molecular weights, and estimated volumes of gas purged. A representative analysis for NGLs is utilized in the calculations.

Pressurized Propane Loadout (L-02) – Insignificant per IA List Item #1.a
Losses from pressurized loading occur when the line between the pressurized tank and tank-truck is disconnected. Emissions were estimated using the Ideal Gas Law to calculate VOC emissions. These emissions are insignificant per IA List Item #1.a.

Haul road activity associated with propane production (Haul Roads) – Insignificant per IA List Item #1.a
Emissions from paved haul roads associated with propane production were calculated using constants from AP-42 Table 13.2.1-1 and the methodology outlined in AP-42 13.2.1. These emissions are insignificant per IA List Item #1.a.

NSR Permit 0110-M11R3 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01; FUG-AGC)
The emissions from fugitive components associated with this project are calculated using emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995. A recent site gas analysis for the acid gas stream is utilized in the calculations. The H_2S in the analysis has been increased as a conservative measure to represent the highest expected H_2S% that the facility will handle, consistent with past applications.

NSR Permit 0110-M11R2 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01)
The emissions from fugitive components associated with this project are calculated using emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995. A representative gas analysis for each gas stream, consistent with past applications, are utilized in the calculations.

NSR Permit 0110-M11R1 Revisions:

Fugitives Associated with Residue Compressor C-40 (Unit FG-01; FUG-C40)
The emissions from fugitive components associated with the new compressor are calculated using emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995. The weight percent of VOC, HAP, and H_2S (gas) used in the calculations is based on the Residue Gas analysis dated 8/21/18.

SSM Emissions Associated with Residue Compressor C-40 (Unit SSM-CB)
SSM emissions associated with this project will result from blowdowns of the new compressor unit. The majority of these emissions will be captured and routed to processes vessels for control; however, a portion of the residue gas used to blowdown the unit will be released to the atmosphere. These emissions are accounted for under unit SSM-CB and are calculated based on anticipated number of blowdowns per year, the duration of each blowdown, the expected volume of gas to be released with each event, and the mas fraction VOC in the residue gas.

NSR Permit 0110-M11 Revisions:

Acid Gas Flare (Unit F-03 SSM)
Emissions from the AGI system consist primarily of use of plant flare, F-03; other emissions units are negligible sources of emissions. When the AGI is inoperable, as for maintenance, facility shutdown or during upset conditions, acid gas will be flared for limited periods at the plant flare. The plant flare is used for flaring during startup, shutdown, maintenance and upset conditions.

The expected composition and maximum expected volumes of the acid gas are used as the basis of the flaring calculation. The acid gas is expected to be relatively low heat content, so assist gas sufficient to raise the heat content of the flared gas may be added. The VOC emission calculation for this unit has been adjusted to account for the volume of assist gas expected to be flared (25 MMSCFD).

RG-109 flare emission factors for low Btu gas are used to calculate NO_x and CO emission rates. VOC, H_2S, and SO_2 emissions are calculated based on the VOC and H_2S content of the acid gas. As a conservative measure, the SO_2 composition is calculated assuming a 100% molar conversion of H_2S to SO_2. An assumed 98% destruction efficiency is applied to the VOC and H_2S emissions.

Various operating scenarios based on several different combinations of flowrates (1.75 -3.5 MMSCFD) and H_2S concentrations (12 – 24 mole percent) were evaluated to determine the maximum emitting scenario. The highest emitting scenario (3.5 MMSCFD, 24 mole percent) was used as the basis for the emissions calculations relied up for the proposed permit limitations. However, based on the variability of inlet gases and operating conditions, Targa's acid gas flow and composition will fluctuate. The calculation in this section is based on 3.5 MMSCFD at a 24 mole percent of H_2S.

Fugitives Associated with Redundant AGI Compressor (Unit FG-01)
The emissions from fugitive components associated with the redundant compressor are calculated using emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995. The gas analyses used in the calculations are based on analyses from the site. To be conservative since the unit will be blowndown with residue gas during SSM events, the VOC content from the residue gas was used in the calculations. The H_2S concentration from the acid gas analysis was used for the H_2S emissions.

SSM Emissions Associated with Redundant AGI Compressor (Unit SSM-AGI-C2)
SSM emissions associated with this project will result from blowdowns of the compressor unit. The majority of these emissions will be routed to the acid gas flare for control (which is accounted in the above flare calculation); however, a portion of the residue gas used to blowdown the unit will be released to the atmosphere. These emissions are accounted for under unit SSM-AGI-C2 and are calculated based on anticipated number of blowdowns per year, the duration of each blowdown, the expected volume of gas to be released with each event, and the mas fraction VOC in the residue gas.

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)

TARGA

Targa Midstream Services, LLC - Monument Gas Plant

Facility-Wide Emission Summary

Emission Unit: All
Source Description: Monument Gas Plant - Emission Totals

Steady-State Emissions

	NOx		CO		VOC		SOx		TSP		PM_{10}		$PM_{2.5}$		H_2S		Total HAPs	
Unit	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
T-01-03[1]	12.40	54.20	4.50	19.80	0.89	3.90	0.51	2.22	0.25	1.09	0.25	1.09	0.25	1.09	0.0054	0.024	0.030	0.13
T-04	2.90	12.70	1.10	4.82	0.20	0.88	0.17	0.74	0.083	0.36	0.083	0.36	0.083	0.36	0.0018	0.0079	0.010	0.044
C-01	27.80	121.80	4.50	19.60	0.93	4.10	0.11	0.47	0.37	1.60	0.37	1.60	0.37	1.60	0.0011	0.0047	0.67	2.96
C-02	27.80	121.80	4.50	19.60	0.93	4.10	0.11	0.47	0.37	1.60	0.37	1.60	0.37	1.60	0.0011	0.0047	0.67	2.96
C-04	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	0.00064	0.0028	0.51	2.22
C-05	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	0.00064	0.0028	0.51	2.22
C-06	25.10	109.90	5.00	21.80	0.39	1.70	0.06	0.26	0.22	0.95	0.22	0.95	0.22	0.95	0.00064	0.0028	0.51	2.22
C-24	41.90	183.50	10.70	46.80	0.78	3.40	0.17	0.76	0.62	2.72	0.62	2.72	0.62	2.72	0.0018	0.0080	0.74	3.25
C-28	16.60	72.70	2.50	10.70	0.78	3.40	0.13	0.58	0.47	2.08	0.47	2.08	0.47	2.08	0.0014	0.0061	0.51	2.24
HB-01	1.10	4.82	0.23	1.00	0.037	0.16	4.79E-05	2.10E-04	0.051	0.22	0.051	0.22	0.051	0.22	0.0010	0.0042	0.012	0.054
BMH-01	0.39	1.71	0.33	1.43	0.021	0.094	0.052	0.23	0.030	0.13	0.030	0.13	0.030	0.13	0.00056	0.0024	0.0072	0.032
H-NO	6.90	30.10	1.70	7.50	0.29	1.25	0.40	1.77	0.23	1.00	0.23	1.00	0.23	1.00	0.0043	0.019	0.055	0.24
H-SO	6.90	30.10	1.70	7.50	0.29	1.25	0.40	1.77	0.23	1.00	0.23	1.00	0.23	1.00	0.0043	0.019	0.055	0.24
RH-01 [2] RH-02 [2]	3.70	16.21	0.92	4.05	0.15	0.67	0.22	0.94	0.12	0.53	0.12	0.53	0.12	0.53	0.00	0.01	0.029	0.13
F-01[3]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.11E-06	1.80E-05	-	-
F-02 [3]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.11E-06	1.80E-05	-	-
F-03 [3]	0.083	0.36	0.16	0.72	-	-	0.0041	0.018	-	-	-	-	-	-	4.11E-06	1.80E-05	-	-
T-MD [4]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T-SO [4]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T-NO [4]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT	-	-	-	-	-	-	-	-	4.88	21.38	2.85	12.48	0.011	0.046	-	-	-	-
FG-01 [5]	-	-	-	-	-	77.12	-	-	-	-	-	-	-	-	0.056	0.24	-	0.28
L-01	-	-	-	-	-	7.08	-	-	-	-	-	-	-	-	-	-	1.44	1.00
Total	**223.94**	**980.42**	**48.17**	**210.37**	**6.45**	**112.5**	**2.46**	**10.79**	**8.35**	**36.55**	**6.32**	**27.66**	**3.48**	**15.22**	**0.082**	**0.36**	**5.76**	**20.21**

[1] The permit contains only the max emissions from T-01 through T-03 combined.

[2] Unit RH-02, which is a standby for unit RH-01. The permit contains only those emissions from unit RH-01 since higher emissions are associated with this unit.

[3] Emissions from flare pilot and purge only are indicated in this section.

[4] Condensate tanks are continuously controlled by a VRU with 100% control efficiency. No steady-state VOC or H_2S emissions are allowed from these units.

[5] FG-01 includes fugitive emissions from the slug catcher (FUG-SC), backup VRU (FUG-VRU), condensate stabilizer (FUG-CS), fractionator (FUG-Frac), C-28 propane service change (FUG-C28), compressor C-40 (FUG-C40), Acid Gas Cooling (FUG-AGC), and Gas Subcooled Processing (FUG-GSP). Note that fugitives associated with Gas Subcooled Processing are not in VOC service and are therefore not be subject to OOOOa LDAR monitoring.

"-" Denotes emissions of this pollutant are not expected.

Startup, Shutdown, and Maintenance Emissions

	NOx		CO		VOC		SOx		H_2S	
Unit	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
F-01	522.42	16.45	1042.95	32.83	100.59	3.10	3.06	0.11	0.033	0.0010
F-02	631.03	1.97	1259.78	3.94	1063.16	2.36	6865.35	17.54	72.94	0.19
F-03 (S1d)	68.37	3.93	586.18	33.71	31.58	1.82	5817.53	334.51	61.90	3.56
F-03 (S2d)	51.56		442.10		23.05		2908.77		30.95	
PIG,SLUG	-	-	-	-	1.20E-02	3.20E-04	-	-	6.70E-04	1.70E-05
Malf*	631.03	10.00	1259.78	10.00	1063.16	10.00	7022.63	10.00	74.62	5.00
SSM-PP	-	-	-	-	-	0.12	-	-	-	-
SSM-VP	-	-	-	-	-	0.0097	-	-	-	1.98E-04
SSM-VRU**	-	-	-	-	-	-	-	-	-	-
SSM-AGI	-	-	-	-	-	5.04E-04	-	-	-	-
SSM-SC	0.21	5.20E-04	0.42	0.0010	0.41	1.20E-04	0.92	0.0023	0.0098	2.45E-05
SSM-Frac	-	-	-	-	-	2.64	-	-	-	-
SSM-AGI-C2	-	-	-	-	0.15	0.0011	-	-	1.59E-04	1.10E-06
SSM-CB	-	-	-	-	-	**0.14**	-	-	-	**0.0076**
Total	**1222.03**	**32.35**	**2889.33**	**80.47**	**1195.91**	**20.19**	**12686.87**	**362.16**	**134.89**	**8.75**

Notes

1. Emissions from flare pilot & purge only are included in this section.
2. Plant shutdown emissions to Flare F-03 represent an alternative SSM scenario in addition to previously permitted F-03 SSM emissions. The three Flare F-03 SSM activities (plant shutdown, SRU SSM to flare, and AGI SSM to flare) cannot occur simultaneously. Total annual emissions represent a sum of the emissions from these three activities. Total hourly emissions represent the highest hourly emission rate. Total allowable emission rates are for informational purposes only.

"-" Denotes emissions of this pollutant are not expected.

Targa Midstream Services, LLC - Monument Gas Plant

Clark RA-8 (Unchanged)

Emission Units:	C-01, C-02
Source Description:	Natural gas engine
Manufacturer:	Clark
Model:	RA-8
Type	2 Stroke Lean Burn RICE
Aspiration:	NA

Engine Horsepower and RPM

Engine speed:	300	rpm	Mfg data
Sea level hp:	800	hp	Mfg data

Fuel Consumption

BSFC	9476	Btu/hp-hr	Southwest Research Institute's, "Compilation of Emissions Data for Stationary Reciprocating Gas Engines "
Fuel heat value:	1000	Btu/scf	Pipeline specification
Heat input:	7.6	MMBtu/hr	BSFC * site hp/ 10^6
Fuel consumption:	7.6	Mscf/hr	Heat input / fuel heat value
Annual fuel usage:	66.4	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	726	°F
Stack height:	33	ft
Stack diameter:	1.17	ft
Exhaust velocity:	90.9	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	TSP[2]	PM-10[2]	PM-2.5[2]	H_2S	HCOH[3]	TOTAL HAPs[3]		
				4.83E-02	4.83E-02	4.83E-02				lb/MMBtu	AP-42 Table 3.2-1 (7/00)
			7.14E-03							lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
							7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
							0.0011			lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
27.8	**4.5**	**0.9**	**0.11**	**0.37**	**0.37**	**0.37**		**0.40**	**0.67**	lb/hr	Hourly emission rate
121.8	**19.6**	**4.1**	**0.47**	**1.6**	**1.6**	**1.6**	**0.0047**	**1.7**	**3.0**	tpy	Annual emission rate (8760 hrs/yr)

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
Previously submitted particulate emission rates were not correctly transcribed into the permit. The correct emissions are represented above.
3. Total HAPs and HCOH emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Clark RA-6 (Unchanged)

Emission Units: C-04, C-05, C-06
Source Description: Natural gas engine
Manufacturer: Clark
Model: RA-6
Type 2 Stroke Lean Burn RICE
Aspiration: NA

Engine Horsepower and RPM

Engine speed:	300	rpm	Mfg data
Sea level hp:	600	hp	Mfg data

Fuel Consumption

BSFC	7451	Btu/hp-hr	Southwest Research Institute's, "Compilation of Emissions Data for Stationary Reciprocating Gas Engines "
Fuel heat value:	1000	Btu/scf	Pipeline specification
Heat input:	4.5	MMBtu/hr	BSFC * site hp/ 10^6
Fuel consumption:	4.5	Mscf/hr	Heat input / fuel heat value
Annual fuel usage:	39.2	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	724	°F
Stack height:	33	ft
Stack diameter:	1.17	ft
Exhaust velocity:	52	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	TSP[2]	PM-10[2]	PM-2.5[2]	H_2S	HCOH[3]	TOTAL HAPs[3]		
				4.83E-02	4.83E-02	4.83E-02				lb/MMBtu	AP-42 Table 3.2-1 (7/00)
			7.14E-03							lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
							7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
							0.032			lb/hr	Hourly emission rate
							0.00064			lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
25.1	**5.0**	**0.39**	**0.060**	**0.22**	**0.22**	**0.22**		**0.30**	**0.51**	lb/hr	Hourly emission rate
109.9	**21.8**	**1.7**	**0.26**	**0.95**	**0.95**	**0.95**	**0.0028**	**1.3**	**2.2**	tpy	Annual emission rate (8760 hrs/yr)

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
Previously submitted particulate emission rates were not correctly transcribed into the permit. The correct emissions are represented above.
3. Total HAPs and HCOH emissions calculated using GRI-HAPCalc.

TARGA

Targa Midstream Services, LLC - Monument Gas Plant

Clark HRA-8 (Unchanged)

Emission Units:	C-24
Source Description:	Natural gas engine
Manufacturer:	Clark
Model:	HRA-8
Type	2 Stroke Lean Burn RICE
Aspiration:	NA

Engine Horsepower and RPM

Engine speed:	300	rpm	Mfg data
Sea level hp:	880	hp	Mfg data

Fuel Consumption

Avg BSFC	14593	Btu/hp-hr	Southwest Research Institute's, "Compilation of Emissions Data for Stationary Reciprocating Gas Engines "
Fuel heat value:	1000	Btu/scf	Pipeline specification
Heat input:	12.8	MMBtu/hr	BSFC * site hp/ 10^6
Fuel consumption:	12.8	Mscf/hr	Heat input / fuel heat value
Annual fuel usage:	112.5	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	568	°F
Stack height:	70	ft
Stack diameter:	3.0	ft
Exhaust velocity:	85	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	TSP[2]	PM-10[2]	PM-2.5[2]	HCOH[3]	TOTAL HAPs[3]		
					4.83E-02	4.83E-02	4.83E-02			lb/MMBtu	AP-42 Table 3.2-1 (7/00)
			7.14E-03							lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03						lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.092						lb/hr	Hourly emission rate
				0.0018						lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
41.9	**10.7**	**0.78**	**0.17**		**0.62**	**0.62**	**0.62**	**0.44**	**0.74**	lb/hr	Hourly emission rate
183.5	**46.8**	**3.4**	**0.76**	**0.0080**	**2.7**	**2.7**	**2.7**	**1.9**	**3.3**	tpy	Annual emission rate (8760 hrs/yr)

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
Previously submitted particulate emission rates were not correctly transcribed into the permit. The correct emissions are represented above.
3. Total HAPs and HCOH emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Cooper Bessemer GMVA-8 (Unchanged)

Emission Units: C-28
Source Description: Natural gas engine
Manufacturer: Cooper Bessemer
Model: GMVA-8
Type 2 Stroke Lean Burn RICE
Aspiration: NA

Engine Horsepower and RPM

Engine speed:	300	rpm	Mfg data
Sea level hp:	1100	hp	Mfg data

Fuel Consumption

Avg BSFC	8934	Btu/hp-hr	Southwest Research Institute's, "Compilation of Emissions Data for Stationary Reciprocating Gas Engines "
Fuel heat value:	1000	Btu/scf	Pipeline specification
Heat input:	9.8	MMBtu/hr	BSFC * site hp/ 10^6
Fuel consumption:	9.8	Mscf/hr	Heat input / fuel heat value
Annual fuel usage:	86.1	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	575	°F
Stack height:	70	ft
Stack diameter:	2.5	ft
Exhaust velocity:	62.2	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	TSP[2]	PM-10[2]	PM-2.5[2]	HCOH[3]	TOTAL HAPs[3]		
					4.83E-02	4.83E-02	4.83E-02			lb/MMBtu	AP-42 Table 3.2-1 (7/00)
			7.14E-03							lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03						lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.070						lb/hr	Hourly emission rate
				0.0014						lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
16.6	**2.5**	**0.78**	**0.13**		**0.47**	**0.47**	**0.47**	**0.32**	**0.51**	lb/hr	Hourly emission rate
72.7	**10.7**	**3.4**	**0.58**	**0.0061**	**2.1**	**2.1**	**2.1**	**1.4**	**2.2**	tpy	Annual emission rate (8760 hrs/yr)

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
Previously submitted particulate emission rates were not correctly transcribed into the permit. The correct emissions are represented above.
3. Total HAPs and HCOH emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Solar Saturn Turbine (Unchanged)

Emission Units:	T-01, T-02, T-03
Source Description:	Natural gas turbine
Manufacturer:	Solar
Model:	Saturn
Horsepower:	1000 hp
Stack no.	T-1-3

Fuel Consumption

Heat input:	12.6	MMBtu/hr	Fuel consumption*heat value/1000
Fuel heat value:	1000	Btu/scf	Pipeline specification
Fuel consumption:	12.6	Mscf/hr	Annual fuel usage*1000/8760
Annual fuel usage:	110	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	600	°F
Stack height:	25	ft
Stack diameter:	1.17	ft
Exhaust velocity:	34.4	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	TSP[2]	PM-10[2]	PM-2.5[2]	TOTAL HAPs[3]		
					6.6E-03	**6.6E-03**	**6.6E-03**		lb/MMBtu	AP-42 Table 3.1-2a (4/00)
			7.14E-03						lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03					lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.090					lb/hr	Hourly emission rate
				0.0018					lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
			0.169		0.083	0.083	0.083	0.010	lb/hr	Hourly emission rate
12.4	**4.5**	**0.89**	**0.51**	**0.0054**	**0.25**	**0.25**	**0.25**	**0.030**	lb/hr	Total from Stack T-1-3 (lb/hr*3 units)
54.2	**19.8**	**3.9**	**2.2**	**0.024**	**1.1**	**1.1**	**1.1**	**0.13**	tpy	Annual emission rate (8760 hrs/yr). Total from Stack T-1-3

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
3. Total HAP emissions calculated using GRI-HAPCalc. Previously submitted HAP emission rates were calculated incorrectly and are being corrected in this application. The correct emissions are represented above.
4. Turbines T-1, T-2, and T-3 share the same stack.

Targa Midstream Services, LLC - Monument Gas Plant

Solar Saturn Turbine (Unchanged)

Emission Units:	T-04
Source Description:	Natural gas turbine
Manufacturer:	Solar
Model:	Saturn
Horsepower:	1000 hp

Fuel Consumption

Heat input:	12.6	MMBtu/hr	Fuel consumption*heat value/1000
Fuel heat value:	1000	Btu/scf	Pipeline specification
Fuel consumption:	12.6	Mscf/hr	Annual fuel usage*1000/8760
Annual fuel usage:	110	MMscf/yr	8760 hrs/yr operation

Exhaust Parameters

Exhaust temp (Tstk):	1000	°F
Stack height:	35	ft
Stack diameter:	1.17	ft
Exhaust velocity:	34.7	ft/sec

Emission Calculations

Uncontrolled Emissions

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	TSP[2]	PM-10[2]	PM-2.5[2]	TOTAL HAPs[3]		
					6.6E-03	**6.6E-03**	**6.6E-03**		lb/MMBtu	AP-42 Table 3.1-2a (4/00)
			7.14E-03						lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03					lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.090					lb/hr	Hourly emission rate
				0.0018					lb/hr	Hourly emission rate 98% combustion efficiency of H_2S
2.9	**1.1**	**0.20**	**0.17**		**0.083**	**0.083**	**0.083**	**0.010**	lb/hr	Hourly emission rate
12.7	**4.8**	**0.88**	**0.74**	**0.0079**	**0.36**	**0.36**	**0.36**	**0.044**	tpy	Annual emission rate (8760 hrs/yr)

1. NOx, CO, and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emission rates were calculated using manufacturer's data or stack test data.
2. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable + condensable
3. Total HAP emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: HB-01
Source Description: Steam Heater
Manufacturer: Holman Superior

Annual operating hours: 8760

Fuel Consumption

Input heat rate	6.7	MMBtu/hr	
Fuel heat value	1000	Btu/scf	Pipeline specification
Fuel rate	6.7	Mscf/hr	Input heat rate / fuel heat value
	0.0067	MMscf/hr	
Annual fuel usage	58.7	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC[2]	SO_2	H_2S	PM[3]	TOTAL HAPs[4]	Units		
		5.5			**7.6**		lb/MMscf	AP-42 Table 1.4-1 and 1.4-2	
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf	
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf	
				0.048			lb/hr	Hourly emission rate	
				9.6E-04			lb/hr	lb/MMscf * Mscf/hr / 1000	98% combustion efficiency of H_2S
1.1	**0.23**	**0.037**	**4.8E-05**		**0.051**	**0.012**	lb/hr	lb/MMscf * Mscf/hr / 1000	
4.8	**1.0**	**0.16**	**2.1E-04**	**4.2E-03**	**0.22**	**0.054**	tpy	8760 hrs/yr	

Exhaust Parameters

Exhaust temp	756	°F
Stack height	25	ft
Stack diameter	1.17	ft
Exhaust velocity	57.0	ft/sec

1. NOx and CO emissions are as permitted; emission rates have been previously reviewed and approved. Emissions were calculated using AP-42 5th edition emission factors and a safety factor.
2. VOC emissions are as previously submitted; the emission rate was not correctly transcribed into the permit. The correct emissions are represented above.
3. Assumes PM (Total) = TSP = PM10 = PM2.5. PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
4. Total HAP emissions calculated using GRI-HAPCalc. HAPs are being updated using

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: BMH-01
Source Description: Molsieve Heater
Manufacturer: Born

Annual operating hours: 8760

Fuel Consumption

Input heat rate	3.90	MMBtu/hr	Nameplate
Fuel heat value	1000	Btu/scf	Pipeline specification
Fuel rate	3.9	Mscf/hr	Input heat rate / fuel heat value
	0.0039	MMscf/hr	
Annual fuel usage	34.2	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC	SO_2	H_2S	PM[2]	TOTAL HAPs[3]	Units		
100.0	84.0	5.50			7.60		lb/MMscf	AP-42 Tables 1.4-1 and 1.4-2 (7/98)	
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf	
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf	
				0.028			lb/hr	Hourly emission rate	
				0.00056			lb/hr	lb/MMscf * Mscf/hr / 1000	98% combustion efficiency of H_2S
0.39	**0.33**	**0.021**	**0.052**		**0.030**	**0.0072**	lb/hr	lb/MMscf * Mscf/hr / 1000	
1.7	**1.4**	**0.094**	**0.23**	**0.0024**	**0.13**	**0.032**	tpy	8760 hrs/yr	

Exhaust Parameters

Exhaust temp	600	°F
Stack height	20	ft
Stack diameter	1.17	ft
Exhaust velocity	0.5	ft/sec

1. NOx and CO emissions corrected from previous applications; emissions were previously calculated with an incorrect heat input rate of 0.15 MMBtu/hr.
2. Assumes PM (Total) = TSP = PM-10 = PM-2.5 PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
3. Total HAP emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: H-NO
Source Description: Hot Oil Heater
Manufacturer: Born

Annual operating hours: 8760

Fuel Consumption

Input heat rate	30.0	MMBtu/hr	
Fuel heat value	1000	Btu/scf	Pipeline specification
Fuel rate	30.0	Mscf/hr	Input heat rate / fuel heat value
	0.030	MMscf/hr	
Annual fuel usage	262.8	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	PM[2]	TOTAL HAPs[3]	Units	
					7.6		lb/MMscf	AP-42 Tables 1.4-1 and 1.4-2 (7/98)
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.214			lb/hr	Hourly emission rate
				0.0043			lb/hr	lb/MMscf * Mscf/hr / 1000 98% combustion efficiency of H_2S
6.9	**1.7**	**0.29**	**0.40**		**0.23**	**0.055**	lb/hr	lb/MMscf * Mscf/hr / 1000
30.1	**7.5**	**1.3**	**1.8**	**0.019**	**1.0**	**0.24**	tpy	8760 hrs/yr

Exhaust Parameters

Exhaust temp	600	°F
Stack height	70	ft
Stack diameter	4.5	ft
Exhaust velocity	47.3	ft/sec

1. NOx, CO and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emissions were calculated using AP-42 5th edition emission factors and a safety factor.
2. Assumes PM (Total) = TSP = PM-10 = PM-2.5 PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
3. Total HAP emissions calculated using GRI-HAPCalc.

TARGA

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: H-SO
Source Description: Hot Oil Heater
Manufacturer: Born

Annual operating hours: 8760

Fuel Consumption

Input heat rate	30	MMBtu/hr	
Fuel heat value	1000	Btu/scf	Estimated, nominal
Fuel rate	30.0	Mscf/hr	Input heat rate / fuel heat value
	0.030	MMscf/hr	
Annual fuel usage	262.8	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	PM[1,2,3]	TOTAL HAPs[1,4]	Units	
					7.6		lb/MMscf	AP-42 Tables 1.4-1 and 1.4-2 (7/98)
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.214			lb/hr	Hourly emission rate
				0.0043			lb/hr	lb/MMscf * Mscf/hr / 198% combustion efficiency of H_2S
6.9	**1.7**	**0.29**	**0.40**		**0.23**	**0.055**	lb/hr	lb/MMscf * Mscf/hr / 1000
30.1	**7.5**	**1.3**	**1.8**	**0.019**	**1.0**	**0.24**	tpy	8760 hrs/yr

Exhaust Parameters

Exhaust temp	600	°F
Stack height	70	ft
Stack diameter	4.5	ft
Exhaust velocity	17.6	ft/sec

1. NOx, CO and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emissions were calculated using AP-42 5th edition emission factors and a safety factor.
2. Assumes PM (Total) = TSP = PM-10 = PM-2.5 PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
3. Total HAP emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: RH-01
Source Description: Regen Gas Heater
Manufacturer: Born

Annual operating hours: 8760

Fuel Consumption

Input heat rate	16	MMBtu/hr	
Fuel heat value	1000	Btu/scf	Estimated, nominal
Fuel rate	16.0	Mscf/hr	Input heat rate / fuel heat value
	0.016	MMscf/hr	
Annual fuel usage	140	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	PM[2]	TOTAL HAPs[3]	Units		
					7.6		lb/MMscf	AP-42 Tables 1.4-1 and 1.4-2 (7/98)	
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf	
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf	
				0.114			lb/hr	Hourly emission rate	
				0.0023			lb/hr	lb/MMscf * Mscf/hr / 1000	98% combustion efficiency of H_2S
3.7	**0.92**	**0.15**	**0.22**		**0.12**	**0.029**	lb/hr	lb/MMscf * Mscf/hr / 1000	
16.2	**4.1**	**0.67**	**0.94**	**0.010**	**0.53**	**0.13**	tpy	8760 hrs/yr	

Exhaust Parameters

Exhaust temp	600	°F
Stack height	35	ft
Stack diameter	4	ft
Exhaust velocity	17.6	ft/sec

1. NOx, CO and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emissions were calculated using AP-42 5th edition emission factors and a safety factor.
2. Assumes PM (Total) = TSP = PM-10 = PM-2.5 PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
3. Total HAP emissions calculated using GRI-HAPCalc.

Targa Midstream Services, LLC - Monument Gas Plant

Heater (Unchanged)

Emission Units: RH-01
Source Description: Regen Gas Heater
Manufacturer: Born

Annual operating hours: 8760

Fuel Consumption

Input heat rate	4	MMBtu/hr	
Fuel heat value	1000	Btu/scf	Estimated, nominal
Fuel rate	4.0	Mscf/hr	Input heat rate / fuel heat value
	0.004	MMscf/hr	
Annual fuel usage	35	MMscf/yr	8760 hrs/yr operation

Emission Rates

NOx[1]	CO[1]	VOC[1]	SO_2	H_2S	PM[2]	TOTAL HAPs[3]	Units	
					7.6		lb/MMscf	AP-42 Tables 1.4-1 and 1.4-2 (7/98)
			7.14E-03				lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
				7.14E-03			lb H_2S/Mscf	Purchased sweet natural gas fuel, 5 gr H_2S/100scf
				0.029			lb/hr	Hourly emission rate
				0.0006			lb/hr	lb/MMscf * Mscf/hr / 1000 98% combustion efficiency of H_2S
3.7	**0.92**	**0.15**	**0.05**		**0.03**	**0.029**	lb/hr	lb/MMscf * Mscf/hr / 1000
16.2	**4.1**	**0.67**	**0.24**	**0.003**	**0.13**	**0.13**	tpy	8760 hrs/yr

Exhaust Parameters

Exhaust temp	600	°F
Stack height	35	ft
Stack diameter	4	ft
Exhaust velocity	17.6	ft/sec

1. NOx, CO and VOC emissions are as permitted; emission rates have been previously reviewed and approved. Emissions were calculated using AP-42 5th edition emission factors and a safety factor.
2. Assumes PM (Total) = TSP = PM-10 = PM-2.5 PM AP-42 emission factor = filterable (1.9) + condensable (5.7) = (7.6) total
3. Total HAP emissions calculated using GRI-HAPCalc.

TARGA

Targa Midstream Services, LLC - Monument Gas Plant

Condensate Loading - Unit L-01 (Unchanged)

Equation[1]:

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

Variables[1]:

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

EPN	Material Loaded	Loading Method	S	P_{max} [2] (psia)	M [2] (lb/lbmol)	T_{max} [3] (°R)	L_L (lbs/1000 gal)	Hourly Throughput (gal/hr)	Wt % of VOC	Uncontrolled Hourly VOC Emissions (lb/hr)	Controlled Hourly VOC Emissions [4] (lb/hr)	Hourly CO_2 Emissions (lb/hr)	Hourly CH_4 Emissions (lb/hr)	Hourly CO_2e Emissions (lb/hr)
L-01	Condensate	Submerged	1.00	30.0	82.6	555.1	55.7	11,928	100	663.8	8.6	-	8.113E-14	2.0E-12

EPN	Material Loaded	Loading Method	S	P_{max} [2] (psia)	M [2] (lb/lbmol)	T_{max} [3] (°R)	L_L (lbs/1000 gal)	Annual Throughput (gal/yr)	Wt % of VOC	Uncontrolled Annual VOC Emissions (tpy)	Controlled Annual VOC Emissions [4] (tpy)	Annual CO_2 Emissions (tn/yr)	Annual CH_4 Emissions (tn/yr)	Hourly CO_2e Emissions (tn/yr)
L-01	Condensate	Submerged	1.00	30.0	82.6	522.9	59.1	18,429,600	100	544.3	7.1	-	6.65E-14	1.7E-12

[1] Loading loss equation and variables are from AP-42, Section 5.2, Transportation and Marketing of Petroleum Liquids.
[2] Vapor pressure and molecular weight for condensate are based on condensate analysis.
[3] Maximum temperature is 100°F and the average temperature is 63.275 °F.
[4] Condensate loading emissions are controlled by vapor balancing . Per AP-42 Section 5.2, a collection efficiency of 98.7 % can be assumed for trucks passing the NSPS-level annual test.

	Condensate		
Pollutant	Cond Wt %[1, 2]	lb/hr	tpy
N-Hexane	10.24%	0.884	0.72
Benzene	3.72%	0.3212	0.263
Toluene	1.78%	0.1540	0.000
E-Benzene	0.61%	0.0527	0.000
M-Xylene	0.18%	0.0157	0.000
O-Xylene	0.18%	0.0157	0.0129
Total HAP		**1.44**	**1.00**

[1] ProMax.
[2] Weight of HAPs in condensate analysis.

Targa Midstream Services, LLC - Monument Gas Plant

Cooling Tower Emissions (Unchanged)

	Cooling Water Recirculation Rate (gpm)	Drift Rate fraction of Circulating Flow %	Total Drift Mass lb/min	% Drift Mass escape from Facility Boundary %	Drift Mass Leaving Site lb/min	Circulating Water Total Dissolved Solids (mg/l)	Circulating Water Total Dissolved Solids (ppm_w)
Note	1	2	3	4	5	6	
Cooling Tower	20,400	0.02%	34	100.00%	34.0	2500	2500

	Particulate Emissions		TSP Emissions		PM_{10} Emissions		$PM_{2.5}$ Emissions	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Note	7	7	8	8	8	8	8	8
Cooling Tower	5.10	22.36	4.88	21.4	2.85	12.48	0.011	0.046

Notes

1 Cooling Tower Water Recirc rate based on site data (6 pumps x 3400 gpm = 20,400 gpm)
2 Uncontrolled circulating water flow percent drift estimated based on AP-42 factors for induced draft cooling towers (Table 13.4-1)
3 Total Drift Mass = Recirculation rate * Drift Rate Fraction * Drift Density (8.34 lb/gal)
4 As a conservative measure, 100% of drift mass is assumed to escape from facility boundary.
5 Drift mass leaving site = Total Drift Mass * % Drift Mass escape from facility boundary
6 TDS measured at 2049 mg/l, 2500 mg/l as a conservative measure.
7 Total particulate emission calculated using procedure described in Section 13.4 of AP-42 (01/95), Wet Cooling Towers.
PM = Water Circulation Rate * Drift Rate* Percent drift mass escape * TDS
Particulate Hourly Emissions:

$$\frac{20{,}400\ \text{gal}}{\text{min}} \times \frac{60\ \text{min}}{\text{hr}} \times \frac{0.0002\ \text{gal drift}}{\text{gal recirculation}} \times 100.00\% \times \frac{8.34\ \text{lb drift}}{\text{gal drift}} \times \frac{2500\ \text{lb PM}}{10^6\ \text{lb drift}} = \frac{5.10\ \text{lb}}{\text{hr}}$$

Particulate annual emissions = Hourly emissions (lb/hr) * 8760 (hrs/yr) / 2000 (lb/ton)
8 Particle size distribution based on the following distribution (from Frisbie data)

Particle Distribution

Particle	Mass % of Total Particulates	
TSP (PM 30)	95.6	Frisbie data
PM10	55.8	Frisbie data
PM2.5	0.21	Frisbie data

Targa Midstream Services, LLC - Monument Gas Plant

Cooling Tower Emissions (Unchanged)

Frisbie Table

Facility TDS 2500

EPRI Droplet Diameter (µm)	Droplet Volume (µm3)	Droplet Mass (µg)	Particle Mass (Solids) (µg)	Solid Particle Volume (µm3)	Solid Particle Diameter (µm)	EPRI % Mass Smaller	Interpolated Particulate Fraction based on facility TDS 2500
10	524	5.24E-04	4.03E-06	1.83	1.04	0	1.0
20	4189	4.19E-03	3.23E-05	14.66	2.09	0.196	2.1
30	14137	1.41E-02	1.09E-04	49.48	3.13	0.226	3.1
40	33510	3.35E-02	2.58E-04	117.29	4.17	0.514	4.2
50	65450	6.54E-02	5.04E-04	229.07	5.22	1.816	5.2
60	113097	1.13E-01	8.71E-04	395.84	6.26	5.702	6.3
70	179594	1.80E-01	1.38E-03	628.58	7.30	21.348	7.3
90	381704	3.82E-01	2.94E-03	1335.96	9.39	49.812	9.4
110	696910	6.97E-01	5.37E-03	2439.18	11.48	70.509	11.5
130	1150347	1.15E+00	8.86E-03	4026.21	13.57	82.023	13.6
150	1767146	1.77E+00	1.36E-02	6185.01	15.65	88.012	15.7
180	3053628	3.05E+00	2.35E-02	10687.7	18.78	91.032	18.8
210	4849048	4.85E+00	3.73E-02	16971.67	21.91	92.468	21.9
240	7238229	7.24E+00	5.57E-02	25333.8	25.04	94.091	25.0
270	10305995	1.03E+01	7.94E-02	36070.98	28.18	94.689	28.2
300	14137167	1.41E+01	1.09E-01	49480.08	31.31	96.288	31.3
350	22449298	2.24E+01	1.73E-01	78572.54	36.52	97.011	36.5
400	33510322	3.35E+01	2.58E-01	117286.13	41.74	98.34	41.7
450	47712938	4.77E+01	3.67E-01	166995.28	46.96	99.071	47.0
500	65449847	6.54E+01	5.04E-01	229074.46	52.18	99.071	52.2
600	113097336	1.13E+02	8.71E-01	395840.67	62.61	100	62.6
				% PM	2.5	=	0.21
				% PM	10	=	55.8
				% PM	30	=	95.6

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Fugitive Emissions Summary (Unit FG-01, Updated - 0110-M11, 0110-M11R1, 0110-M11R2, 0110-M11R3, 0110-M11R4)

Unit	VOC		H_2S		Total HAPs		CO2	CH4	N2O	CO2e
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy	tpy	tpy	tpy
Historically Permitted FG-01	***0.00***	***72.79***	***0.00***	***0.00***	***0.00***	***0.19***	**-**	**-**	**-**	**-**
FUG-AGI-C2	0.0010	0.0045	0.022	0.098	1.02E-04	4.48E-04	0.34	0.41	-	10.68
FUG-IS	0.22	0.97	0.053	0.23	9.32E-04	0.0041	0.072	-	-	0.072
FUG-VRU	0.0028	0.012	1.41E-04	6.16E-04	2.81E-04	0.0012	-	-	-	-
FUG-Frac	0.24	1.06	-	-	0.012	0.053	-	-	-	-
FUG-CS	0.018	0.064	0.00090	0.0040	0.0018	0.0064	-	-	-	-
FUG-SC	0.014	0.063	0.00034	0.0015	0.00049	0.0021	0.0086	0.11	-	2.65
FUG-C28	0.050	0.22	-	-	-	-	-	-	-	-
FUG-C40	0.0080	0.035	0.00E+00	0.00E+00	5.98E-05	2.62E-04	-	-	-	-
FUG-AGC	0.00084	0.0037	0.041	0.18	6.26E-04	0.0027	-	-	-	-
FUG-GSP	0.43	1.90	0.0010	0.0046	0.0056	0.025	0.027	0.86	-	21.55
FG-01	**0.99**	**77.12**	**0.056**	**0.24**	**0.022**	**0.28**	**0.4472**	**1.38**	**0**	**34.95**

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Fugitive Emissions for Slug Catcher (Unit FUG-SC, Unchanged)

Component	Count	Emission Factor (kg/hr/ source)[1]	Emission Factor (lb/hr/ source)	LDAR Reduction (%)	VOC (lb/hr)	VOC (tpy)	HAP (lb/hr)	HAP (tpy)	H_2S (lb/hr)	H_2S (tpy)
Flanges	72	3.9E-04	8.6E-04	30%	1.3E-02	5.5E-02	4.2E-04	1.9E-03	3.0E-04	1.3E-03
Valves	21	4.5E-03	9.9E-03	97%	1.8E-03	7.9E-03	6.1E-05	2.7E-04	4.3E-05	1.9E-04
			Total		0.014	0.063	4.9E-04	2.1E-03	3.4E-04	1.5E-03

Monument Inlet Gas analysis (8/7/2015)

Pollutant	Wt %
Hydrogen Sulfide	**0.69%**
Nitrogen	**2.84%**
Methane	**48.66%**
Carbon Dioxide	**3.94%**
Ethane	**14.95%**
Propane	**13.09%**
Iso-Butane	**2.28%**
N-Butane	**5.63%**
Iso-Pentane	**1.85%**
N-Pentane	**1.71%**
N-Hexane	**0.54%**
Benzene	**0.18%**
Toluene	**0.16%**
Ethylbenzene	**0.03%**
M&P Xylenes	**0.05%**
O-Xylenes	**0.01%**
Hexane Plus	**3.37%**
VOC Total =	**28.9%**
HAPs Total=	**1.0%**

Notes

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

Targa Midstream Services, LLC
Monument Gas Plant

Fugitive Emissions for Second VRU (Unit FUG-VRU, Unchanged)

Component	Service	Count	Emission Factor (kg/hr/ source)[1]	Emission Factor (lb/hr/ source)	LDAR Reduction (%)	VOC (lb/hr)	VOC (tpy)	HAP (lb/hr)	HAP (tpy)	H_2S (lb/hr)	H_2S (tpy)
Valve	Gas	5	0.0045	0.0099207	97%	1.5E-03	6.5E-03	1.5E-04	6.5E-04	7.4E-05	3.3E-04
	Light Oil	8	0.0025	0.0055115	97%	1.3E-03	5.8E-03	1.3E-04	5.8E-04	6.6E-05	2.9E-04
Flange	Gas	18	0.00039	0.0008598	30%	1.1E-02	4.7E-02	1.1E-03	4.7E-03	5.4E-04	2.4E-03
	Light Oil	0	0.00011	0.0002425	30%	0.0E+00	0E+00	0E+00	0E+00	0E+00	0.0E+00
Connectors	Gas	0	0.0002	0.0004409	30%	0.0E+00	0E+00	0E+00	0E+00	0E+00	0.0E+00
	Light Oil	67	0.00021	0.000463	30%	2.2E-02	9.5E-02	2.2E-03	9.5E-03	1.1E-03	4.8E-03
Other	Gas	1	0.0088	0.0194005	97%	5.8E-04	2.5E-03	5.8E-05	2.5E-04	2.9E-05	1.3E-04
	Light Oil	1	0.0075	0.0165345	97%	5.0E-04	2.2E-03	5.0E-05	2.2E-04	2.5E-05	1.1E-04
Total						0.003	0.012	2.8E-04	1.2E-03	1.4E-04	6.2E-04

Notes

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

[2] As a conservative measure, the wt % VOC, HAPs, and H_2S in the stream is assumed as 100%, 10% and 5% respectively.

Targa Midstream Services, LLC
Monument Gas Plant

Propane Fractionation Fugitive Emissions (FUG-Frac, Unchanged)

Component	Emission Factors (kg/hr/source)[1] Gas	Light Oil	Propane Fractionation Component Count Gas	Light Oil	LDAR % Reduction	TOC Emissions kg/hr	lb/hr	VOC Emissions lb/hr	HAP Emissions lb/hr	VOC Emissions tpy	HAP Emissions tpy
Connectors	2.00E-04	2.10E-04	86	263	30%	0.051	0.11	0.11	0.006	0.49	0.024
Flanges	3.90E-04	1.10E-04	25	172	30%	0.020	0.044	4.42E-02	2.21E-03	0.19	0.010
Open-Ended Lines	2.00E-03	1.40E-03	0	0	97%	0.000	0.000	0.00	0.00	0.000	0.000
Pumps	2.40E-03	1.30E-02	2	3	85%	0.007	0.014	1.45E-02	7.24E-04	6.34E-02	3.17E-03
Valves	4.50E-03	2.50E-03	71	286	97%	0.031	0.07	6.84E-02	3.42E-03	3.00E-01	1.50E-02
Other	8.80E-03	7.50E-03	2	4	97%	0.001	0.00	3.15E-03	1.57E-04	1.38E-02	6.89E-04
							TOTAL	0.24	0.012	1.06	0.053

Notes

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

[2] As a conservative measure, the wt % VOC and HAPs in the stream is assumed as 100% and 5%.

Targa Midstream Services, LLC
Monument Gas Plant

Condensate Stabilizer Fugitive Emissions (Unit FUG-CS, Unchanged)

Component	Emission Factors (kg/hr/source) [2] Light Oil	Component Count Light Oil	LDAR % Reduction	TOC Emissions kg/hr	TOC Emissions lb/hr	VOC Emissions lb/hr	VOC Emissions tpy	HAP Emissions lb/hr	HAP Emissions tpy	H2S Emissions lb/hr	H2S Emissions tpy
Flanges	1.10E-04	81	30%	0.0062	0.014	0.014	0.060	1.4E-03	6.0E-03	6.9E-04	3.0E-03
Valves	2.50E-03	5	97%	3.75E-04	8.27E-04	8.3E-04	0.0036	8.3E-05	3.6E-04	4.1E-05	1.8E-04
Other	7.50E-03	7	97%	1.58E-03	3.47E-03	3.5E-03	0.0152	3.5E-04	1.5E-03	1.7E-04	7.6E-04
					TOTAL	0.018	0.064	1.80E-03	6.38E-03	9.0E-04	4.0E-03

Notes

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

[2] As a conservative measure, the wt % VOC, HAPs, and H_2S in the stream is assumed as 100%, 10% and 5% respectively.

Targa Midstream Services, LLC
Monument Gas Plant

Description: Project Fugitive Emissions for C28 service change
Unit: FG-01 (FUG-C28, Unchanged)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	Total Emissions kg/hr	Total Emissions lb/hr	VOC Emissions lb/hr	VOC Emissions tpy
Flanges	3.90E-04	-	-	-	-	-
Pump Seals	2.40E-03	-	-	-	-	-
Valves	4.50E-03	5	0.023	0.050	0.050	0.22
Other	8.80E-03	-	-	-	-	-
				Total	**0.050**	**0.22**

Notes:

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
[2] The propane gas steam is assumed to have the following composition:

wt% VOC: 100%
wt% H_2S: 0%
wt% HAP: 0%

Targa Midstream Services, LLC
Monument Gas Plant

Fugitive Emissions for C-40 (FUG-C-40, New - 0110-M11R1)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count[2]	VOC Emissions[3]		HAP Emissions[3]		H_2S Emissions[3]	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	55	3.85E-04	1.69E-03	2.86E-06	1.25E-05	0.00E+00	0.00E+00
Flanges	3.90E-04	65	8.87E-04	3.89E-03	6.59E-06	2.89E-05	0.00E+00	0.00E+00
Open-Ended Lines	2.00E-03	-	-	-	-	-	-	-
Pump Seals	2.40E-03	-	-	-	-	-	-	-
Valves	4.50E-03	43	6.77E-03	2.97E-02	5.03E-05	2.20E-04	0.00E+00	0.00E+00
Other	8.80E-03	-	-	-	-	-	-	-
		Total	**8.05E-03**	**3.52E-02**	**5.98E-05**	**2.62E-04**	**0.00E+00**	**0.00E+00**

Notes:

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

[2] Actual anticipated component counts with a safety factor of 10%

[3] This fugitive gas steam is assumed to have the following composition for Residue gas:

wt% VOC: 1.588%

wt% H_2S: 0.000%

wt% HAP: 0.012%

TARGA

Targa Midstream Services, LLC
Monument Gas Plant

Description: AGI-C2 Compressor Fugitive Emissions
Unit: FG-01 (AGI-C2 compressor only, **New - 0110-M11**)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	Total Emissions kg/hr	Total Emissions lb/hr	VOC Emissions lb/hr	VOC Emissions tpy	HAP Emissions lb/hr	HAP Emissions tpy	H_2S Emissions lb/hr	H_2S Emissions tpy	CO_2 lb/hr	CO_2 tpy	CH_4 lb/hr	CH_4 tpy
Connectors	2.00E-04	-	-	-	-	-	-	-	-	-	-	-	-	-
Flanges	3.90E-04	8	0.003	0.007	6.69E-05	2.93E-04	6.69E-06	2.93E-05	1.46E-03	6.39E-03	0.00506131	2.22E-02	0.00617475	0.0270454
Open-Ended Lines	2.00E-03	-	-	-	-	-	-	-	-	-	-	-	-	-
Pump Seals	2.40E-03	-	-	-	-	-	-	-	-	-	-	-	-	-
Valves	4.50E-03	6	0.027	0.060	5.79E-04	2.53E-03	5.79E-05	2.54E-04	1.26E-02	5.53E-02	0.044	1.92E-01	0.05343532	0.2340467
Other	8.80E-03	2	0.018	0.039	3.77E-04	1.65E-03	3.77E-05	1.65E-04	8.23E-03	3.60E-02	0.029	1.25E-01	0.03483191	0.15256377
				Total	**1.02E-03**	**4.48E-03**	**1.02E-04**	**4.48E-04**	**2.23E-02**	**9.77E-02**	**7.74E-02**	**3.39E-01**	**9.44E-02**	**4.14E-01**

Notes:

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
[2] The gas steam is assumed to have the following composition:

wt% VOC: 1.0%
wt% H_2S: 21.2%
wt% HAP: 0.097%
wt% CH_4: 89.770%
wt% CO_2: 73.583%

TARGA

Targa Midstream Services, LLC
Monument Gas Plant

Description: Fugitive Emissions for Acid Gas Cooling
Unit: FG-01 (FUG-AGC, **New - 0110-M11R3**)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count[2]	VOC Emissions[3]		HAP Emissions[3]		H_2S Emissions[3]		Cyclohexane[3]	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flanges	3.90E-04	16	4.95E-05	2.17E-04	3.69E-05	1.62E-04	2.42E-03	1.06E-02	1.02E-06	4.46E-06
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	4	7.61E-05	3.33E-04	5.68E-05	2.49E-04	3.72E-03	1.63E-02	1.57E-06	6.87E-06
Valves	4.50E-03	20	7.14E-04	3.13E-03	5.32E-04	2.33E-03	3.49E-02	1.53E-01	1.47E-05	6.44E-05
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Total	**8.39E-04**	**3.68E-03**	**6.26E-04**	**2.74E-03**	**4.10E-02**	**1.80E-01**	**1.73E-05**	**7.57E-05**

Notes:

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

[2] Actual anticipated component counts with a safety factor of 100%

[3] The following Acid Gas composition is applied for the fugitive stream based on a site specific analysis.
H2S has been increased as a conservative measure to represent the highest expected H2S% that the facility will handle, consistent with past applications

wt% VOC:	0.360%
wt% H_2S:	17.580%
wt% HAP:	0.268%
wt% cyclohexane:	0.007%

TARGA

Targa Midstream Services, LLC
Monument Gas Plant

Description: FG-01 Fugitive Emissions Associated with Cryo Project (FUG-GSP, **New - 0110-M11R4**)
Annual Operating Hours: 8760 hr/yr

Fugitive Gas Stream Data

Component	Gas Stream (wt%)		
	Inlet Gas	Residue Gas	Y-Grade (NGL)
VOC	28.1445%	0.9660%	73.4090%
H_2S	0.9431%	0.0010%	0.0000%
Methane	47.4630%	89.7755%	0.0450%
CO2	5.2313%	0.2587%	0.0040%
HAP	0.8238%	0.0125%	0.8570%
n-Hexane	0.4906%	0.0005%	0.0000%
Benzene	0.1157%	0.0005%	0.5240%
Toluene	0.1098%	0.0027%	0.2800%
Ethylbenzene	0.0261%	0.0031%	0.0180%
Xylenes	0.0815%	0.0057%	0.0350%

Emission Calculations
Unit: FG-01

Inlet Gas

Component	Emission Factors (kg/hr/source)[1]	Component Count	VOC Emissions		H_2S Emissions		HAP Emissions		CO_2		CH_4		CO_2e Emissions	
	Gas		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flanges	3.90E-04	36	8.71E-03	3.82E-02	2.92E-04	1.28E-03	2.55E-04	1.12E-03	1.62E-03	7.09E-03	1.47E-02	6.43E-02	3.69E-01	1.62E+00
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Valves	4.50E-03	8	2.23E-02	9.78E-02	7.49E-04	3.28E-03	6.54E-04	2.86E-03	4.15E-03	1.82E-02	3.77E-02	1.65E-01	9.46E-01	4.14E+00
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**3.10E-02**	**1.36E-01**	**1.04E-03**	**4.56E-03**	**9.09E-04**	**3.98E-03**	**5.77E-03**	**2.53E-02**	**5.24E-02**	**2.29E-01**	**1.31E+00**	**5.76E+00**

Residue Gas

Component	Emission Factors (kg/hr/source)[1]	Component Count	VOC Emissions		H_2S Emissions		HAP Emissions		CO_2		CH_4		CO_2e Emissions	
	Gas		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flanges	3.90E-04	48	3.99E-04	1.75E-03	4.17E-07	1.83E-06	5.17E-06	2.26E-05	1.07E-04	4.68E-04	3.71E-02	1.62E-01	9.26E-01	4.06E+00
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Valves	4.50E-03	12	1.15E-03	5.04E-03	1.20E-06	5.27E-06	1.49E-05	6.53E-05	3.08E-04	1.35E-03	1.07E-01	4.68E-01	2.67E+00	1.17E+01
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**1.55E-03**	**6.78E-03**	**1.62E-06**	**7.10E-06**	**2.01E-05**	**8.79E-05**	**4.15E-04**	**1.82E-03**	**1.44E-01**	**6.30E-01**	**3.60E+00**	**1.58E+01**

Y-Grade (NGL)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	VOC Emissions		H_2S Emissions		HAP Emissions		CO_2		CH_4		CO_2e Emissions	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	36	1.17E-02	5.10E-02	0.00E+00	0.00E+00	1.36E-04	5.96E-04	6.35E-07	2.78E-06	7.14E-06	3.13E-05	1.79E-04	7.85E-04
Flanges	3.90E-04	152	9.59E-02	4.20E-01	0.00E+00	0.00E+00	1.12E-03	4.91E-03	5.23E-06	2.29E-05	5.88E-05	2.58E-04	1.48E-03	6.46E-03
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	8	3.11E-02	1.36E-01	0.00E+00	0.00E+00	3.63E-04	1.59E-03	1.69E-06	7.42E-06	1.90E-05	8.34E-05	4.78E-04	2.09E-03
Valves	4.50E-03	36	2.62E-01	1.15E+00	0.00E+00	0.00E+00	3.06E-03	1.34E-02	1.43E-05	6.26E-05	1.61E-04	7.04E-04	4.03E-03	1.77E-02
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**4.01E-01**	**1.76E+00**	**0.00E+00**	**0.00E+00**	**4.68E-03**	**2.05E-02**	**2.18E-05**	**9.57E-05**	**2.46E-04**	**1.08E-03**	**6.16E-03**	**2.70E-02**

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

Total Emissions

Unit		VOC Emissions		H_2S Emissions		HAP Emissions		CO_2		CH_4		CO_2e Emissions	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
FG-01	**Total Emissions**	**0.433**	**1.90**	**0.0010**	**0.0046**	**0.00561**	**0.0246**	**0.0062**	**0.027**	**0.20**	**0.86**	**4.92**	**21.55**

Speciated HAP Emission Calculations

Unit: *FG-01*

Inlet Gas

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flanges	3.90E-04	36	1.52E-04	6.65E-04	3.58E-05	1.57E-04	3.40E-05	1.49E-04	8.09E-06	3.54E-05	2.52E-05	1.11E-04
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Valves	4.50E-03	8	3.89E-04	1.71E-03	9.18E-05	4.02E-04	8.72E-05	3.82E-04	2.07E-05	9.08E-05	6.47E-05	2.83E-04
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**5.41E-04**	**2.37E-03**	**1.28E-04**	**5.59E-04**	**1.21E-04**	**5.31E-04**	**2.88E-05**	**1.26E-04**	**8.99E-05**	**3.94E-04**

Residue Gas

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Flanges	3.90E-04	48	2.11E-07	9.24E-07	1.91E-07	8.38E-07	1.13E-06	4.94E-06	1.30E-06	5.69E-06	2.34E-06	1.02E-05
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Valves	4.50E-03	12	6.09E-07	2.67E-06	5.52E-07	2.42E-06	3.25E-06	1.42E-05	3.75E-06	1.64E-05	6.75E-06	2.96E-05
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**8.20E-07**	**3.59E-06**	**7.43E-07**	**3.25E-06**	**4.38E-06**	**1.92E-05**	**5.05E-06**	**2.21E-05**	**9.09E-06**	**3.98E-05**

Y-Grade (NGL)

Component	Emission Factors (kg/hr/source)[1] Gas	Component Count	n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Connectors	2.00E-04	36	0.00E+00	0.00E+00	8.32E-05	3.64E-04	4.44E-05	1.95E-04	2.86E-06	1.25E-05	5.56E-06	2.43E-05
Flanges	3.90E-04	152	0.00E+00	0.00E+00	6.85E-04	3.00E-03	3.66E-04	1.60E-03	2.35E-05	1.03E-04	4.57E-05	2.00E-04
Open-Ended Lines	2.00E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pump Seals	2.40E-03	8	0.00E+00	0.00E+00	2.22E-04	9.71E-04	1.19E-04	5.19E-04	7.62E-06	3.34E-05	1.48E-05	6.49E-05
Valves	4.50E-03	36	0.00E+00	0.00E+00	1.87E-03	8.20E-03	1.00E-03	4.38E-03	6.43E-05	2.82E-04	1.25E-04	5.48E-04
Other	8.80E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			**0.00E+00**	**0.00E+00**	**2.86E-03**	**1.25E-02**	**1.53E-03**	**6.70E-03**	**9.83E-05**	**4.30E-04**	**1.91E-04**	**8.37E-04**

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

Total Speciated HAP Emissions

Unit		n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
FG-01	**Total Speciated HAP Emissions**	**5.42E-04**	**2.37E-03**	**2.99E-03**	**1.31E-02**	**1.65E-03**	**7.25E-03**	**1.32E-04**	**5.79E-04**	**2.90E-04**	**1.27E-03**

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Targa Midstream Services, LLC
Monument Gas Plant

Description: Scrubbers and Coalescers Fugitive Emissions
Unit: FUG-IS **(Unchanged)**

Component	Emission Factors (kg/hr/source)[1] Gas	Gas	Propane Fractionation Component Count Inlet Gas	Residue Gas	LDAR % Reduction	Total Emissions kg/hr	lb/hr	VOC Emissions lb/hr	H_2S Emissions lb/hr	HAP Emissions lb/hr	CO_2 Emissions lb/hr
Connectors	2.00E-04	2.00E-04	-	-		-	-	-	-	-	-
Valves	4.50E-03	4.50E-03	72	65		0.62	1.36	0.22	0.053	9.32E-04	0.017
Other	8.80E-03	8.80E-03	-	-		-	-	-	-	-	-
							TOTAL	**0.22**	**0.053**	**9.32E-04**	**0.017**

Notes

[1] Emission factors from Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

[2] As a conservative measure the stream were assumed as:

wt% VOC Inlet Gas: 28.68%
wt% VOC Residue Gas: 2.73%
wt% H2S Inlet Gas: 7.38%
wt% H2S Residue Gas: 0.000038%
wt% HAPs Inlet Gas: 0.33%
wt% HAPs Residue Gas: 0.011%
wt% CO_2 Inlet Gas: 5.18%
wt% CO_2 Residue Gas: 0.94%

Targa Midstream Services, LLC
Monument Gas Plant

Pressurized Liquid Loading Emissions (Updated - 0110-M11R4)

L-02 is insignificant per IA List Item #1.a

Emission unit number(s): L-02
Source description: Pressurized Liquid Loading Emissions

Equation:

$$L_L = \frac{(P+14.7)*(V_{Hose})*MW*}{14.7*(359\ scf/lbmol)}$$

Variables:

L_L - Loading Loss (lbs)
P - Pressure of Tank (psig)
V_{Hose} - Volume of Hose (ft^3) = $pi*D^2*H/4$
MW - Molecular Weight of Vapor (lb/lb mol)

Material Loaded	Loading Method	L (ft)	D (ft)	P (psig)	MW (lb/lbmol)	Max Loads per Hour	Max Hourly Emissions (lb/hr)
Propane	Pressurized	30.0	0.1667	5	44.10	1	0.11

Material Loaded	Loading Method	L (ft)	D (ft)	P (psig)	MW (lb/lbmol)	Loads per Year[1]	Annual Emissions (tpy)
Propane	Pressurized	30.0	0.1667	5	44.10	3,000	0.162

[1]Loading losses from pressurized loading occur when the line between the pressurized tank and tank-truck is disconnected.
The necessary loads per year required was previously underestimated and has been updated with this application to accurately reflect propane extracted.

Targa Midstream Services, LLC
Monument Gas Plant

Propane Haul Road Emissions - Exempt per 20.2.72.202.B.5 (Updated - 0110M11R4)

Haul roads are insigificant per IA List Item 1.a

Emission Unit Number: Haul Roads
Source description: Haul road activity associated with propane production

Input Data

Empty vehicle weight[1]	16	tons	[1] Empty vehicle weight includes driver and occupants and full fuel load.
Load weight[2]	26.838	tons	[2] Cargo, transported materials, etc.
Loaded vehicle[3]	42.838	tons	[3] Loaded vehicle weight = Empty + Load Size
Mean vehicle weight[4]	29.419	tons	[4] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
Round-trip distance	0.25	mile/trip	Obtained from Google earth - measuring roundtrip truck route from fence line;
Trip frequency[5]	10	trips/hour	[5] Max trucks on road in one hour; conservative
Trip frequency[6]	87,600	trips/yr	[6] Max potential trucks per year; conservative
Surface silt content[7]	0.6	g/m^2	[7] AP-42 Table 13.2.1-2 - Paved Haul Roads < 500
Annual wet days[8]	60	days/yr	[8] AP-42 Figure 13.2.1-1
Vehicle miles traveled[9]	2.5	mile/hr	[9] VMT/hr = Vehicle Miles Traveled per hour= Trips per hour * Segment Length

Emission Factors and Constants

Parameter	PM_{10}	$PM_{2.5}$	
k, lb/VMT[10]	0.0022	0.00054	[10] Table 13.2.1-1, Paved Roads
Hourly EF, lb/VMT[11]	0.0435	0.0107	[11] AP-42 13.2.1, Equation 1
Annual EF, lb/VMT[12]	0.0364	0.00892	[12] AP-42 13.2.1, Equation 2

Haul Road Emission Calculations

	PM_{10}	$PM_{2.5}$	
Hourly emissions	0.11	0.027	lb/hr = Hourly EF (lb/VMT) * VMT (mile/hr)
Annual Emissions	0.40	0.098	ton/yr =Annual EF (lb/VMT) * VMT (mile/Trip) * Trips per year (Trip/yr) / 2000 (lb/tpy)

Targa Midstream Services, LLC - Monument Gas Plant

Haul Roads - Condensate - Exempt per 20.2.72.202.B.5 (Unchanged)

Haul Roads are insignificant per IA list item #1.a

Source description: Haul Road Emissions

Input Data

Empty vehicle weight[1]	16	tons	[1] Empty vehicle weight includes driver and occupants and full fuel load.
Load weight[2]	26.8	tons	[2] Cargo, transported materials, etc.
Loaded vehicle[3]	42.8	tons	[3] Loaded vehicle weight = Empty + Load Size
Mean vehicle weight[4]	29.4	tons	[4] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2
Round-trip distance	0.25	mile/trip	Obtained from Google earth - measuring roundtrip truck route from fence line;
Trip frequency[5]	3.0	trips/hour	[5] Max trucks on road in one hour;
Trip frequency[6]	2,438	trips/yr	Annual trucks per year requested;
Surface silt content[7]	0.6	g/m^2	[7] AP-42 Table 13.2.1-2 - Paved Haul Roads < 500
Annual wet days[8]	60	days/yr	[8] AP-42 Figure 13.2.1-1
Vehicle miles traveled[9]	0.8	mile/hr	[9] VMT/hr = Vehicle Miles Traveled per hour= Trips per hour * Segment Length

Emission Factors and Constants

Parameter	PM_{30}	PM_{10}	$PM_{2.5}$	
k, lb/VMT[10]	0.011	0.0022	0.00054	[10] Table 13.2.1-1, Paved Roads
Hourly EF, lb/VMT[11]	0.22	0.044	0.011	[11] AP-42 13.2.1, Equation 1
Annual EF, lb/VMT[12]	0.18	0.036	0.0089	[12] AP-42 13.2.1, Equation 2

Haul Road Emission Calculations

	PM_{30}	PM_{10}	$PM_{2.5}$	
Hourly emissions	0.16	0.033	0.008	lb/hr = Hourly EF (lb/VMT) * VMT (mile/hr)
Annual Emissions	0.055	0.011	0.0027	ton/yr =Annual EF (lb/VMT) * VMT (mile/Trip) * Trips per year (Trip/yr) / 2000 (lb/tpy)

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Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Summary of SSM Emissions and Activities

Unit	Description	NOx		CO		VOC		H_2S		SO_2		Source of Emission Estimate	SSM Activity
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy		
F-01	Flare F-01	522.42	16.45	1042.95	32.83	100.59	3.10	0.033	0.0010	3.06	0.11	Engineering Estimate[2]	2 plant blowdowns to flare per year
F-02	Flare F-02	631.03	1.97	1259.78	3.94	1063.16	2.36	72.94	0.19	6865.35	17.54	Engineering Estimate[2]	2 plant blowdowns to flare per year
F-03 (S1d)	S-1d - 24% H2S, 3.5 MMSCFD Acid Gas	**68.37**	3.93	**586.18**	33.71	**31.58**	1.82	**61.90**	3.56	**5817.53**	334.51	Engineering Estimate[2]	2 plant blowdowns plus AGI
F-03 (S2d)	S-2d - 24% H2S, 1.75 MMSCFD Acid Gas	51.56		442.10		23.05		30.95		2908.77		Engineering Estimate[2]	AGI SSM to Acid Gas Flare
PIG,SLUG	Pigging, slugging	-	-	-	-	1.20E-02	3.20E-04	6.70E-04	1.70E-05	-	-	Targa SSM emissions estimate	
Malf*	Malfunction	631.03	10.00	1259.78	10.00	1063.16	10.00	74.62	5.00	7022.6	10.00	Targa Malf emissions estimate	
SSM-PP	Pump Purging	-	-	-	-	-	0.12	-	-	-	-	Targa SSM emissions estimate	Purging
SSM-VP	Vessel Purging	-	-	-	-	-	0.0097	-	1.98E-04	-	-	Targa SSM emissions estimate	Purging
SSM-VRU**	VRU Downtime	-	-	-	-	-	-	-	-	-	-	A VRU backup is installed. No downtime other than malfunction.	
SSM-AGI	AGI Compressor to Atmosphere	-	-	-	-	-	5.04E-04	-	-	-	-	Targa SSM emissions estimate	6 blowdowns per year
SSM-SC	Slug catcher flaring	0.21	5.20E-04	0.42	0.0010	0.41	1.20E-04	0.0098	2.45E-05	0.92	0.0023	Targa SSM emissions estimate	Slug catcher flaring
SSM-Frac	De-ethanizer and de-propanizer	-	-	-	-	-	2.64	-	-	-	-	Targa SSM emissions estimate	4 blowdowns per year
SSM-AGI-C2	AGI Compressor to Atmosphere	-	-	-	-	0.15	0.0011	1.59E-04	1.10E-06	-	-	Targa SSM emissions estimate	
SSM-CB	Compressor Blowdown to Atmosphere	-	-	-	-	-	0.14	-	0.0076	-	-	Targa SSM emissions estimate	30 blowdowns per year
	Total Emissions	**1222.03**	**32.35**	**2889.33**	**80.47**	**1195.91**	**20.19**	**134.89**	**8.75**	**12686.87**	**362.16**	**Total of plant shutdown and SSM activities**	

"*" Malfunction emissions may result with emissions from venting (VOC or H_2S emissions) or any of the flares (F-01, F02, and F-03 flare emissions of NOx, CO, VOC, SOx, and H_2S). Hourly malfunction emissions shown in the table above are emissions with the highest hourly emissions. **These malfunction emissions are not summed in the totals column since the malfunction unit will not be adding hourly emissions. The flares are already permitted at their max hourly rate.**

"**" A VRU and backup VRU are installed on the condensate tanks. There will be no downtime on the VRU's other than during malfunction.

"-" Denotes emissions of this pollutant are not expected.

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Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Summary of Calculations for Compressor Blowdowns to Atmosphere (Unit SSM-CB, Updated - 0110-M11R1)

Unit	Blowdowns/yr	Unit Release (scf)	Yearly Release (scf) (Includes 15% Safety Factor)	Unit Pounds Released (lb)	H_2S Unit Pounds Released (lb)
C-1	30	65.80	2,270.08	3.86	0.058
C-2	30	65.80	2,270.08	3.86	0.058
C-4	30	41.78	1,441.48	2.45	0.037
C-5	30	41.78	1,441.48	2.45	0.037
C-6	30	41.78	1,441.48	2.45	0.037
C-24	30	244.00	8,418.07	14.33	0.22
RC-28 *	30	-	-	-	-
Combined Compressor Release		500.95	17,282.66		

*Unit C-28 switched to propane service; residue gas blowndown. Emissions added to total below. (Feb. '19)

Total Lbs Released	29.42		
Total Lbs Released	1,014.96	lbs	Combined annual compressor release (scf)/ Weighted total specific volume (scf/lb)

Gas Analysis 6

Component	%	Spec. Volume ft^3/lb	Weighted Specific Volume ft^3/lb	Lbs released annually by C-1 through C-24
N2	3.0	13.5	0.4	30.1
CO2	4.57	8.623	0.39	46.34
H2S	1.50	11.31	0.17	15.26
C1	54.30	23.65	12.84	551.16
C2	11.86	12.62	1.50	120.41
C3	10.62	8.606	0.91	107.78
iC4	2.12	6.529	0.14	21.49
nC4	5.11	6.529	0.33	51.83
iC5	1.90	5.26	0.10	19.26
nC5	1.69	5.26	0.09	17.15
C6	3.37	4.404	0.15	34.18
		Total	17.03	1014.96

Emission Calculations

	VOC	H_2S	
	251.7	15.3	lb/yr
	-	0.44	lb/hr
	0.13	0.0076	ton/yr

C-28 Emissions

	VOC	H_2S	
	4.57E-02	0.00	lb/hr
	7.88E-04	0.00	ton/yr

C-40 Emissions

	VOC	H_2S	
	9.31E-01	0.00	lb/hr
	1.61E-02	0.00	ton/yr

Total SSM-CB	VOC	H_2S	
	0.977	0.44	lb/hr
	0.143	0.0076	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-1 (Unit SSM-CB, Unchanged)

65.8	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
65.80	**Total Blowdown (SCF)**

51.2 **Cylinder 1 GHG (SCF)**	0.5 **Cylinder 2 GHG (SCF)**	0.5 **Cylinder 3 GHG (SCF)**
64.5 **Cylinder 1 Blowdown (SCF)**	0.7 **Cylinder 2 Blowdown (SCF)**	0.6 **Cylinder 3 Blowdown (SCF)**
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - NA**
76.0 Mol % Methane	**76.0** Mol % Methane	**76.0** Mol % Methane
3.3 Mol % CO2	**3.3** Mol % CO2	**3.3** Mol % CO2
Cylinder Volume	**Cylinder Volume**	**Cylinder Volume**
8.0 Diameter (ID inches)	8.0 Diameter (ID inches)	8.0 Diameter (ID inches)
1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
0.7 Volume (CF)	0.7 Volume (CF)	0.6 Volume (CF)
Cylinder Suction Bottle	**Cylinder Suction Bottle**	**Cylinder Suction Bottle**
	** Note Common Bottle	
16.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
15.5 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
35.0 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Bottle	**Cylinder Discharge Bottle**	**Cylinder Discharge Bottle**
	** Note Common Bottle	
14.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.5 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
18.3 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
8.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.0 Length (Feet)	13.0 Length (Feet)	22.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
7.3 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
6.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.0 Length (Feet)	10.0 Length (Feet)	10.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
3.2 Volume (CF)	- Volume (CF)	- Volume (CF)

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Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-2 (Unit SSM-CB, Unchanged)

65.8	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
65.80	**Total Blowdown (SCF)**

51.2 **Cylinder 1 GHG (SCF)**	0.5 **Cylinder 2 GHG (SCF)**	0.5 **Cylinder 3 GHG (SCF)**
64.5 **Cylinder 1 Blowdown (SCF)**	0.7 **Cylinder 2 Blowdown (SCF)**	0.6 **Cylinder 3 Blowdown (SCF)**
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - NA**
76.0 Mol % Methane	**76.0** Mol % Methane	**76.0** Mol % Methane
3.3 Mol % CO2	**3.3** Mol % CO2	**3.3** Mol % CO2
Cylinder Volume	**Cylinder Volume**	**Cylinder Volume**
8.0 Diameter (ID inches)	8.0 Diameter (ID inches)	8.0 Diameter (ID inches)
1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
0.7 Volume (CF)	0.7 Volume (CF)	0.6 Volume (CF)
Cylinder Suction Bottle	**Cylinder Suction Bottle**	**Cylinder Suction Bottle**
	** Note Common Bottle	
16.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
15.5 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
35.0 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Bottle	**Cylinder Discharge Bottle**	**Cylinder Discharge Bottle**
	** Note Common Bottle	
14.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.5 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
18.3 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
8.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.0 Length (Feet)	13.0 Length (Feet)	22.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
7.3 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
6.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.0 Length (Feet)	10.0 Length (Feet)	10.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
3.2 Volume (CF)	- Volume (CF)	- Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-4 (Unit SSM-CB, Unchanged)

41.8	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
41.78	**Total Blowdown (SCF)**

32.4 **Cylinder 1 GHG (SCF)**	0.4 **Cylinder 2 GHG (SCF)**	0.4 **Cylinder 3 GHG (SCF)**
40.8 **Cylinder 1 Blowdown (SCF)**	0.5 **Cylinder 2 Blowdown (SCF)**	0.5 **Cylinder 3 Blowdown (SCF)**
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - NA**
76.0 Mol % Methane	**76.0** Mol % Methane	**76.0** Mol % Methane
3.3 Mol % CO2	**3.3** Mol % CO2	**3.3** Mol % CO2
Cylinder Volume	**Cylinder Volume**	**Cylinder Volume**
7.0 Diameter (ID inches)	7.0 Diameter (ID inches)	7.0 Diameter (ID inches)
1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
0.5 Volume (CF)	0.5 Volume (CF)	0.5 Volume (CF)
Cylinder Suction Bottle	**Cylinder Suction Bottle**	**Cylinder Suction Bottle**
	** Note Common Bottle	
14.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
22.9 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Bottle	**Cylinder Discharge Bottle**	**Cylinder Discharge Bottle**
	** Note Common Bottle	
12.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
11.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
11.2 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
6.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
16.0 Length (Feet)	13.0 Length (Feet)	22.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
5.1 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
4.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
10.0 Length (Feet)	10.0 Length (Feet)	10.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
1.1 Volume (CF)	- Volume (CF)	- Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-5 (Unit SSM-CB, Unchanged)

41.8	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
41.78	**Total Blowdown (SCF)**

32.4 **Cylinder 1 GHG (SCF)**	0.4 **Cylinder 2 GHG (SCF)**	0.4 **Cylinder 3 GHG (SCF)**
40.8 **Cylinder 1 Blowdown (SCF)**	0.5 **Cylinder 2 Blowdown (SCF)**	0.5 **Cylinder 3 Blowdown (SCF)**
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - NA**
76.0 Mol % Methane	**76.0** Mol % Methane	**76.0** Mol % Methane
3.3 Mol % CO2	**3.3** Mol % CO2	**3.3** Mol % CO2
Cylinder Volume	**Cylinder Volume**	**Cylinder Volume**
7.0 Diameter (ID inches)	7.0 Diameter (ID inches)	7.0 Diameter (ID inches)
1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
0.5 Volume (CF)	0.5 Volume (CF)	0.5 Volume (CF)
Cylinder Suction Bottle	**Cylinder Suction Bottle**	**Cylinder Suction Bottle**
	** Note Common Bottle	
14.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
22.9 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Bottle	**Cylinder Discharge Bottle**	**Cylinder Discharge Bottle**
	** Note Common Bottle	
12.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
11.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
11.2 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
6.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
16.0 Length (Feet)	13.0 Length (Feet)	22.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
5.1 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
4.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
10.0 Length (Feet)	10.0 Length (Feet)	10.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
1.1 Volume (CF)	- Volume (CF)	- Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-6 (Unit SSM-CB, Unchanged)

41.8	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
41.78	**Total Blowdown (SCF)**

32.4 **Cylinder 1 GHG (SCF)**	0.4 **Cylinder 2 GHG (SCF)**	0.4 **Cylinder 3 GHG (SCF)**
40.8 **Cylinder 1 Blowdown (SCF)**	0.5 **Cylinder 2 Blowdown (SCF)**	0.5 **Cylinder 3 Blowdown (SCF)**
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - NA**
76.0 Mol % Methane	**76.0** Mol % Methane	**76.0** Mol % Methane
3.3 Mol % CO2	**3.3** Mol % CO2	**3.3** Mol % CO2
Cylinder Volume	**Cylinder Volume**	**Cylinder Volume**
7.0 Diameter (ID inches)	7.0 Diameter (ID inches)	7.0 Diameter (ID inches)
1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)	1.2 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
0.5 Volume (CF)	0.5 Volume (CF)	0.5 Volume (CF)
Cylinder Suction Bottle	**Cylinder Suction Bottle**	**Cylinder Suction Bottle**
	** Note Common Bottle	
14.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
13.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
22.9 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Bottle	**Cylinder Discharge Bottle**	**Cylinder Discharge Bottle**
	** Note Common Bottle	
12.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
11.3 Length (Feet)	12.0 Length (Feet)	12.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
11.2 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
6.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
16.0 Length (Feet)	13.0 Length (Feet)	22.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
80.0 Temperature (F)	80.0 Temperature (F)	120.0 Temperature (F)
5.1 Volume (CF)	- Volume (CF)	- Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
4.0 Diameter (ID inches)	- Diameter (ID inches)	- Diameter (ID inches)
10.0 Length (Feet)	10.0 Length (Feet)	10.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	10.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
1.1 Volume (CF)	- Volume (CF)	- Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Volume Calculation for Blowdown of Compressor C-24 (Unit SSM-CB, Unchanged)

244.0	**Unit Blowdown (SCF)**
1	**Number of Unit Blowdowns**
244.0	**Total Blowdown (SCF)**

150.1	**Cylinder 1 GHG (SCF)**	5.2	**Cylinder 2 GHG (SCF)**	1.1	**Cylinder 3 GHG (SCF)**	37.1	**Cylinder 4 GHG (SCF)**
189.2	**Cylinder 1 Blowdown (SCF)**	6.6	**Cylinder 2 Blowdown (SCF)**	1.4	**Cylinder 3 Blowdown (SCF)**	46.8	**Cylinder 4 Blowdown (SCF)**
Cylinder #1 - 1st Stage		**Cylinder #2 - 1st Stage**		**Cylinder #3 - 2nd Stage**		**Cylinder #4 - 2nd Stage**	
76.0	Mol % Methane	**76.0**	Mol % Methane	**76.0**	Mol % Methane	**76.0**	Mol % Methane
3.3	Mol % CO2	**3.3**	Mol % CO2	**3.3**	Mol % CO2	**3.3**	Mol % CO2
Cylinder Volume		**Cylinder Volume**		**Cylinder Volume**		**Cylinder Volume**	
25.0	Diameter (ID inches)	25.0	Diameter (ID inches)	12.0	Diameter (ID inches)	12.0	Diameter (ID inches)
1.2	Length, Stroke (Feet)	1.2	Length, Stroke (Feet)	1.2	Length, Stroke (Feet)	1.2	Length, Stroke (Feet)
30.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	120.0	Temperature (F)	120.0	Temperature (F)
12.0	Volume (CF)	6.6	Volume (CF)	1.4	Volume (CF)	1.4	Volume (CF)
Cylinder Suction Bottle		**Cylinder Suction Bottle**		**Cylinder Suction Bottle**		**Cylinder Suction Bottle**	
			** Note Common Bottle				
28.0	Diameter (ID inches)	-	Diameter (ID inches)	-	Diameter (ID inches)	14.0	Diameter (ID inches)
10.5	Length (Feet)	12.0	Length (Feet)	12.0	Length (Feet)	9.8	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	120.0	Temperature (F)	120.0	Temperature (F)
72.6	Volume (CF)	-	Volume (CF)	-	Volume (CF)	15.7	Volume (CF)
Cylinder Discharge Bottle		**Cylinder Discharge Bottle**		**Cylinder Discharge Bottle**		**Cylinder Discharge Bottle**	
			** Note Common Bottle				
20.0	Diameter (ID inches)	-	Diameter (ID inches)	-	Diameter (ID inches)	12.0	Diameter (ID inches)
7.6	Length (Feet)	12.0	Length (Feet)	12.0	Length (Feet)	6.3	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
230.0	Temperature (F)	230.0	Temperature (F)	230.0	Temperature (F)	230.0	Temperature (F)
21.0	Volume (CF)	-	Volume (CF)	-	Volume (CF)	6.2	Volume (CF)
Cylinder Suction Pipe		**Cylinder Suction Pipe**		**Cylinder Suction Pipe**		**Cylinder Suction Pipe**	
18.0	Diameter (ID inches)	-	Diameter (ID inches)	-	Diameter (ID inches)	10.0	Diameter (ID inches)
20.0	Length (Feet)	15.0	Length (Feet)	22.0	Length (Feet)	20.0	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	120.0	Temperature (F)	120.0	Temperature (F)
57.1	Volume (CF)	-	Volume (CF)	-	Volume (CF)	16.4	Volume (CF)
Cylinder Discharge Pipe		**Cylinder Discharge Pipe**		**Cylinder Discharge Pipe**		**Cylinder Discharge Pipe**	
16.0	Diameter (ID inches)	-	Diameter (ID inches)	-	Diameter (ID inches)	8.0	Diameter (ID inches)
15.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	16.0	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
230.0	Temperature (F)	230.0	Temperature (F)	230.0	Temperature (F)	230.0	Temperature (F)
26.5	Volume (CF)	-	Volume (CF)	-	Volume (CF)	7.1	Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant

Description: RC-28 Compressor Purging Emissions
Unit: SSM-CB (For RC-28 Only) Unchanged

Inputs

Parameter	Value	Units	Notes
Number of Compressors	1	-	Facility design
Blowdowns per year	30	per unit	Facility design
Duration of blowdown	1	hours	Facility design, no simultaneous events

Vessel	Volume ft^3	Emissions routed to...	Volume to atmosphere ft^3/hr	Volume to atmosphere ft^3/yr
Compressor	61.00	Atmosphere	61.00	2,104.50
Total			**61.00**	**2,104.50**

Vessel	Volume routed to atmosphere ft^3/hr	Volume routed to atmosphere ft^3/yr	Mass Percent VOC	Molecular Wt lb/lb-mol	VOC lb/hr	VOC ton/yr
Compressor	61.00	2,104.50	1.6%	17.9	4.6E-02	7.9E-04
				Total	**4.6E-02**	**7.9E-04**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CO_2 wt %	Molecular wt	CO_2 (lb/hr)	CO_2 (ton/yr)
CH4 Emissions	61	2,104.50	0.27%	17.9	-	1.33E-04
				Total	**-**	**0.0001**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CH_4 wt %	Molecular wt	CH_4 (lb/hr)	CH_4 (ton/yr)
CH4 Emissions	61	2,104.50	77.98%	17.9	-	0.039
				Total	**-**	**0.039**

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Targa Midstream Services, LLC
Monument Gas Plant

Description: C-40 Compressor Purging Emissions
Unit: SSM-CB (for C-40 Only, **New - 0110-M11R1**)
Annual Vol. Safety Factor[1] 15%
VRU BD Capture Efficiency 87%

Inputs

Parameter	Value	Units	Notes
Number of Compressors	1	-	Facility design
Blowdowns per year	30	per unit	Facility design
Duration of blowdown	1	hours	Facility design, no simultaneous events

Vessel	Volume ft^3	Emissions routed to...	Volume to atmosphere ft^3/hr	Volume to atmosphere ft^3/yr[1]
Compressor	8,317.1	Process Vessels	0.00E+00	0.00E+00
Compressor	1,242.8	Atmosphere	1,242.8	42,876.2
Total			**1,242.8**	**42,876.2**

[1] Safety factor added to annual volume vented to atmosphere.

Vessel	Volume routed to atmosphere ft^3/hr	Volume routed to atmosphere ft^3/yr	Mass Percent VOC	Molecular Wt lb/lb-mol	VOC lb/hr	VOC ton/yr
Compressor	1,242.8	42,876.2	1.6%	17.9	0.93	0.016
				Total	**0.93**	**0.016**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CO_2 wt %	Molecular Wt lb/lb-mol	CO_2 (lb/hr)	CO_2 (ton/yr)
CO_2 Emissions	1,242.8	42,876.2	0.27%	17.9	-	0.0027
				Total	**-**	**0.0027**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CH_4 wt %	Molecular Wt lb/lb-mol	CH_4 (lb/hr)	CH_4 (ton/yr)
CH_4 Emissions	1,242.8	42,876.2	77.98%	17.9	-	0.79
				Total	**-**	**0.79**

Basis of Calculation:
Emissions from compressor maintenance activities are calculated based on a mass balance as follows:

Maximum Uncontrolled Hourly Emissions (pph) = [Volume of Gas Vented (scf/hr)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] / [379.5 (scf/lb-mol)]

Targa Midstream Services, LLC
Monument Gas Plant - SSM-PP Emissions

Pump Purging SSM Emissions Summary (Unit SSM-PP, Updated - 0110-M11R4)

Unit	VOC		H_2S		Total HAPs		CO2
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	tpy
Historically Permitted SSM-PP	***-***	***0.011***	***-***	***-***	***-***	***-***	***-***
PM-101	0.72	0.00036	-	-	-	-	-
PM-102	0.72	0.00036	-	-	-	-	-
PM-103	0.72	0.00036	-	-	-	-	-
PM-105	0.39	0.00020	-	-	-	-	-
PM-107	1.91	0.00095	-	-	-	-	-
PM-108	4.43	0.0022	-	-	-	-	-
PM-109	2.96	0.0015	-	-	-	-	-
PM-111	0.39	0.00020	-	-	-	-	-
PM-138	7.49	0.0037	-	-	-	-	-
PM-139	1.60	0.00080	-	-	-	-	-
PM-140	1.48	0.00074	-	-	-	-	-
Cryo-PP	0.025	0.11	-	-	-	-	-
SSM-PP	**22.85**	**0.12**	**0.000**	**0.00**	**0.000**	**0.00**	**0.0000**

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-138 Pipeline Pumps (Unit SSM-PP, Unchanged)

PM -138A		PM -138B		PM -138C		PM -138D		PM -138E		PM -138F	
Inlet		Inlet		Inlet		Inlet		Inlet		Inlet	
4.0	Diameter (ID inches)	4.0	Diameter (ID inches)	4.0	Diameter (ID inches)	4.0	Diameter (ID inches)	3.0	Diameter (ID inches)	3.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.9	Volume (CF)	0.9	Volume (CF)	0.9	Volume (CF)	0.9	Volume (CF)	0.5	Volume (CF)	0.5	Volume (CF)
Outlet		Outlet		Outlet		Outlet		Outlet		Outlet	
3.0	Diameter (ID inches)	3.0	Diameter (ID inches)	3.0	Diameter (ID inches)	3.0	Diameter (ID inches)	2.0	Diameter (ID inches)	2.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.5	Volume (CF)	0.5	Volume (CF)	0.5	Volume (CF)	0.5	Volume (CF)	0.2	Volume (CF)	0.2	Volume (CF)
Bore		Bore		Bore		Bore		Bore		Bore	
8.0	Diameter (ID inches)	8.0	Diameter (ID inches)	8.0	Diameter (ID inches)	8.0	Diameter (ID inches)	6.0	Diameter (ID inches)	6.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)
0.7	Volume (CF)	0.7	Volume (CF)	0.7	Volume (CF)	0.7	Volume (CF)	0.4	Volume (CF)	0.4	Volume (CF)
2.06	Total CF/purge	2.06	Total CF/purge	2.06	Total CF/purge	2.06	Total CF/purge	1.10	Total CF/purge	1.10	Total CF/purge
8.00	purges/yr	8.00	purges/yr	8.00	purges/yr	8.00	purges/yr	8.00	purges/yr	8.00	purges/yr
16.49	scf/yr	16.49	scf/yr	16.49	scf/yr	16.49	scf/yr	8.81	scf/yr	8.81	scf/yr

Total Volume:	83.60	scf/yr
Total Volume With 15% Safety Factor:	96.1	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0043
C1	0.38	23.7	0.1	0.0413
C2	30.57	12.62	3.86	3.3186
C3	31.87	8.606	2.74	3.4597
iC4	5.95	6.529	0.39	0.6459
nC4	14.82	6.529	0.97	1.6088
iC5	5.05	5.26	0.27	0.5482
nC5	4.8	5.26	0.25	0.5211
C6	6.52	4.404	0.29	0.7078
Total	100.0		8.9	10.9

Emission Calculations

VOC	H_2S	
7.5	-	lb/yr
-	-	lb/hr
0.0037	-	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-140 Sour Truck Unloading Pump (Unit SSM-PP, Unchanged)

PM -138A

Inlet		
4.0	Diameter (ID inches)	
10.0	Length (Feet)	
0.9	Volume (CF)	
Outlet		
3.0	Diameter (ID inches)	
10.0	Length (Feet)	
0.5	Volume (CF)	
Bore		
8.0	Diameter (ID inches)	
2.0	Length (Feet)	
0.7	Volume (CF)	
2.06	Total CF/purge	
8.00	purges/yr	
16.49	scf/yr	

Total Volume:	16.49	scf/yr
Total Volume With 15% Safety Factor:	19.0	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0009
C1	0.38	23.7	0.1	0.0081
C2	30.57	12.62	3.86	0.6547
C3	31.87	8.606	2.74	0.6825
iC4	5.95	6.529	0.39	0.1274
nC4	14.82	6.529	0.97	0.3174
iC5	5.05	5.26	0.27	0.1082
nC5	4.8	5.26	0.25	0.1028
C6	6.52	4.404	0.29	0.1396
Total	100.0		8.9	2.1

Emission Calculations

VOC	H_2S	
1.5	-	lb/yr
-	-	lb/hr
0.0007	-	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-109 Depropanizer Reflux Pumps (Unit SSM-PP, Unchanged)

PM -109A		PM -109B	
Inlet		Inlet	
4.0	Diameter (ID inches)	4.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)
0.9	Volume (CF)	0.9	Volume (CF)
Outlet		Outlet	
3.0	Diameter (ID inches)	3.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)
0.5	Volume (CF)	0.5	Volume (CF)
Bore		Bore	
8.0	Diameter (ID inches)	8.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)
0.7	Volume (CF)	0.7	Volume (CF)
2.06	Total CF/purge	2.06	Total CF/purge
8.00	purges/yr	8.00	purges/yr
16.49	scf/yr	16.49	scf/yr

Total Volume:	32.99	scf/yr
Total Volume With 15% Safety Factor:	37.9	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0017
C1	0.38	23.7	0.1	0.0163
C2	30.57	12.62	3.86	1.3094
C3	31.87	8.606	2.74	1.3651
iC4	5.95	6.529	0.39	0.2549
nC4	14.82	6.529	0.97	0.6348
iC5	5.05	5.26	0.27	0.2163
nC5	4.8	5.26	0.25	0.2056
C6	6.52	4.404	0.29	0.2793
Total	100.0		8.9	4.3

Emission Calculations

VOC	H_2S	
3.0	-	lb/yr
-	-	lb/hr
0.0015	-	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-108 Deethanizer reflux Pumps (Unit SSM-PP, Unchanged)

PM -108A		PM -108B		PM -108C	
Inlet		Inlet		Inlet	
4.0	Diameter (ID inches)	4.0	Diameter (ID inches)	4.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.9	Volume (CF)	0.9	Volume (CF)	0.9	Volume (CF)
Outlet		Outlet		Outlet	
3.0	Diameter (ID inches)	3.0	Diameter (ID inches)	3.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.5	Volume (CF)	0.5	Volume (CF)	0.5	Volume (CF)
Bore		Bore		Bore	
8.0	Diameter (ID inches)	8.0	Diameter (ID inches)	8.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)
0.7	Volume (CF)	0.7	Volume (CF)	0.7	Volume (CF)
2.06	Total CF/purge	2.06	Total CF/purge	2.06	Total CF/purge
8.00	purges/yr	8.00	purges/yr	8.00	purges/yr
16.49	scf/yr	16.49	scf/yr	16.49	scf/yr

Total Volume:	49.48	scf/yr
Total Volume With 15% Safety Factor:	56.9	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0026
C1	0.38	23.7	0.1	0.0244
C2	30.57	12.62	3.86	1.9641
C3	31.87	8.606	2.74	2.0476
iC4	5.95	6.529	0.39	0.3823
nC4	14.82	6.529	0.97	0.9522
iC5	5.05	5.26	0.27	0.3245
nC5	4.8	5.26	0.25	0.3084
C6	6.52	4.404	0.29	0.4189
Total	100.0		8.9	6.4

Emission Calculations

VOC	H_2S	
4.4	-	lb/yr
-	-	lb/hr
0.0022	-	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-105 Demethanizer Pumps (Unit SSM-PP, Unchanged)

PM -105A			PM -105B	
Inlet			Inlet	
3.0	Diameter (ID inches)		3.0	Diameter (ID inches)
10.0	Length (Feet)		10.0	Length (Feet)
0.5	Volume (CF)		0.5	Volume (CF)
Outlet			Outlet	
2.0	Diameter (ID inches)		2.0	Diameter (ID inches)
10.0	Length (Feet)		10.0	Length (Feet)
0.2	Volume (CF)		0.2	Volume (CF)
Bore			Bore	
6.0	Diameter (ID inches)		6.0	Diameter (ID inches)
2.0	Length (Feet)		2.0	Length (Feet)
0.4	Volume (CF)		0.4	Volume (CF)
1.10	Total CF/purge		1.10	Total CF/purge
2.00	purge/yr		2.00	purge/yr
2.20	scf/yr		2.20	scf/yr

Total Volume:	4.41	scf/yr
Total Volume With 15% Safety Factor:	5.07	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0002
C1	0.38	23.7	0.1	0.0022
C2	30.57	12.62	3.86	0.1749
C3	31.87	8.606	2.74	0.1824
iC4	5.95	6.529	0.39	0.0340
nC4	14.82	6.529	0.97	0.0848
iC5	5.05	5.26	0.27	0.0289
nC5	4.8	5.26	0.25	0.0275
C6	6.52	4.404	0.29	0.0373
Total	100.0		8.9	0.572

Emission Calculations

VOC	H_2S	
0.39	-	lb/yr
-	-	lb/hr
1.97E-04	-	ton/yr

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Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-139 Propane Truck Loading Pumps (Unit SSM-PP, Unchanged)

PM -139A			PM -139B			PM -139C		
Inlet			Inlet			Inlet		
	4.0	Diameter (ID inches)		4.0	Diameter (ID inches)		4.0	Diameter (ID inches)
	10.0	Length (Feet)		10.0	Length (Feet)		10.0	Length (Feet)
	0.9	Volume (CF)		0.9	Volume (CF)		0.9	Volume (CF)
Outlet			Outlet			Outlet		
	3.0	Diameter (ID inches)		3.0	Diameter (ID inches)		3.0	Diameter (ID inches)
	10.0	Length (Feet)		10.0	Length (Feet)		10.0	Length (Feet)
	0.5	Volume (CF)		0.5	Volume (CF)		0.5	Volume (CF)
Bore			Bore			Bore		
	8.0	Diameter (ID inches)		8.0	Diameter (ID inches)		8.0	Diameter (ID inches)
	2.0	Length (Feet)		2.0	Length (Feet)		2.0	Length (Feet)
	0.7	Volume (CF)		0.7	Volume (CF)		0.7	Volume (CF)
	2.06	Total CF/purge		2.06	Total CF/purge		2.06	Total CF/purge
	2.00	purges/yr		2.00	purges/yr		2.00	purges/yr
	4.12	scf/purge		4.12	scf/purge		4.12	scf/purge

Total Volume:	12.37	scf/yr
Total Volume With 15% Safety Factor:	14.2	scf/yr

Gas Analysis 10

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H20	0	11.31	0	0.0000
C1	0	23.7	0.0	0.0000
C2	2.1	12.62	0.26	0.0337
C3	97.9	8.606	8.43	1.6035
iC4	0	6.529	0.00	0.0000
nC4	0	6.529	0.00	0.0000
iC5	0	5.26	0.00	0.0000
nC5	0	5.26	0.00	0.0000
C6	0	4.404	0.00	0.0000
Total	100.0		8.7	1.6

Emission Calculations

VOC	H_2S	
1.6	-	lb/yr
-	-	lb/hr
8.0E-04	-	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-111 1840 Pumps (Unit SSM-PP, Unchanged)

PM -111A		PM -111B	
Inlet		Inlet	
3.0	Diameter (ID inches)	3.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)
0.5	Volume (CF)	0.5	Volume (CF)
Outlet		Outlet	
2.0	Diameter (ID inches)	2.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)
0.2	Volume (CF)	0.2	Volume (CF)
Bore		Bore	
6.0	Diameter (ID inches)	6.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)
0.4	Volume (CF)	0.4	Volume (CF)
1.10	Total CF/purge	1.10	Total CF/purge
2.00	Purge per year	2.00	Purge per year
2.20	scf per year	2.20	scf per year
8.24	Gallons	8.24	Gallons

Total Volume:	4.41	scf/yr
Total Volume With 15% Safety Factor:	5.1	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0002
C1	0.38	23.7	0.1	0.0022
C2	30.57	12.62	3.86	0.1749
C3	31.87	8.606	2.74	0.1824
iC4	5.95	6.529	0.39	0.0340
nC4	14.82	6.529	0.97	0.0848
iC5	5.05	5.26	0.27	0.0289
nC5	4.8	5.26	0.25	0.0275
C6	6.52	4.404	0.29	0.0373
Total	100.0		8.9	0.6

Emission Calculations

VOC	H_2S	
0.4	-	lb/yr
-	-	lb/hr
2.0E-04	-	ton/yr

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-107 Deethanizer Feed Pumps (Unit SSM-PP, Unchanged)

PM -107A		PM -107B		PM -107C	
Inlet		Inlet		Inlet	
6.0	Diameter (ID inches)	6.0	Diameter (ID inches)	6.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
2.0	Volume (CF)	2.0	Volume (CF)	2.0	Volume (CF)
Outlet		Outlet		Outlet	
3.0	Diameter (ID inches)	3.0	Diameter (ID inches)	3.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.5	Volume (CF)	0.5	Volume (CF)	0.5	Volume (CF)
Bore		Bore		Bore	
10.0	Diameter (ID inches)	10.0	Diameter (ID inches)	10.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)
1.1	Volume (CF)	1.1	Volume (CF)	1.1	Volume (CF)
3.55	Total CF/purge	3.55	Total CF/purge	3.55	Total CF/purge
2.00	purges/yr	2.00	purges/yr	2.00	purges/yr
7.09	scf/yr	7.09	scf/yr	7.09	scf/yr

Total Volume:	21.27	scf/yr
Total Volume With 15% Safety Factor:	24.5	scf/yr

Gas Analysis 9

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	0.040	11.31	0.004524	0.0011
C1	0.38	23.7	0.1	0.0105
C2	30.57	12.62	3.86	0.8444
C3	31.87	8.606	2.74	0.8803
iC4	5.95	6.529	0.39	0.1643
nC4	14.82	6.529	0.97	0.4093
iC5	5.05	5.26	0.27	0.1395
nC5	4.8	5.26	0.25	0.1326
C6	6.52	4.404	0.29	0.1801
Total	100		8.9	2.8

Emission Calculations

VOC	H_2S	
1.9	-	lb/yr
-	-	lb/hr
9.5E-04	-	ton/yr

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - PM-101, -102, -103 Inlet Scrubber Pumps (Unit SSM-PP, Unchanged)

PM -101		PM -102		PM -103	
Inlet		Inlet		Inlet	
2.0	Diameter (ID inches)	2.0	Diameter (ID inches)	2.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.2	Volume (CF)	0.2	Volume (CF)	0.2	Volume (CF)
Outlet		Outlet		Outlet	
2.0	Diameter (ID inches)	2.0	Diameter (ID inches)	2.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
0.2	Volume (CF)	0.2	Volume (CF)	0.2	Volume (CF)
Bore		Bore		Bore	
5.0	Diameter (ID inches)	5.0	Diameter (ID inches)	5.0	Diameter (ID inches)
2.0	Length (Feet)	2.0	Length (Feet)	2.0	Length (Feet)
0.3	Volume (CF)	0.3	Volume (CF)	0.3	Volume (CF)
0.71	Total CF/purge	0.71	Total CF	0.71	Total CF
2.00	purges/yr	2.00	purges/yr	2.00	purges/yr
1.42	scf/yr	1.42	scf/yr	1.42	scf/yr

Total Volume:	4.25	scf/yr
Total Volume With 15% Safety Factor:	4.9	scf/yr

Gas Analysis 8

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0.0000
H2S	17.3	11.31	1.95663	0.1512
C1	0	23.7	0.0	0.0000
C2	0	12.62	0.00	0.0000
C3	0	8.606	0.00	0.0000
iC4	0	6.529	0.00	0.0000
nC4	0	6.529	0.00	0.0000
iC5	0	5.26	0.00	0.0000
nC5	0	5.26	0.00	0.0000
C6	82.7	4.404	3.64	0.7227
Total	100		5.6	0.87

Emission Calculations

VOC	H_2S	
0.72	-	lb/yr
-	-	lb/hr
0.00036	-	ton/yr

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Pump Purging - (Unit SSM-PP, New - 0110-M11R4)

Absorber Bottoms Pumps (quantity x2)		
Afton 3x4-13 ILVS, one stage, 20 HP		
6", 3" I/O piping		
Max volume per pump maint. event:	0.25	MCF

DeC1 Bottoms Pump		
Afton 1.5x3-11 ILVS, one stage, 25 HP		
3", 2" I/O piping		
Max volume per pump maint. event:	0.125	MCF

Pipeline Pump		
Gaso Pumps Triplex, 60 HP		
I/O piping		
Max volume per pump maint. event:	0.25	MCF

Frequency of Pump Maintenance/yr:	4	
Total new pump SSM to atmosphere:	**2.50**	**MSCF/yr**
Total Volume with 25% safety factor:	**3.13**	**MSCF/yr**

Component	Gas Stream (wt%) Y-Grade (NGL)[1]	Specific Volume[2] (ft^3/lb)	Weighted Specific Volume[3] (ft^3/lb)	Annual Emissions[4] lb/yr	Annual Emissions[4] tpy
Hydrogen Sulfide	0.00%	11.30	0.00E+00	0.00E+00	0.00E+00
Nitrogen	0.03%	13.50	3.78E-03	1.61E-01	8.07E-05
Methane	0.05%	23.65	1.06E-02	4.55E-01	2.27E-04
Carbon Dioxide	0.00%	8.60	3.44E-04	1.47E-02	7.35E-06
Ethane	26.51%	12.62	3.35E+00	1.43E+02	7.15E-02
Propane	34.95%	8.61	3.01E+00	1.28E+02	6.42E-02
Iso-Butane	5.95%	6.53	3.89E-01	1.66E+01	8.30E-03
Nor-Butane	15.07%	6.53	9.84E-01	4.20E+01	2.10E-02
Iso-Pentane	4.58%	5.26	2.41E-01	1.03E+01	5.14E-03
Nor-Pentane	4.56%	5.26	2.40E-01	1.02E+01	5.12E-03
N-Hexane	0.00%	4.40	0.00E+00	0.00E+00	0.00E+00
Cyclohexane	0.79%	0.02	1.62E-04	6.90E-03	3.45E-06
Benzene	0.52%	4.86	2.55E-02	1.09E+00	5.44E-04
Toluene	0.28%	4.12	1.15E-02	4.93E-01	2.46E-04
Ethylbenzene	0.02%	3.57	6.43E-04	2.75E-02	1.37E-05
M&P-Xylene	0.03%	3.57	1.00E-03	4.27E-02	2.14E-05
O-Xylene	0.01%	3.57	2.50E-04	1.07E-02	5.34E-06
Other Hexanes+	6.66%	4.40	2.93E-01	1.25E+01	6.26E-03
		Total [4] =	8.554	**365.32**	**0.18**
		Total VOC =	-	221.79	0.11
		Total H_2S =	-	0.00E+00	0.00E+00
		Total HAP =	-	1.66	0.00083
		Total CO_2e =		11.38	0.0057

Notes:
(1) NGL Gas Analysis - Monument Demeth Tower. Date Sampled: 07/14/2021
(2) Component specific volumes obtained from Physical Properties of Hydrocarbons, API Research Project 44, Fig. 16-1, Rev. 1981
(3) Weighted Specific Volume = Component wt% * Specific Volume
(4) Annual vented gas emissions calculated as follows:
Total Annual Emissions (lb/yr) = Total new SSM volume (MSCF/yr) / Total Stream Specific Volume (ft^3/lb) * 1000 SCF/MSCF
Speciated Component Annual Emissions (lb/yr) = [Component Weighted Specific Volume (ft^3/lb) / Total Stream Specific Volume (ft^3/lb)]* Total Annual Emissions (lb/yr)
Annual Emissions (tpy) = Annual Emissions (lb/yr) / 2000 lb/ton

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for Vessel Purging Emissions (SSM-VP, Unchanged)

Iron Sponge Volume		**Cryo Inlet Filter Volume**		**Dust Filter Volume**		**F-114A Volume**		**F-114B Volume**	
78.0	Diameter (ID inches)	30.0	Diameter (ID inches)	20.0	Diameter (ID inches)	30.0	Diameter (ID inches)	48.0	Diameter (ID inches)
15.0	Length (Feet)	10.0	Length (Feet)	6.0	Length (Feet)	8.5	Length (Feet)	12.5	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)
804.7	Volume (CF)	79.4	Volume (CF)	21.2	Volume (CF)	67.5	Volume (CF)	254.0	Volume (CF)
Inlet Piping		**Inlet Piping**		**Inlet Piping**		**Inlet Piping**		**Inlet Piping**	
6.0	Diameter (ID inches)	10.0	Diameter (ID inches)	10.0	Diameter (ID inches)	14.0	Diameter (ID inches)	14.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)
3.2	Volume (CF)	8.8	Volume (CF)	8.8	Volume (CF)	17.3	Volume (CF)	17.3	Volume (CF)
Outlet Piping		**Outlet Piping**		**Outlet Piping**		**Outlet Piping**		**Outlet Piping**	
6.0	Diameter (ID inches)	10.0	Diameter (ID inches)	10.0	Diameter (ID inches)	14.0	Diameter (ID inches)	14.0	Diameter (ID inches)
10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)	10.0	Length (Feet)
10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)	10.0	Pressure (Psig)
80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)	80.0	Temperature (F)
3.2	Volume (CF)	8.8	Volume (CF)	8.8	Volume (CF)	17.3	Volume (CF)	17.3	Volume (CF)
811.06	Total Volume	97.00	Total Volume	38.80	Total Volume	102.02	Total Volume	288.52	Total Volume

	Iron Sponge	Cryo Inlet Filter Plus Dust Filter	F-114A Plus F-114B
Total Volume (CF):	811.06	135.79	390.54
Total Volume Plus 15% Safety Factor (CF):	932.72	156.16	449.12

Gas Analysis 4

Component	wt %	Specific Volume ft^3/lb	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	13.547	0	0
CO2	0	8.623	0	0
H2S	0	11.31	0	0
C1	73.8	23.7	17.5	35.3
C2	4.46	12.62	0.56	2.13
C3	9.31	8.606	0.80	4.45
iC4	1.86	6.529	0.12	0.89
nC4	4.48	6.529	0.29	2.14
iC5	1.66	5.26	0.09	0.79
nC5	1.48	5.26	0.08	0.71
C6	2.95	4.404	0.13	1.41
Total	100.0		19.5	47.8

Weighted specific volume = Specific volume * Percent component
Total lbs = Total volume / Weighted specific volume
Component lbs = Total pounds * % Component

Gas Analysis 5

Component	wt%	Weighted Spec. Vol. ft^3/lb	lbs
N2	0	0	0
CO2	0	0	0
H2S	0	0	0
C1	59.7	14.12	5.3
C2	13.04	1.65	1.15
C3	11.67	1.00	1.03
iC4	2.33	0.15	0.21
nC4	5.61	0.37	0.50
iC5	2.09	0.11	0.18
nC5	1.86	0.10	0.16
C6	3.7	0.16	0.33
Total	100	17.7	8.8

Gas Analysis 6

Component	wt %	Weighted Spec. Vol. ft^3/lb	lbs
N2	2.97	0.40	0.78
CO2	4.57	0.39	1.21
H2S	1.5	0.17	0.40
C1	54.3	12.84	14.3
C2	11.86	1.50	3.13
C3	10.62	0.91	2.80
iC4	2.12	0.14	0.56
nC4	5.11	0.33	1.35
iC5	1.9	0.10	0.50
nC5	1.69	0.09	0.45
C6	3.37	0.15	0.89
Total	100.0	17.0	26.4

Emission Calculations

VOC	H_2S	
19.3	0.40	lb/yr
-	0.40	lb/hr
0.0097	2.0E-04	ton/yr

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for VRU Downtime Emissions (Unit SSM-VRU, Unchanged)

VRU Downtime

0 Days
70 MSCFD
80.5 MSCFD including 15% safety factor
0 Total Volume MSCF per year

Gas Analysis 7 - Plant LP Recovery to Suc

Component	MW	Wet vol/mol	MW*Wet Vol %	HHV Btu/scf	BTU/scf* Wet Vol %	Spec. Volume ft^3/lb	Weighted Specific Volume ft^3/lb	Mass Fraction (Wet)	Spec. Volume VOC ft^3/lb
Water	18.02	0.00%	0		0	21.1	0	0	
Nitrogen	28.01	5.15%	1.4	0	0	13.5	0.70	0.045	
CO_2	44.01	0.40%	0.18	0	0	8.6	0.035	0.0055	
H_2S	34.08	0.60%	0.21	637.0	3.8	11.3	0.068	0.0063	
Methane	16.04	55.61%	8.9	1009.7	561.5	23.7	13.15	0.28	
Ethane	30.07	5.90%	1.8	1768.7	104.3	12.6	0.74	0.055	
Propane	44.10	8.47%	3.7	2517.2	213.3	8.6	0.73	0.12	1.62
I-Butane	58.12	3.02%	1.8	3252.6	98.3	6.5	0.20	0.054	0.58
N-Butane	58.12	9.40%	5.5	3262	306.5	6.5	0.61	0.17	1.80
I-Pentane	72.15	3.36%	2.4	3999.7	134.4	5.26	0.18	0.075	0.643
N-Pentane	72.15	3.61%	2.6	4008.7	144.8	5.26	0.19	0.081	0.69
Hexanes	86.2	4.48%	3.9	4756.1	213.0	4.4	0.20	0.12	0.86
Total		100.0%	32.36		1779.97		16.799	1.0	6.1849
Dry total		100%	*(mixture mol. wt)*		*(mixture heating value)*				
	NMHC	*38.24%*						61.3%	
	NMEHC (VOC)	*32.34%*							

Emission Calculations

VOC	**H_2S**	
-	1.8	**lb/hr**
0.0	**0.00**	**tpy**

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Blowdown Summary for De-ethanizer and Depropanizer (SSM-Frac,Unchanged)

De-C2 System blow down volume for Emissions
Total De-ethanizer **3,258** scf/blowdown

De-C3 System Blow Down Volume for Emissions
Total Depropanizer **8,119** scf/blowdown

Propane Specific Volume (ft^3/lb)	VOC Emissions (lb/blowdown)	Blowdown Duration (hr)	Blowdowns per Year	VOC Emissions (lb/hr)	VOC Emissions (ton/yr)
8.606	**1321.95**	1	4	1321.95	**2.64**

Site **Monument Plant**
System **De-ethanizer**
Tower, Reboiler, reflux accumilator, preheater, and feed exchanger

Volume at Operating Conditions	61,479	SCF
Reduction of volume do to blowing down to field	58,764	SCF
Gas to Atm from vessels	2,715	SCF
Mark up for piping	543	SCF
Total De-ethanizer	**3,258**	**SCF**

De-C2 Tower — **O.C. Volume 41,090 (SCF)** — **I.C. Volume 1,802 (SCF)**

	Physical Properties			Operating Conditions			Initial Conditions		
Description	Diameter (ID inches)	Length (ft)	# of tubes	Pressure (PSIG)	Temp. (F)	Volume (CF)	Pressure (PSIG)	Temp. (F)	Volume (CF)
internal volume	48.00	100.0		485.00	75.00	**41,090**	7.00	75.00	**1801.84**
	Physical Properties								
Description	Length (ID inches)	wideth (in)	height (in)	diameter (inches)	# of units	Volume (CF)			
tray volume			0.25	48.0	40	**10.47**			
down comers	8.0	1.0	0.25		40	**0.05**			

De-C2 Reboiler — **O.C. Volume 4,807 (SCF)** — **I.C. Volume 223 (SCF)**

	Physical Properties			Operating Conditions			Initial Conditions		
Description	Diameter (ID inches)	Length (ft)	# of tubes	Pressure (PSIG)	Temp. (F)	Volume (CF)	Pressure (PSIG)	Temp. (F)	Volume (CF)
volume of shell	32.50	26.99		485.00	75.00	**4,807**	7.00	75.00	**222.94**
	Physical Properties								
Description	Length (ID inches)	wideth (in)	height (in)	diameter (inches)	# of units	Volume (CF)			
tube volume			240.00	0.8	158	**9.69**			

De-C2 Chiller — **O.C. Volume 3,607 (SCF)** — **I.C. Volume 169 (SCF)**

	Physical Properties			Operating Conditions			Initial Conditions		
Description	Diameter (ID inches)	Length (ft)	# of tubes	Pressure (PSIG)	Temp. (F)	Volume (CF)	Pressure (PSIG)	Temp. (F)	Volume (CF)
volume of shell	31.88	21.31		485.00	75.00	**3,607**	7.00	75.00	**169.34**
	Physical Properties								
Description	Length (ID inches)	wideth (in)	height (in)	diameter (inches)	# of units	Volume (CF)			
volume of tubes			216.00	0.8	158	**8.73**			

De-C2 Reflux Cam — **O.C. Volume 8,274 (SCF)** — **I.C. Volume 360 (SCF)**

	Physical Properties			Operating conditions			Initial Conditions		
Description	Diameter (ID inches)	Length (ft)	# of tubes	Pressure (PSIG)	Temp. (F)	Volume (CF)	Pressure (PSIG)	Temp. (F)	Volume (CF)
volume	55.00	15.21		485.00	75	**8274.01**	7.00	75.00	**359.78**

De-C2 Pre-heater/Feed Exchanger — **O.C. Volume 3,700 (SCF)** — **I.C. Volume 161 (SCF)**

	Physical Properties			Operating Conditions			Initial Conditions		
	Length (ID inches)	wideth (in)	height (in)	Pressure (PSIG)	Temp. (F)	Volume (CF)	Pressure (PSIG)	Temp. (F)	Volume (CF)
volume of tubes	44.5	249	17.50	485.00	75.00	**3,700**	7.00	75.00	**161**

Site **Monument Plant**
System **Depropanizer**
Tower, Reboiler, reflux accumilator, preheater, and feed exchanger (SSM-Frac, Unchanged)

Volume at Operating Conditions	154,401	SCF
Reduction of volume do to blowing down to field	147,635	SCF
Gas to Atm from vessels	6,766	SCF
Mark up for piping	1,353	SCF
Total Depropanizer	**8,119**	**SCF**

De-C2 Tower — **O.C. Volume 137,300 (SCF)** — **I.C. Volume 6,018 (SCF)**

Description	Physical Properties: Diameter (ID inches)	Length (ft)	# of tubes	Operating Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)	Initial Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)
internal volume	90.00	95.00		485.00	75.00	**137,300**	7.00	75.00	**6017.86**
Description	Physical Properties: Length (ID inches)	wideth (in)	height (in)	diameter (inches)	# of units	Volume (CF)			
tray volume			0.25	90.0	36	**33.13**			
down comers	8.0	1.0	0.25		36	**0.04**			

De-C2 Reboiler — **O.C. Volume 5,476 (SCF)** — **I.C. Volume 239 (SCF)**

Description	Physical Properties: Diameter (ID inches)	Length (ft)	# of tubes	Operating Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)	Initial Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)
volume of shell	36.00	23.58		485.00	75.00	**5,476**	7.00	75.00	**239.03**
Description	Physical Properties: Length (ID inches)	wideth (in)	height (in)	diameter (inches)	# of units	Volume (CF)			
tube volume			15.48	0.8	158	**0.63**			

De-C2 Reflux Cam — **O.C. Volume 7,900 (SCF)** — **I.C. Volume 343 (SCF)**

Description	Physical Properties: Diameter (ID inches)	Length (ft)	# of tubes	Operating conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)	Initial Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)
volume	60.50	12.00		485.00	75	**7899.53**	7.00	75.00	**343.50**

De-C2 Pre-heater/Feed Exchanger — **O.C. Volume 3,725 (SCF)** — **I.C. Volume 165 (SCF)**

Description	Physical Properties: Length (ID inches)	wideth (in)	height (in)	Operating Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)	Initial Conditions: Pressure (PSIG)	Temp. (F)	Volume (CF)
Volume of exchanger 1	256.0	26	16.00	485.00	75.00	**2,032**	7.00	75.00	**88**
Volume of exchanger 2	256.0	25	14.00	485.00	75.00	**1,693**	8.00	75.00	**77**

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for AGI Compressor Emissions, Part 1 (Unit SSM-AGI,Unchanged)

Cylinder 1 Blowdown (SCF)	Cylinder 2 Blowdown (SCF)	Cylinder 3 Blowdown (SCF)	Cylinder 4 Blowdown (SCF)	Cylinder 5 Blowdown (SCF)	Cylinder 6 Blowdown (SCF)
270.7	5.9	661.7	980.1	1,241.5	2,079.5
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - 2nd Stage**	**Cylinder #4 - 3rd Stage**	**Cylinder #5 - 4th Stage**	**Cylinder #6 - 5th Stage**
V-100 1st Stage Scrubber	**V-100 1st Stage Scrubber**	**V-200 2nd Stage Scrubber**	**V-300 3rd Stage Scrubber**	**V-400 4th Stage Scrubber**	**V-500 5th Stage Scrubber**
36.0 Diameter (ID inches)	- Diameter (ID inches)	30.0 Diameter (ID inches)	24.0 Diameter (ID inches)	20.0 Diameter (ID inches)	16.0 Diameter (ID inches)
8.3 Length	0.7 Length (Feet)	8.0 Length (Feet)	7.0 Length, Stroke (Feet)	7.5 Length, Stroke (Feet)	6.5 Length, Stroke (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	83.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)
110.0 Temperature (F)	80.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
89.3 Volume (CF)	- Volume (CF)	237.7 Volume (CF)	304.7 Volume (CF)	437.5 Volume (CF)	484.9 Volume (CF)
V-101 1st Stage Suction Bottle	**V-101 1st Stage Suction Bottle**	**V-201 2nd Stage Suction Bottle**	**V-301 3rd Stage Suction Bottle**	**V-401 4th Stage Suction Bottle**	**V-501 5th Stage Suction Bottle**
30.0 Diameter (ID inches)	- Diameter (ID inches)	24.0 Diameter (ID inches)	20.0 Diameter (ID inches)	14.0 Diameter (ID inches)	10.8 Diameter (ID inches)
5.3 Length (Feet)	12.0 Length (Feet)	4.0 Length (Feet)	3.3 Length (Feet)	2.5 Length (Feet)	2.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	83.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)
110.0 Temperature (F)	80.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
39.5 Volume (CF)	- Volume (CF)	76.1 Volume (CF)	99.8 Volume (CF)	71.5 Volume (CF)	67.4 Volume (CF)
Cylinder	**Cylinder**	**Cylinder**	**Cylinder**	**Cylinder**	**Cylinder**
20.8 Diameter (ID inches)	20.8 Diameter (ID inches)	16.0 Diameter (ID inches)	9.8 Diameter (ID inches)	7.0 Diameter (ID inches)	4.8 Diameter (ID inches)
0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)
83.0 Pressure (Psig)	83.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)	1,820.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
5.9 Volume (CF)	5.9 Volume (CF)	8.0 Volume (CF)	5.8 Volume (CF)	5.9 Volume (CF)	5.8 Volume (CF)
V-102 1st Stage Discharge Bottle	**V-102 1st Stage Discharge Bottle**	**V-202 2nd Stage Discharge Bottle**	**V-302 3rd Stage Discharge Bottle**	**V-402 4th Stage Discharge Bottle**	**V-502 5th Stage Discharge Bottle**
24.0 Diameter (ID inches)	- Diameter (ID inches)	20.0 Diameter (ID inches)	18.0 Diameter (ID inches)	14.0 Diameter (ID inches)	12.0 Diameter (ID inches)
5.3 Length (Feet)	5.3 Length (Feet)	7.8 Length (Feet)	10.0 Length (Feet)	6.2 Length (Feet)	5.5 Length (Feet)
83.0 Pressure (Psig)	10.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)	1,820.0 Pressure (Psig)
230.0 Temperature (F)	80.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	110.0 Temperature (F)	230.0 Temperature (F)
83.3 Volume (CF)	- Volume (CF)	193.5 Volume (CF)	390.3 Volume (CF)	354.1 Volume (CF)	405.5 Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
10.0 Diameter (ID inches)	- Diameter (ID inches)	8.0 Diameter (ID inches)	6.0 Diameter (ID inches)	4.0 Diameter (ID inches)	3.0 Diameter (ID inches)
20.0 Length (Feet)	20.5 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)
10.0 Pressure (Psig)	10.0 Pressure (Psig)	83.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)
110.0 Temperature (F)	230.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
16.7 Volume (CF)	- Volume (CF)	42.3 Volume (CF)	54.4 Volume (CF)	46.7 Volume (CF)	52.5 Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
8.0 Diameter (ID inches)	- Diameter (ID inches)	6.0 Diameter (ID inches)	4.0 Diameter (ID inches)	3.0 Diameter (ID inches)	3.0 Diameter (ID inches)
20.0 Length (Feet)	20.5 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)
83.0 Pressure (Psig)	10.0 Pressure (Psig)	209.0 Pressure (Psig)	417.0 Pressure (Psig)	848.0 Pressure (Psig)	1,820.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
34.9 Volume (CF)	- Volume (CF)	45.0 Volume (CF)	38.6 Volume (CF)	43.3 Volume (CF)	92.2 Volume (CF)
Interstage Cooler 1	**Interstage Cooler 1**	**Interstage Cooler 2**	**Interstage Cooler 3**	**Interstage Cooler 4**	**Discharge Cooler**
1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)
26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)
42 Number of Tubes	0 Number of Tubes	53 Number of Tubes	33 Number of Tubes	43 Number of Tubes	66 Number of Tubes
83 Pressure (Psig)	83 Pressure (Psig)	209 Pressure (Psig)	417 Pressure (Psig)	848 Pressure (Psig)	1820 Pressure (Psig)
110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)
36.0 Volume (CF)	- Volume (CF)	104.1 Volume (CF)	125.1 Volume (CF)	325.8 Volume (CF)	1,063.5 Volume (CF)

Acid Gas

5,239.42 Total SCF per blowdown — 31,436.51 Total SCF per year

Purged with Residue — 6 Blowdowns per year

338.27 Total SCF per blowdown — 2,029.63 Total SCF per year

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for AGI Compressor Emissions, Part 1 (Unit SSM-AGI,Unchanged)

Cylinder 1 Blowdown (SCF)	Cylinder 2 Blowdown (SCF)	Cylinder 3 Blowdown (SCF)	Cylinder 4 Blowdown (SCF)	Cylinder 5 Blowdown (SCF)	Cylinder 6 Blowdown (SCF)
127.0	1.1	88.8	57.8	36.9	26.7
Cylinder #1 - 1st Stage	**Cylinder #2 - 1st Stage**	**Cylinder #3 - 2nd Stage**	**Cylinder #4 - 3rd Stage**	**Cylinder #5 - 4th Stage**	**Cylinder #6 - 5th Stage**
V-100 1st Stage Scrubber	**V-100 1st Stage Scrubber**	**V-200 2nd Stage Scrubber**	**V-300 3rd Stage Scrubber**	**V-400 4th Stage Scrubber**	**V-500 5th Stage Scrubber**
36.0 Diameter (ID inches)	- Diameter (ID inches)	30.0 Diameter (ID inches)	24.0 Diameter (ID inches)	20.0 Diameter (ID inches)	16.0 Diameter (ID inches)
8.3 Length	0.7 Length (Feet)	8.0 Length (Feet)	7.0 Length, Stroke (Feet)	7.5 Length, Stroke (Feet)	6.5 Length, Stroke (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
110.0 Temperature (F)	80.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
64.0 Volume (CF)	- Volume (CF)	43.1 Volume (CF)	24.1 Volume (CF)	18.0 Volume (CF)	10.0 Volume (CF)
V-101 1st Stage Suction Bottle	**V-101 1st Stage Suction Bottle**	**V-201 2nd Stage Suction Bottle**	**V-301 3rd Stage Suction Bottle**	**V-401 4th Stage Suction Bottle**	**V-501 5th Stage Suction Bottle**
30.0 Diameter (ID inches)	- Diameter (ID inches)	24.0 Diameter (ID inches)	20.0 Diameter (ID inches)	14.0 Diameter (ID inches)	10.8 Diameter (ID inches)
5.3 Length (Feet)	12.0 Length (Feet)	4.0 Length (Feet)	3.3 Length (Feet)	2.5 Length (Feet)	2.0 Length (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
110.0 Temperature (F)	80.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
28.3 Volume (CF)	- Volume (CF)	13.8 Volume (CF)	7.9 Volume (CF)	2.9 Volume (CF)	1.4 Volume (CF)
Cylinder	**Cylinder**	**Cylinder**	**Cylinder**	**Cylinder**	**Cylinder**
20.8 Diameter (ID inches)	20.8 Diameter (ID inches)	16.0 Diameter (ID inches)	9.8 Diameter (ID inches)	7.0 Diameter (ID inches)	4.8 Diameter (ID inches)
0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)	0.5 Length (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
1.1 Volume (CF)	1.1 Volume (CF)	0.6 Volume (CF)	0.2 Volume (CF)	0.1 Volume (CF)	0.1 Volume (CF)
V-102 1st Stage Discharge Bottle	**V-102 1st Stage Discharge Bottle**	**V-202 2nd Stage Discharge Bottle**	**V-302 3rd Stage Discharge Bottle**	**V-402 4th Stage Discharge Bottle**	**V-502 5th Stage Discharge Bottle**
24.0 Diameter (ID inches)	- Diameter (ID inches)	20.0 Diameter (ID inches)	18.0 Diameter (ID inches)	14.0 Diameter (ID inches)	12.0 Diameter (ID inches)
5.3 Length (Feet)	5.3 Length (Feet)	7.8 Length (Feet)	10.0 Length (Feet)	6.2 Length (Feet)	5.5 Length (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
230.0 Temperature (F)	80.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	110.0 Temperature (F)	230.0 Temperature (F)
15.1 Volume (CF)	- Volume (CF)	15.3 Volume (CF)	16.0 Volume (CF)	7.3 Volume (CF)	3.9 Volume (CF)
Cylinder Suction Pipe	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**	**Cylinder Suction Pipe**
10.0 Diameter (ID inches)	- Diameter (ID inches)	8.0 Diameter (ID inches)	6.0 Diameter (ID inches)	4.0 Diameter (ID inches)	3.0 Diameter (ID inches)
20.0 Length (Feet)	20.5 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
110.0 Temperature (F)	230.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)	110.0 Temperature (F)
12.0 Volume (CF)	- Volume (CF)	7.7 Volume (CF)	4.3 Volume (CF)	1.9 Volume (CF)	1.1 Volume (CF)
Cylinder Discharge Pipe	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**	**Cylinder Discharge Pipe**
8.0 Diameter (ID inches)	- Diameter (ID inches)	6.0 Diameter (ID inches)	4.0 Diameter (ID inches)	3.0 Diameter (ID inches)	3.0 Diameter (ID inches)
20.0 Length (Feet)	20.5 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)	20.0 Length (Feet)
3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)	3.0 Pressure (Psig)
230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)	230.0 Temperature (F)
6.3 Volume (CF)	- Volume (CF)	3.6 Volume (CF)	1.6 Volume (CF)	0.9 Volume (CF)	0.9 Volume (CF)
Interstage Cooler 1	**Interstage Cooler 1**	**Interstage Cooler 2**	**Interstage Cooler 3**	**Interstage Cooler 4**	**Discharge Cooler**
1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)	1 Diameter (ID inches)
26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)	26 Length (Feet)
42 Number of Tubes	0 Number of Tubes	53 Number of Tubes	33 Number of Tubes	43 Number of Tubes	66 Number of Tubes
3 Pressure (Psig)	3 Pressure (Psig)	3 Pressure (Psig)	3 Pressure (Psig)	3 Pressure (Psig)	3 Pressure (Psig)
110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)	110 Temperature (F)
6.5 Volume (CF)	- Volume (CF)	8.3 Volume (CF)	5.1 Volume (CF)	6.7 Volume (CF)	10.3 Volume (CF)

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Calculation for AGI Compressor Emissions, Part 2 (Unit SSM-AGI, Unchanged)

Flow Rate:	338.27	SCF/blowdown	Maximum AGI Compressor Blowdown to atmosphere based on SSM records
	389.01	SCF/blowdown	AGI Compressor Blowdown with 15% safety factor
	6.00	blowdown/yr	Maximum AGI Compressor Blowdowns per year
	2,334.07	SCF/yr	Yearly AGI Compressor Blowdown to atmosphere

Gas Analysis 1 - Residue to El Paso, Plant 118

Component	MW	Wet vol/mol	MW*Wet Vol %	HHV Btu/scf	BTU/scf* Wet Vol %	Spec. Volume ft^3/lb	Weighted Specific Volume ft^3/lb	Mass Fraction (Wet)	Spec. Volume VOC ft^3/lb
Water	18.02	0.00%	0		0	21.1	0	0	
Nitrogen	28.01	2.54%	0.7	0	0	13.5	0.34	0.042	
CO_2	44.01	0.10%	0.04	0	0	8.6	0.009	0.0026	
H_2S	34.08	0.00%	0.00	637.0	0.0	11.3	0.000	0.0000	
Methane	16.04	94.36%	15.1	1009.7	952.7	23.7	22.32	0.90	
Ethane	30.07	2.68%	0.8	1768.7	47.4	12.6	0.34	0.048	
Propane	44.10	0.22%	0.1	2517.2	5.6	8.6	0.02	0.01	5.13
I-Butane	58.12	0.02%	0.0	3252.6	0.6	6.5	0.00	0.001	0.44
N-Butane	58.12	0.05%	0.0	3262	1.6	6.5	0.00	0.00	1.12
I-Pentane	72.15	0.01%	0.0	3999.7	0.5	5.26	0.00	0.001	0.299
N-Pentane	72.15	0.01%	0.0	4008.7	0.5	5.26	0.00	0.001	0.29
Hexanes	86.2	0.01%	0.0	4756.1	0.5	4.4	0.00	0.00	0.23
Total		100.00%	16.86		1009.36		23.031	1.0	7.5121
Dry total		100%		*(mixture mol. wt)*	*(mixture heating value)*				
	NMHC	*3.00%*						1.0%	
	NMEHC (VOC)	*0.32%*							

Emission Calculations

VOC	**H_2S**	
-	**-**	**lb/hr**
5.0E-04	**-**	**tpy**

TARGA

Targa Midstream Services, LLC
Monument Gas Plant

Description: AGI-C2 Compressor Purging Emissions
Unit: SSM-CB (For AGI-C2 Only, **New - 0110-M11**)

Inputs

Parameter	Value	Units	Notes
Number of Compressors	1	-	Facility design
Blowdowns per year	12	per unit	Facility design
Duration of blowdown	1	hours	Facility design, no simultaneous events

Vessel	Volume ft^3	Emissions routed to...	Volume to Atmosphere ft^3/hr	Volume to Atmosphere ft^3/yr
Redundant AGI Compressor	355.00	Atmosphere	355.00	4,899.00
Total			**355.00**	**4,899.00**

Vessel	Volume routed to atmosphere ft^3/hr	Volume routed to atmosphere ft^3/yr	Mass Percent VOC	Mass Percent H_2S	Molecular Wt lb/lb-mol	VOC lb/hr	VOC ton/yr	H_2S lb/hr	H_2S ton/yr
Redundant AGI Compressor	355.00	4,899.00	1.0%	0.001%	16.9	0.15	1.1E-03	1.6E-04	1.1E-06
					Total	**0.15**	**1.1E-03**	**1.6E-04**	**1.1E-06**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CO_2 wt %	Molecular wt	CO_2 (lb/hr)	CO_2 (ton/yr)
CO2 Emissions	355	4,899.00	0.26%	16.9	-	2.82E-04
				Total	**-**	**2.82E-04**

	Volume routed to atmosphere hour (ft^3/hr)	Volume routed to atmosphere year (ft^3/yr)	CH_4 wt %	Molecular wt	CH_4 (lb/hr)	CH_4 (ton/yr)
CH4 Emissions	355	4,899.00	89.77%	16.9	-	0.098
				Total	**-**	**0.098**

Basis of Calculation:
Emissions from compressor maintenance activities are calculated based on a mass balance as follows:

Maximum Uncontrolled Annual Emissions (tpy) = [Volume of Gas Vented (scf/yr)] x [MW of stream (lb/lb-mol)] x [wt % VOC or speciated constituent] / [379.5 (scf/lb-mol)] / [2,000 (lb/ton)]

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Slug Catcher Blowdown to Flare (Unit SSM-SC, Unchanged)

Emission Unit:	Inlet Flare (Field Gas Flare)		
Source Description:	Flare 2		
Slug Catcher Blowdown			
Maximum blowdown to flare	0.0058	MMScf/yr	Conservatively assuming gas in 100% of system
Pounds released per event	355.9	lb	
Blowdowns per year	1.0		
Gas heating rate	7.5	MMBtu/hr	scfh * mixture heating value / 1000

Monument Inlet Gas analysis (8/7/2015)

Component	MW	Wet vol/mol%	MW*Wet Vol %	HHV Btu/scf	BTU/scf Wet Vol %	Spec. Volume ft³/lb	Mass Fraction (wet)	Weighted Spec. Volume ft³/lb	Pounds Released	Pounds Realeased per hour[1]
Hydrogen Sulfide	34.08	0.47%	0.16	637	3.01	11.136	0.00689	0.08	2.5	0.49
Nitrogen	28.01	2.37%	0.66	0	0.00	13.547	0.02842	0.38	10.1	2.02
Methane	16.04	70.96%	11.38	1009.7	716.51	23.65	0.48659	11.51	173.2	34.64
Carbon Dioxide	44.01	2.09%	0.92	0	0.00	8.623	0.03937	0.34	14.0	2.80
Ethane	30.07	11.63%	3.50	1768.7	205.72	12.62	0.14949	1.89	53.2	10.64
Propane	44.10	6.95%	3.06	2517.2	174.87	8.606	0.13094	1.13	46.6	9.32
Iso-Butane	58.12	0.92%	0.53	3252.6	29.88	6.529	0.02282	0.15	8.1	1.62
N-Butane	58.12	2.27%	1.32	3262	73.91	6.529	0.05629	0.37	20.0	4.01
Iso-Pentane	72.15	0.60%	0.43	3999.7	24.06	5.26	0.01855	0.10	6.6	1.32
N-Pentane	72.15	0.56%	0.40	4008.7	22.28	5.26	0.01714	0.09	6.1	1.22
N-Hexane	86.18	0.15%	0.13	4756.1	6.98	4.404	0.00541	0.02	1.9	0.38
Benzene	78.11	0.06%	0.04	3741.9	2.06	4.858	0.00184	0.01	0.7	0.13
Toluene	92.14	0.04%	0.04	4474.8	1.84	4.119	0.00162	0.01	0.6	0.12
Ethylbenzene	106.17	0.01%	0.01	5222.1	0.30	3.574	0.00026	0.00	0.1	0.02
M&P Xylenes	106.17	0.01%	0.01	5207.8	0.62	3.574	0.00054	0.00	0.2	0.04
O-Xylenes	106.17	0.002%	0.00	5208.6	0.13	3.574	0.00011	0.00	0.0	0.01
Hexane Plus	86.18	0.92%	0.79	4756.1	43.54	4.404	0.03372	0.15	12.0	2.40
Total		100.00%	23.40		1305.7		1.0	16.2	355.9	
			(mixture mol. wt)		*(mixture heating value)*					
Dry total		100%								
	NMHC	*95.1%*						HAPs	0.0017	0.70
	NMEHC (VOC)	*12.5%*					28.92%			

[1]The event will happen over: 5 hrs.

Emission Calculations

Slug Catcher Blowdown[1]	NO_X	CO	SO_2	H_2S	VOC		
	0.1380	0.2755				lb/MMBtu	RG-109 Emission Factors for high-Btu, non-steam assisted Flare Gas
				0.5%	12.47%	mol %	
				0.5	20.6	lb/hr	vol. Gas * mole fraction / specific volume
				98%	98%		Estimated control efficiency for H_2S and VOC
			100%				Estimated H_2S conversion to SO_2 (1-1 molar ratio)
	0.21	0.42	0.92	0.010	0.41	lb/hr	
	5.2E-04	1.0E-03	2.3E-03	2.5E-05	1.0E-03	tpy	

[1] The inlet flare is already permitted at maximum houlry rates. The hourly rates for the flare will not increase with this application. The hourly limit is included to show the new piece of equipment qualifies for a technical revision.

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Slug Catcher Blowdown to Flare (Unit SSM-SC, Unchanged) Greenhouse Gas Emissions

Emission Unit: Inlet Flare (Field Gas Flare)
Source Description: Flare 2

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*
where:
$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from regenerator in cubic feet under actual conditions.
V_a = volume of gas sent to combustion unit during the year (cf)
η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W 0.98
For gas sent to an unlit flare, η is zero.
X_{CH4} = Mole fraction of CH_4 in gas to the flare = 0.7096 (Client gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*
where:
$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from regenerator in cubic feet under actual conditions.
V_a = volume of gas sent to combustion unit during the year (cf)
X_{CO2} = Mole fraction of CO_2 in gas to the flare = 0.765

Step 3. Calculate contribution of combusted CO_2 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_i * R_i) *(Equation W-21)*
where:
η = Fraction of gas combusted by a burning flare (or regenerator) = 0.98
For gas sent to an unlit flare, η is zero.
V_a = volume of gas sent to combustion unit during the year (cf)
Y_i = mole fraction of gas hydrocarbon constituents j:
Constituent j, Methan 0.7096 (Client gas analysis)
Constituent j, Ethane 0.1163
Constituent j, Propane 0.0695
Constituent j, Butane 0.03185
Constituent j, Pentane 0.023
R_i = number of carbon atoms in the gas hydrocarbon constituent j:
Constituent j, Methan 1
Constituent j, Ethane 2
Constituent j, Propane 3
Constituent j, Butane 4
Constituent j, Pentane 5

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s)}{(459.67 + T_a) * P_s} * I$$ *(Equation W-33)*

where:
$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet
$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)
T_s = Temperature at standard conditions (F) = 60 F
T_a = Temperature at actual conditions (F) = 76 F (Based on Annual Avg Max Temperature for Hobbs, NM from Western Regional Climate Center)
P_s = Absolute pressure at standard conditions (psia) = 14.7 psia
P_a = Absolute pressure at actual conditions (psia) = 14.7 psia (Assumption)
Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i}$ = $E_{s,i}$ * ρ_i * 0.0011023 *(Equation W-36)*
where:
$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)
$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)
ρ_i = Density of GHG i. Use:
CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)
CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40 .

$Mass_{N2O}$ = 0.0011023 * Fuel * HHV * EF *(Equation W-40)*
where:
$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).
Fuel = mass or volume of the fuel combusted
HHV = high heat value of the fuel
Field gas 1.235E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)
EF = 1.00E-04 kg N_2O/MMBtu
10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

Gas Sent to Flare (cf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (cf)	CO_2 Un-Combusted, $E_{a,CO2}$ (cf)	CO_2 Combusted, $E_{a,CO2}$ (cf)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
5,773	82	4,418	7,891	79	4,284	7,651	0.0017	0.25	0.44	7.9E-07

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Residue Flare SSM (RESIDUE TO FLARE 1) - Scenario 1 and Scenario 2 GHG Emissions (Unchanged)
§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98
For gas sent to an unlit flare, η is zero.

X_{CH4} = Mole fraction of CH_4 in gas to the flare = 0.9436 (Client gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare = 0.001

Step 3. Calculate contribution of combusted CO_2 emissions from the regenerator combustion gas vent (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_i * R_i) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) = 0.98
For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_i = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane	0.9436	(Client gas analysis)
Constituent j, Ethane =	0.0268	
Constituent j, Propane	0.0022	
Constituent j, Butane =	0.00065	
Constituent j, Pentanes	0.000354	

R_i = number of carbon atoms in the gas hydrocarbon constituent j:

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

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Based on Annual Avg Max Temperature for Hobbs, NM from Western Regional Climate Center)

P_s = Absolute pressure at standard conditions (psia) = 14.7 psia

P_a = Absolute pressure at actual conditions (psia) = 14.7 psia (Assumption)

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i}$ = $E_{s,i}$ * ρ_i * 0.0011023 *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40 .

$Mass_{N2O}$ = 0.0011023 * Fuel * HHV * EF *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HH\ 1.235E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission from flare (regenerator) by summing Equations W-40, W-19, W-20, and W-21.

Gas Sent to Flare (cf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (cf)	CO_2 Un-Combusted, $E_{a,CO2}$ (cf)	CO_2 Combusted, $E_{a,CO2}$ (cf)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
230,940,000	4358166	228,862	228,164,360	4,225,625	221,901	221,225,391	89.43	12.87	12,826.86	0.03144

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Flare emission calculations from SSM (RESIDUE TO FLARE 1) - Scenario 1 and Scenario 2 (Unchanged)

Emission Unit: Residue Flare (Plant Flare)
Source Description: Flare 1

Flow Rate:

Flared Volume	230.9	MMScf/yr	Max volume to flare from residue compressor malfunction events; based on SSM records	
	90.00	MMscf/d	Flare design capacity	
	3.75	MMscf/hr	Flare design capacity	
	3,750.0	Mscf/hr	24-hr average	
	3785.1	MMBtu/hr	scfh * mixture heating value / 1000	
Pilot	575.0	scf/hr	flare pilot	
	0.0138	MMscf/d	scf/hr * 24 (hr/day) / 1e6 SCF/MMscf	Currently Permitted
	1040	BTU/scf	Nominal, sweet natural gas	
	0.598	MMBtu/hr		
SSM Volume + Pilot	3785.67	MMBtu/hr		

Residue Gas analysis (Residue to El Paso, Plant 118, 4/17/2012)

Component	MW	Wet vol/mol%	MW*Wet Vol %	HHV Btu/scf	BTU/scf* Wet Vol %	Spec. Volume ft^3/lb	Mass Fraction (wet)	Weighted Spec. Volume ft^3/lb	Spec. Volume VOC ft^3/lb
Water	18.02	0.00%	0.00		0.00	21.06	0	0	
Nitrogen	28.01	2.54%	0.71	0	0.00	13.547	0.0422	0.34	
CO_2	44.01	0.10%	0.04	0	0.00	8.623	0.0026	0.0085	
H_2S	34.08	0.0005%	0.00	637.02	0.00	11.31	1.0106E-05	0.00005655	
Methane	16.04	94.36%	15.14	1009.7	952.72	23.65	0.89771	22.3	
Ethane	30.07	2.68%	0.81	1768.7	47.36	12.62	0.04775	0.34	
Propane	44.10	0.22%	0.10	2517.2	5.58	8.606	0.00579	0.019	5.129
I-Butane	58.12	0.02%	0.01	3252.6	0.62	6.529	0.00066	0.0012	0.442
N-Butane	58.12	0.05%	0.03	3262	1.50	6.529	0.00159	0.0030	1.065
I-Pentane	72.15	0.0129%	0.01	3999.7	0.52	5.26	0.00055	0.00068	0.299
N-Pentane	72.15	0.0124%	0.01	4008.7	0.50	5.26	0.00053	0.00065	0.287
Hexane Plus	100.21	0.01%	0.01	5502	0.56	3.787	0.00060	0.00038	0.234
Total		100%	16.86		1009.35		1.000	23.0	7.46
Dry total		100%		*(mixture mol. wt)*	*(mixture heating value)*				
	NMHC	*3.00%*							
	NMEHC (VOC)						0.97%		

Emission Calculations

Pilot Emissions	**NOx**	**CO**	**SO_2**	**H_2S**	**VOC**	**Units**	
	0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
				3.6E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
				2.05E-04		lb H_2S/hr	H_2S rate * fuel usage
			7E-03			lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
			4E-03			lb SO_2/hr*	SO_2 rate * fuel usage
					0.00%	mol%	Assume no VOC content in purchased fuel (methane)
					23.7	ft^3/lb	Specific volume (methane)
	0.083	**0.165**				lb/hr	lb/MMBtu * MMBtu/hr
			0.0041	**4.1E-06**	**-**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
	0.36	**0.72**				tpy	8760 hrs/yr
			0.018	**1.8E-05**	**-**		
Plant Blowdown to Flare SSM	**NO_X**	**CO**	**SO_2**	**H_2S***	**VOC***		
	0.1380	0.2755				lb/MMBtu	RG-109 Emission Factors for high-Btu, non-steam assisted
			0.0005%	0.0005%	1.00%	mol %	Flare Gas
			11.31	11.31	7.46	ft^3/lb	Specific volume
			1.66	1.66	5,029.4	lb/hr	vol. Gas * mole fraction / specific volume
				98%	98%		Estimated control efficiency for H_2S and VOC
			100%				Estimated H_2S conversion to SO_2 (1-1 molar ratio)
	522.3	1042.8	3.06	3.32E-02	100.6	lb/hr	Based on pilot plus flared gas
	16.08	32.1	0.096	0.00102	3.10	tpy	
Total Pilot + Flaring	**NO_X**	**CO**	**SO_2**	**H_2S**	**VOC**		
	522.42	**1042.95**	**3.06**	**0.033**	**100.59**	**lb/hr**	
	16.45	**32.83**	**0.11**	**0.0010**	**3.10**	**tpy**	

* VOC and H_2S concentrations were increased to account any variations in the gas.

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Flare emission calculations from SSM (PLANT SHUTDOWN TO FLARE 2) - Scenario 3 (Unchanged)

Emission Unit: Inlet Flare (Field Gas Flare)
Source Description: Flare 2

Flow Rate:

Plant Blowdown	16.6	MMscf/yr	Maximum Plant Blowdown to Flare based on SSM records
	19.1	MMscf/yr	Maximum Plant Blowdown with 15% safety factor
	90.00	MMscf/d	Flare design capacity
	3.75	MMscf/hr	Flare design capacity
	3,750.00	Mscf/hr	24-hr average
	4570.91	MMBtu/hr	scfh * mixture heating value / 1000
Pilot	575.0	scf/hr	flare pilot
	0.0138	MMscf/d	scf/hr * 24 (hr/day) / 1e6 SCF/MMscf
	1040	BTU/scf	Nominal, sweet natural gas
	0.598	MMBtu/hr	
Pilot plus Flare	4571.5	MMBtu/hr	
	21.68	MMscf/yr	

Inlet Gas analysis (Green Gas Flare, Plant 118, 2/10/2012)

Component	MW	Wet vol/mol%	MW*Wet Vol %	HHV Btu/scf	BTU/scf* Wet Vol %	Spec. Volume ft^3/lb	Weighted Spec. Volume ft^3/lb	Mass Fraction (Wet)	Spec. Volume VOC ft^3/lb
Water	18.02	0.00%	0.00		0.00	21.06	0	0	
Nitrogen	28.01	2.17%	0.61	0	0.00	13.547	0.29	0.0270	
CO_2	44.01	3.56%	1.57	0	0.00	8.623	0.3072	0.0695	
H_2S	34.08	1.10%	0.37	637.02	7.01	11.31	0.124	0.0166	
Methane	16.04	74.74%	11.99	1009.7	754.64	23.65	17.7	0.5317	
Ethane	30.07	8.75%	2.63	1768.7	154.71	12.62	1.10	0.1166	
Propane	44.10	5.20%	2.29	2517.2	130.92	8.606	0.448	0.1017	3.6692
I-Butane	58.12	0.77%	0.45	3252.6	25.10	6.529	0.0504	0.0199	0.5443
N-Butane	58.12	1.83%	1.06	3262	59.56	6.529	0.1192	0.0471	1.2880
I-Pentane	72.15	0.5316%	0.38	3999.7	21.26	5.26	0.02796	0.0170	0.3750
N-Pentane	72.15	0.4693%	0.34	4008.7	18.81	5.26	0.02469	0.0150	0.3311
Hexane plus	100.21	0.85%	0.85	5502	46.89	3.787	0.03228	0.0379	0.6012
Total		100%	22.55		1218.91		20.2	1	6.8089
Dry total		100%	*(mixture mol. wt)*		*(mixture heating value)*				
	NMHC	*18.40%*							
	NMEHC (VOC)	*9.65%*						24%	

Emission Calculations

Pilot Emissions	NOx	CO	SO_2	H_2S	VOC	Units	
	0.1380	0.2755				lb/MMBtu	TNRCC RG-109 (high Btu; other)
				4E-04		lb H_2S/Mscf	Purchased sweet natural gas fuel, 0.25 gr H_2S/100scf
				2.1E-04		lb H_2S/hr	H_2S rate * fuel usage
			7E-03			lb S/Mscf	Purchased sweet natural gas fuel, 5 gr S/100scf
			4E-03			lb SO_2/hr*	SO_2 rate * fuel usage
					0.00%	mol%	Assume no VOC content in purchased fuel (methane)
					6.8	ft^3/lb	Specific volume (methane)
	0.083	**0.165**				lb/hr	lb/MMBtu * MMBtu/hr
			0.00411	**4.1E-06**	**-**	lb/hr	98% combustion H_2S; 100% conversion to SO_2
	0.36	**0.72**	**0.01802**	**1.8E-05**	**-**	tpy	8760 hrs/yr

Plant Blowdown to Flare SSM	NO_x	CO	SO_2	H_2S	VOC		
	0.1380	0.2755				lb/MMBtu	RG-109 Emission Factors for high-Btu, non-steam assisted
			1.1%	1.1%	9.7%	mol %	Flare Gas
			11.31	11.31	6.81	ft^3/lb	Specific volume
			3,647.21	3,647.21	53,158.1	lb/hr	vol. Gas * mole fraction / specific volume
				98%	98%		Estimated control efficiency for H_2S and VOC
			100%				Estimated H_2S conversion to SO_2 (1-1 molar ratio)
	630.87	1259.4	6,865.3	72.9	1063.2	lb/hr	Based on pilot plus flared gas
	1.6	3.2	17.5	0.19	2.4	tpy	

Total Pilot + Flaring	NO_x	CO	SO_2	H_2S	VOC	
	631.03	**1259.78**	**6865.35**	**72.94**	**1063.16**	**lb/hr**
	1.97	**3.94**	**17.54**	**0.19**	**2.36**	**tpy**

Fuel gas molecular weight	16.04	g/mol	Mol. wt. of methane, the dominant species
Heat release (q)	320,005,387.3	cal/sec	MMBtu/hr * 10^6 * 252 cal/Btu ÷ 3600 sec/hr
q_n	258,487,599.6		$q_n = q(1\text{-}0.048(MW)^{1/2})$
Effective stack diameter (D)	16.1	m	$D = (10^{-6}q_n)^{1/2}$

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Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Flare GHG emission calculations from SSM (PLANT SHUTDOWN TO FLARE 2) - Scenario 3 (Unchanged)
§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W 0.98
For gas sent to an unlit flare, η is zero.

X_{CH4} = Mole fraction of CH_4 in gas to the flare = 0.7474 (Client gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare = 0.036

Step 3. Calculate contribution of combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) 0.98
For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Meth	0.7474 (Client gas analysis)
Constituent j, Ethan	0.0875
Constituent j, Propa	0.0520
Constituent j, Butar	0.02598
Constituent j, Penta	0.018532

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

Constituent j, Meth	1
Constituent j, Ethan	2
Constituent j, Propa	3
Constituent j, Butar	4
Constituent j, Penta	5

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s)}{(459.67 + T_a) * P_s} * P \quad \textit{(Equation W-33)}$$

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Based on Annual Avg Max Temperature for Hobbs, NM from Western Regional Climate Center)

P_s = Absolute pressure at standard conditions (psia) 14.7 psia

P_a = Absolute pressure at actual conditions (psia) = 14.7 psia (Assumption)

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i}$ = $E_{s,i}$ * ρ_i * 0.0011023 *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40 .

$Mass_{N2O}$ = 0.0011023 * Fuel * HHV * EF *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HI 1.235E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission by summing Equations W-40, W-19, W-20, and W-21.

Gas Sent to Flare (cf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (cf)	CO_2 Un-Combusted, $E_{a,CO2}$ (cf)	CO_2 Combusted, $E_{a,CO2}$ (cf)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
19,141,750	286126	681,944	23,916,285	277,424	681,944	23,188,939	5.87	39.54	1,344.52	0.00261

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

F-03 Summary (Updated - 0110-M11)

Scenarios	H_2S Mol%	Description	NOx		CO		VOC		H_2S		SO_2	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1a	12%	3.5 MMSCFD Acid Gas	67.65	7.78	580.05	66.71	31.58	3.63	30.95	3.56	2908.77	334.51
2a	12%	1.75 MMSCFD Acid Gas	51.20		439.03		23.05		15.48		1454.38	
1b	16%	3.5 MMSCFD Acid Gas	67.89	5.86	582.10	50.21	31.58	2.72	41.27	3.56	3878.35	334.51
2b	16%	1.75 MMSCFD Acid Gas	51.32		440.06		23.05		20.63		1939.18	
1c	20%	3.5 MMSCFD Acid Gas	68.13	4.70	584.14	40.31	31.58	2.18	51.59	3.56	4847.94	334.51
2c	20%	1.75 MMSCFD Acid Gas	51.44		441.08		23.05		25.79		2423.97	
1d	24%	3.5 MMSCFD Acid Gas	68.37	3.93	586.18	33.71	31.58	1.82	61.90	3.56	5817.53	334.51
2d	24%	1.75 MMSCFD Acid Gas	51.56		442.10		23.05		30.95		2908.77	

*The purpose of this table is to show the different fluctuations in H_2S concentration in the gas that may be sent to the acid gas flare. The worst case scenario for permitting purposes will be Scenarios 1d and 2d which has the highest concentration of H_2S. Scenarios 1d and 2d will be the emissions listed in table 2F of the application.

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Targa Midstream Services, LLC -- Monument Gas Plant

Flare emission calculations from SSM (AGI SSM to Acid Gas Flare) - Annual Emissions (Updated - 0110-M11)

Emission Unit: Acid Gas Flare
Source Description: F-03 (AGI SSM to Acid Gas Flare)

Flow Rate:

3.5	MMscf/d	Daily flare volume
3,500	Mscf/d	MMscf/d * 1000
146	Mscf/hr	24-hr average
24.3	MMBtu/hr	scfh * mixture heating value / 1000

Component	MW	Wet vol/mol%	MW*Wet Vol %	HHV Btu/scf	BTU/scf * Wet Vol %	Spec. Volume ft^3/lb	Mass Fraction (wet)	Weighted Spec. Volume ft^3/lb	Spec. Volume VOC ft^3/lb
Water	18.02	9.67%	1.74		0.00	21.06	0.045	2.04	
Nitrogen	28.01	0.00%	0.00	0	0.00	13.547	0.00	0.00	
CO_2	44.01	64.50%	28.39	0	0.00	8.623	0.737	5.56	
H_2S	34.08	24.00%	8.18	637.02	152.88	11.31	0.212	2.71	
Methane	16.04	0.50%	0.08	1009.7	5.05	23.65	0.0021	0.12	
Ethane	30.07	0.30%	0.09	1768.7	5.31	12.62	0.0023	0.038	
Propane	44.10	0.10%	0.04	2517.2	2.52	8.606	0.0011	0.0086	6.17
I-Butane	58.12	0.00%	0.00	3252.6	0.00	6.529	0.00	0.000	0.00
N-Butane	58.12	0.03%	0.02	3262	0.98	6.529	0.00	0.0020	1.85
I-Pentane	72.15	0.00%	0.00	3999.7	0.00	5.26	0.00	0.00	0.00
N-Pentane	72.15	0.00%	0.00	4008.7	0.00	5.26	0.00	0.00	0.00
Hexanes	86.18	0.00%	0.00	4756.1	0.00	4.404	0.00	0.00	0.00
C7+	100.21	0.00%	0.00	5502	0.00	3.787	0.00	0.00	0.00
Total		99.1%	38.54		166.74				8.017
Dry total		89%		*(mixture mol. wt)*	*(mixture heating value)*				
	NMHC	*0.43%*							
	NMEHC (VOC)	*1.00%*					0.0016		

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Flared Gas Volume (mmscfd)	Acid Gas HHV (btu/scf)	Flare Pilot HHV (btu/scf)	Assist Gas HHV (btu/scf)	Flared Gas HHV (btu/scf)	Heat Release (MMBtu/hr)
3.50	0.0138	**25.0**	28.51	166.74	1,000.00	1,000.00	897.72	1,066.56

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Acid Gas MW (lb/lb-mol)	Flare Pilot MW (lb/lb-mol)	Assist Gas MW (lb/lb-mol)	Flared Gas MW (lb/lb-mol)	Effective Diameter (m)
3.50	0.0138	**25.0**	38.54	16.00	16.00	18.77	**7.7**

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Acid Gas H_2S (%)	Acid Gas H_2S (lb/hr)	H_2S Emissions (lb/hr)	SO_2 Emissions (lb/hr)	SO_2 Emissions (tpy)
3.50	0.0138	**25.000**	24.00%	3,095.12	61.90	5817.5	872.63

NO_X	CO	SO_2	H_2S	VOC	
0.0641	0.5496				lb/MMBtu RG-109 Emission Factors for Low-Btu, non-steam assisted
			3,095.12	1578.9	H_2S and VOC in acid gas by mass balance
			98%	98%	Estimated control efficiency for H_2S and VOC
		100%			Estimated H_2S conversion to SO_2 (1-1 molar ratio)
68.4	**586.2**	**5,817.5**	**61.9**	**31.58**	(lb/hr) - Scenario 4 worst case
3.9	**33.7**	**334.5**	**3.6**	**1.816**	(tpy) 115 hr/yr

TARGA

Targa Midstream Services, LLC -- Monument Gas Plant

Flare emission calculations from SSM (AGI SSM to Acid Gas Flare) - Scenario 2d (Updated - 0110-M11)

Emission Unit: Acid Gas Flare
Source Description: F-03 (AGI SSM to Acid Gas Flare)

Flow Rate:

1.75	MMscf/d	Daily flare volume
1,750	Mscf/d	MMscf/d * 1000
73	Mscf/hr	24-hr average
12.2	MMBtu/hr	scfh * mixture heating value / 1000

Component	MW	Wet vol/mol%	MW*Wet Vol %	HHV Btu/scf	BTU/scf * Wet Vol %	Spec. Volume ft^3/lb	Mass Fraction (wet)	Weighted Spec. Volume ft^3/lb	Spec. Volume VOC ft^3/lb
Water	18.02	9.67%	1.74		0.00	21.06	0.045253	2.036502	
Nitrogen	28.01	0.00%	0.00	0	0.00	13.547	0	0.00	
CO_2	44.01	64.40%	28.34	0	0.00	8.623	0.736241	5.5532	
H_2S	34.08	24.00%	8.18	637.02	152.88	11.31	0.21248	2.7144	
Methane	16.04	0.50%	0.08	1009.7	5.05	23.65	0.002084	0.1	
Ethane	30.07	0.30%	0.09	1768.7	5.31	12.62	0.002343	0.04	
Propane	44.10	0.10%	0.04	2517.2	2.52	8.606	0.001145	0.009	6.167
I-Butane	58.12	0.00%	0.00	3252.6	0.00	6.529	0	0.0000	0.000
N-Butane	58.12	0.03%	0.02	3262	0.98	6.529	0.000453	0.0020	1.850
I-Pentane	72.15	0.00%	0.00	3999.7	0.00	5.26	0	0.00000	0.000
N-Pentane	72.15	0.00%	0.00	4008.7	0.00	5.26	0	0.00000	0.000
Hexanes	86.18	0.00%	0.00	4756.1	0.00	4.404	0	0.00000	0.000
C7+	100.21	0.00%	0.00	5502	0.00	3.787	0	0.00000	0.000
Total		99.0%	38.50		166.74				8.017
Dry total		89%		*(mixture mol. wt)*	*(mixture heating value)*				
	NMHC	*0.43%*							
	NMEHC (VOC)	*1.00%*					0.001598		

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Flared Gas Volume (mmscfd)	Acid Gas HHV (btu/scf)	Flare Pilot HHV (btu/scf)	Assist Gas HHV (btu/scf)	Flared Gas HHV (btu/scf)	Heat Release (MMBtu/hr)
1.75	0.0138	**19.00**	20.76	166.74	1,000.00	1,000.00	929.77	804.40

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Acid Gas MW (lb/lb-mol)	Flare Pilot MW (lb/lb-mol)	Assist Gas MW (lb/lb-mol)	Flared Gas MW (lb/lb-mol)	Effective Diameter (m)
1.75	0.0138	**19.00**	38.50	16.00	16.00	17.9	**6.70**

Acid Gas Volume (mmscfd)	Flare Pilot Volume (mmscfd)	Assist Gas Volume (mmscfd)	Acid Gas H_2S (%)	Acid Gas H_2S (lb/hr)	H_2S Emissions (lb/hr)	SO_2 Emissions (lb/hr)	SO_2 Emissions (tpy)
1.75	0.0138	**19.00**	24.00%	1,547.56	30.95	2908.8	436.3

NO_X	CO	SO_2	H_2S	VOC	
0.0641	0.5496				lb/MMBtu RG-109 Emission Factors for Low-Btu, non-steam assisted
			1,547.56	1152.70	H_2S and VOC in acid gas by mass balance
			98%	98%	Estimated control efficiency for H_2S and VOC
		100%			Estimated H_2S conversion to SO_2 (1-1 molar ratio)
51.6	**442.1**	**2,908.8**	**31.0**	**23.05**	(lb/hr) - Scenario 2 worst case

TARGA

Targa Midstream Services, LLC

Monument Gas Plant - SSM Emissions

Acid Gas Flare GHG emission calculations for worst case scenario annual emissions (Updated - 0110-M11)

§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*

where:

$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpart W = 0.98

For gas sent to an unlit flare, η is zero.

X_{CH4} = Mole fraction of CH_4 in gas to the flare = 0.0050 (Client gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*

where:

$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from regenerator in cubic feet under actual conditions.

V_a = volume of gas sent to combustion unit during the year (cf)

X_{CO2} = Mole fraction of CO_2 in gas to the flare = 0.645

Step 3. Calculate contribution of combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*

where:

η = Fraction of gas combusted by a burning flare (or regenerator) = 0.98

For gas sent to an unlit flare, η is zero.

V_a = volume of gas sent to combustion unit during the year (cf)

Y_j = mole fraction of gas hydrocarbon constituents j:

Constituent j, Methane = 0.0050 (Client gas analysis)
Constituent j, Ethane = 0.0030
Constituent j, Propane = 0.0010
Constituent j, Butane = 0.00030
Constituent j, Pentanes Plus = 0.000000

R_j = number of carbon atoms in the gas hydrocarbon constituent j:

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

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:

$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet

$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)

T_s = Temperature at standard conditions (F) = 60 F

T_a = Temperature at actual conditions (F) = 76 F (Based on Annual Avg Max Temperature for Hobbs, NM from Western Regional Climate

P_s = Absolute pressure at standard conditions (psia) = 14.7 psia

P_a = Absolute pressure at actual conditions (psia) = 14.7 psia (Assumption)

Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i}$ = $E_{s,i}$ * ρ_i * 0.0011023 *(Equation W-36)*

where:

$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)

$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)

ρ_i = Density of GHG i. Use:

CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)

CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40 .

$Mass_{N2O}$ = 0.0011023 * Fuel * HHV * EF *(Equation W-40)*

where:

$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).

Fuel = mass or volume of the fuel combusted

HHV = high heat value of the fuel

Field gas HHV = 1.235E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)

EF = 1.00E-04 kg N_2O/MMBtu

10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission by summing Equations W-40, W-19, W-20, and W-21

Gas Sent to Flare (cf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (cf)	CO_2 Un-Combusted, $E_{a,CO2}$ (cf)	CO_2 Combusted, $E_{a,CO2}$ (cf)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
43,750,000	4375	28,218,750	651,700	4,242	28,218,750	631,880	0.09	1,636.15	36.64	0.00596

TARGA

Targa Midstream Services, LLC
Monument Gas Plant - SSM Emissions

Residue Assist Gas to Acid Gas Flare GHG emission calculations - Annual Emissions (Updated - 0110-M11)
§98.233(n) Flare stack GHG emissions.

Step 1. Calculate contribution of un-combusted CH_4 emissions (actual conditions).

$E_{a,CH4}$ (un-combusted) = V_a * (1- η)* X_{CH4} *(Equation W-39B)*
where:
$E_{a,CH4}$ = contribution of annual un-combusted CH_4 emissions from regenerator in cubic feet under actual conditions.
V_a = volume of gas sent to combustion unit during the year (cf)
η = Fraction of gas combusted by a burning flare (or regenerator), default value from Subpa 0.98
For gas sent to an unlit flare, η is zero.
X_{CH4} = Mole fraction of CH_4 in gas to the flare = 0.9436 (Client gas analysis)

Step 2. Calculate contribution of un-combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ = V_a * X_{CO2} *(Equation W-20)*
where:
$E_{a,CO2}$ = contribution of annual un-combusted CO_2 emissions from regenerator in cubic feet under actual conditions.
V_a = volume of gas sent to combustion unit during the year (cf)
X_{CO2} = Mole fraction of CO_2 in gas to the flare = 0.001

Step 3. Calculate contribution of combusted CO_2 emissions (actual conditions).

$E_{a,CO2}$ (combusted) = Σ (η * V_a * Y_j * R_j) *(Equation W-21)*
where:
η = Fraction of gas combusted by a burning flare (or regenerator) 0.98
For gas sent to an unlit flare, η is zero.
V_a = volume of gas sent to combustion unit during the year (cf)
Y_j = mole fraction of gas hydrocarbon constituents j:
Constituent j, Methane = 0.9436 (Client gas analysis)
Constituent j, Ethane = 0.0268
Constituent j, Propane = 0.0022
Constituent j, Butane = 0.00065
Constituent j, Pentanes Plus 0.000354
R_j = number of carbon atoms in the gas hydrocarbon constituent j:
Constituent j, Methane = 1
Constituent j, Ethane = 2
Constituent j, Propane = 3
Constituent j, Butane = 4
Constituent j, Pentanes Plus 5

Step 4. Calculate GHG volumetric emissions at standard conditions (scf).

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s}$$ *(Equation W-33)*

where:
$E_{s,n}$ = GHG i volumetric emissions at standard temperature and pressure (STP) in cubic feet
$E_{a,n}$ = GHG i volumetric emissions at actual conditions (cf)
T_s = Temperature at standard conditions (F) = 60 F
T_a = Temperature at actual conditions (F) = 76 F (Based on Annual Avg Max Temperature for Hobbs, NM from Western Regional Climate
P_s = Absolute pressure at standard conditions (psia 14.7 psia
P_a = Absolute pressure at actual conditions (psia) = 14.7 psia (Assumption)
Constant = 459.67 (temperature conversion from F to R)

Step 5. Calculate annual CH_4 and CO_2 mass emissions (ton).

$Mass_{s,i}$ = $E_{s,i}$ * ρ_i * 0.0011023 *(Equation W-36)*
where:
$Mass_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) mass emissions at standard conditions in tons (tpy)
$E_{s,i}$ = GHG i (CO_2, CH_4, or N_2O) volumetric emissions at standard conditions (cf)
ρ_i = Density of GHG i. Use:
CH_4: 0.0192 kg/ft^3 (at 60F and 14.7 psia)
CO_2: 0.0526 kg/ft^3 (at 60F and 14.7 psia)

Step 6. Calculate annual N_2O emissions from portable or stationary fuel combustion sources under actual conditions (cf) using Equation W-40 .

$Mass_{N2O}$ = 0.0011023 * Fuel * HHV * EF *(Equation W-40)*
where:
$Mass_{N2O}$ = annual N_2O emissions from combustion of a particular type of fuel (tons).
Fuel = mass or volume of the fuel combusted
HHV = high heat value of the fuel
Field gas HHV = 1.235E-03 MMBtu/scf (Default provided in Subpart W Final Amendment;)
EF = 1.00E-04 kg N_2O/MMBtu
10^{-3} = conversion factor from kg to metric tons.

Step 7. Calculate total annual emission by summing Equations W-40, W-19, W-20, and W-21

Gas Sent to Flare (cf/yr)	CH_4 Un-Combusted, $E_{a,CH4}$ (cf)	CO_2 Un-Combusted, $E_{a,CO2}$ (cf)	CO_2 Combusted, $E_{a,CO2}$ (cf)	CH_4 Un-Combusted, $E_{a,CH4}$ (scf)	CO_2 Un-Combusted, $E_{a,CO2}$ (scf)	CO_2 Combusted, $E_{a,CO2}$ (scf)	CH_4 Un-Combusted, $E_{a,CH4}$ (tpy)	CO_2 Un-Combusted, $E_{a,CO2}$ (tpy)	CO_2 Combusted, $E_{a,CO2}$ (tpy)	N_2O Mass Emissions (tpy)
328,500,000	6199261	325,544	324,551,798	6,010,729	325,544	314,681,480	127.21	18.88	18,245.54	0.04472

New Unit BE/BH-1

Exempt per 20.2.72.202.B.5

Targa Midstream Services LLC - Monument Compressor Station

Emissions Summary

		Controlled Emissions															
		NOx		CO		VOCs		SO_2		TSP		PM-10		PM-2.5		HAPs	
Unit No.	Description/Source	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
Proposed Sources																	
BH-1	Emergency Heater	0.14	0.036	0.036	0.0091	0.0040	0.0010	0.05	0.013	0.014	0.0036	0.014	0.0036	0.014	0.0036	0.000024	0.0000
BE-1	Emergency Heater Engine	0.13	0.033	0.092	0.023	0.13	0.033	0.028	0.0071	0.014	0.0035	0.014	0.0035	0.014	0.0035	0.0064	0.0331
	Total	0.28	0.07	0.13	0.03	0.14	0.03	0.08	0.02	0.03	0.01	0.03	0.01	0.03	0.01	0.01	0.03

New Unit BE/BH-1

Exempt per 20.2.72.202.B.5

TABLE 2
ESTIMATED EMISSIONS FROM

Input Parameters for Emission Calculations

Design Firing Rating	0.10	MMBtu/hr			
Engine Rating	13.8	Horse Power	8.0	kW	
Fuel Consumption[b]	7000	BTU/hp-hr	0.7	gal/hr	350 gal/yr
Operating Hours per Year	500	hr/yr			

POLLUTANT	EMISSION FACTOR		CAPACITY		CONVERSION FACTOR		HOURLY EMISSIONS		ANNUAL OPERATING HOURS		WEIGHT CONVERSION		ANNUAL EMISSIONS	
NOx[a]	7.50	g NOx / kW-hr	8.0	kW	0.0022	lb / gr	0.13	lb NOx / hr	500	Hours / yr	1 / 2000	ton / lbs	0.03	tons NOx / yr
CO[a]	0.0067	lb CO / hp-hr	13.8	hp			0.09	lb CO / hr	500	Hours / yr	1 / 2000	ton / lbs	0.02	tons CO / yr
VOC[a]	7.50	g VOC / kW-hr	8.0	kW	0.0022	lb / gr	0.13	lb VOC / hr	500	Hours / yr	1 / 2000	ton / lbs	0.03	tons VOC / yr
CH_2O[a]	0.000463	lb CH2O / hp-hr	13.8	hp			0.01	lb CH_2O / hr	500	Hours / yr	1 / 2000	ton / lbs	0.002	tons CH_2O / yr
SO_2[a]	0.00205	lb SO2 / hp-hr	13.8	hp			0.03	lb SO_2 / hr	500	Hours / yr	1 / 2000	ton / lbs	0.01	tons SO_2 / yr
PM_{10}[a]	0.8	g PM10 / kW-hr	8.0	kW	0.0022	lb / gr	0.01	lb PM_{10} / hr	500	Hours / yr	1 / 2000	ton / lbs	0.004	tons PM_{10} / yr
CH3CHO[a]	0.000000	lb CH3CHO / hp-hr	0.0	hp			0.00	lb CH_2O / hr	500	Hours / yr	1 / 2000	ton / lbs	0.000	tons CH_2O / yr
Total HAP[a]	0.000000	lb HAP / hp-hr	0.0	hp			0.00	lb CH_2O / hr	500	Hours / yr	1 / 2000	ton / lbs	0.000	tons CH_2O / yr

[a] Emission Factors obtained from EPA Tier IV diesel engines and AP-42.

NOx Emission Factor = 7.50 Grams/kW-HR, EPA Tier IV diesel engine
CO Emission Factor = 0.00668 lb/HP-hr, AP-42 Table 3.3-1
VOC Emission Factor = 7.50 Grams/kW-HR, EPA Tier IV diesel engine
CH_2O Emission Factor = 0.000463 lb/HP-hr, AP-42 Table 3.3-1
SO_2 Emission Factor = 0.00205 lb/HP-hr, AP-42 Table 3.3-1
PM_{10} Emission Factor = 0.8 Grams/kW-HR, EPA Tier IV diesel engine
CH3CHO (acetaldehyde) Emission Factor = 0.000463 lb/HP-hr, AP-42 Table 3.3-1
Total HAP Emission Factor = 0.000463 lb/HP-hr, AP-42 Table 3.3-1

New Unit BE/BH-1
Exempt per 20.2.72.202.B.5

TABLE 3
ESTIMATED EMISSIONS FROM

Input Parameters for Emission Calculations

Design Firing Rating	1.00	MMBtu/hr	
Heating Value	0.138	MMBTU/gal	
Fuel Usage	7.25	gal/hr	3623.2 gal/yr
Operating Hours per Year	500	hr/yr	

POLLUTANT	EMISSION FACTOR		CAPACITY		CONVERSION FACTOR	HOURLY EMISSIONS		ANNUAL OPERATING HOURS		WEIGHT CONVERSION		ANNUAL EMISSIONS	
NOx[a]	20.0	lb NOx / gal	x 7.25	gal / hr	x 1 / 1000	= 0.14	lb NOx / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.04	tons NOx / yr
CO[a]	5.0	lb CO / gal	x 7.25	gal / hr	x 1 / 1000	= 0.04	lb CO / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.01	tons CO / yr
VOC[a]	0.556	lb VOC / gal	x 7.25	gal / hr	x 1 / 1000	= 0.0040	lb VOC / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.001	tons VOC / yr
CH_2O[a]	0.0033	lb CH2O / gal	x 7.25	gal / hr	x 1 / 1000	= 0.00002	lb CH_2O / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.00001	tons CH_2O / yr
SO_2[a]	7.1	lb SO2 / hp-hr	x 7.25	gal / hr	x 1 / 1000	= 0.051	lb SO_2 / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.01	tons SO_2 / yr
PM_{10}[a]	2.0	lb PM10 / gal	x 7.25	gal / hr	x 1 / 1000	= 0.01	lb PM_{10} / hr	500	Hours / yr	x 1 / 2000	ton / lbs	= 0.004	tons PM_{10} / yr

[a] Emission Factors obtained from AP-42.

NOx Emission Factor =	20.0	lb/1000 gal
CO Emission Factor =	5.0	lb/1000 gal
VOC Emission Factor =	0.556	lb/1000 gal
CH_2O Emission Factor =	0.0033	lb/1000 gal
SO_2 Emission Factor =	7.1	lb/1000 gal
PM_{10} Emission Factor =	2.0	lb/1000 gal

500 ppm S 0.05% by weight S

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.

NSR Permit 0110-M11R5 Revisions:

Extreme Cold Emergency Heater (Unit BE/BH-1) – Insignificant per IA List Item #1.a

- EPA Tier 4 diesel engine emission factors
- AP-42 Table 3.3-1

NSR Permit 0110-M11R4 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01; FUG-GSP)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Residue gas analysis dated 4/17/2012
- NGLs gas analysis dated 7/14/2021
- Inlet gas analysis dated 8/21/2018

Pump Purging SSM Emissions (Unit SSM-PP)

- Manufacturer Specifications
- NGLs gas analysis dated 7/14/2021

Pressurized Propane Loadout (Unit L-02) – Insignificant per IA List Item #1.a

- Ideal gas law

Haul road activity associated with propane production (Haul Roads) – Insignificant per IA List Item #1.a

- AP-42 13.2.1 Paved Roads

NSR Permit 0110-M11R3 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01; FUG-AGC)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Facility Acid Gas Analysis dated 8/18/2020

NSR Permit 0110-M11R2 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

NSR Permit 0110-M11R1 Revisions:

Fugitives Associated with C-40 (Unit FG-01; FUG-C40)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

SSM Emissions Associated with C-40 (Unit SSM-CB)

- Residue Gas Analysis, dated 8/21/2018

NSR Permit 0110-M11 Revisions:

Acid Gas Flare (Unit F-03 SSM)

- TNRCC RG-109
- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

Fugitives Associated with Redundant AGI Compressor (Unit FG-01)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Facility Acid Gas Analysis

SSM Emissions Associated with Redundant AGI Compressor (Unit SSM-AGI-C2)

- Facility Acid Gas Analysis

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.

NSR Permit 0110-M11R4 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01; FUG-GSP)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Residue gas analysis dated 4/17/2012
- NGLs gas analysis dated 7/14/2021
- Inlet gas analysis dated 8/21/2018

Pump Purging SSM Emissions (Unit SSM-PP)

- Manufacturer Specifications
- NGLs gas analysis dated 7/14/2021

Pressurized Propane Loadout (Unit L-02) – Insignificant per IA List Item #1.a

- Ideal gas law

Haul road activity associated with propane production (Haul Roads) – Insignificant per IA List Item #1.a

- AP-42 13.2.1 Paved Roads

NSR Permit 0110-M11R3 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01; FUG-AGC)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Facility Acid Gas Analysis dated 8/18/2020

NSR Permit 0110-M11R2 Revisions:

Fugitives Associated with Additional Components Installation (Unit FG-01)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

NSR Permit 0110-M11R1 Revisions:

Fugitives Associated with C-40 (Unit FG-01; FUG-C40)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

SSM Emissions Associated with C-40 (Unit SSM-CB)

- Residue Gas Analysis, dated 8/21/2018

NSR Permit 0110-M11 Revisions:

Acid Gas Flare (Unit F-03 SSM)

- TNRCC RG-109
- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995

Fugitives Associated with Redundant AGI Compressor (Unit FG-01)

- Table 2-4 of the EPA Protocol for Equipment Leak Emission Estimates, November 1995
- Facility Acid Gas Analysis

SSM Emissions Associated with Redundant AGI Compressor (Unit SSM-AGI-C2)

- Facility Acid Gas Analysis

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

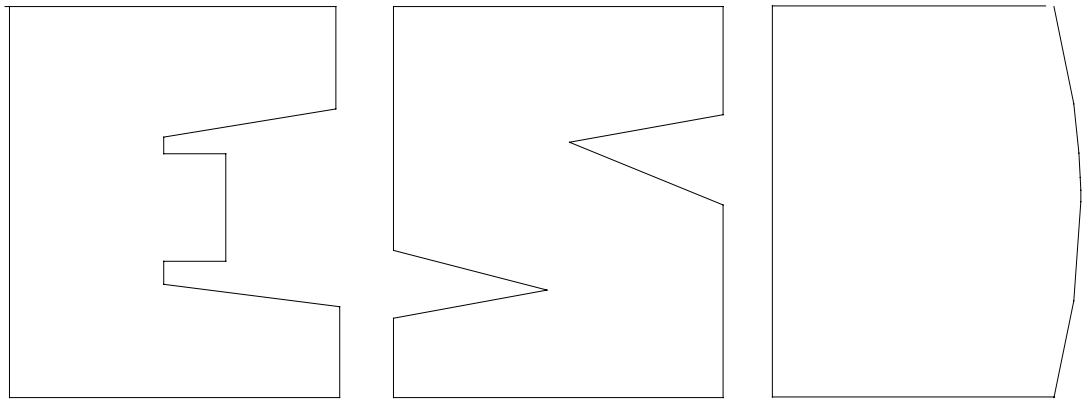

TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

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.

Inlet Analysis

SHIPPING ADDRESS:
2800 WESTOVER STREET
ODESSA, TEXAS 79764

MOBILE ANALYTICAL LABORATORIES, INC.

BILLING ADDRESS:
P.O. BOX 69210
ODESSA, TEXAS 79769-0210

LABORATORIES IN ODESSA & GIDDINGS
PHONE (432) 337-4744 | FAX (432) 337-8781

08/21/18 **GAS EXTENDED ANALYSIS** **LAB # 48583**

TARGA: MONUMENT
INLET GAS: 118-100029

	MOL %	GPM
HYDROGEN SULFIDE	0.6523	0.000
NITROGEN	2.8018	0.000
METHANE	69.7478	0.000
CARBON DIOXIDE	2.8018	0.000
ETHANE	11.7584	3.140
PROPANE	6.9269	1.906
ISO-BUTANE	0.8862	0.290
N-BUTANE	2.2176	0.698
ISO-PENTANE	0.5713	0.209
N-PENTANE	0.5345	0.193
NEOHEXANE	0.0060	0.003
CYCLOPENTANE	0.0628	0.019
2-METHYLPENTANE	0.1309	0.054
3-METHYLPENTANE	0.0856	0.035
N-HEXANE	0.1342	0.055
METHYLCYCLOPENTANE	0.0920	0.032
BENZENE	0.0349	0.010
CYCLOHEXANE	0.0786	0.027
2-METHYLHEXANE	0.0270	0.013
3-METHYLHEXANE	0.0490	0.022
DIMETHYLCYCLOPENTANES	0.0556	0.023
N-HEPTANE	0.0448	0.021
METHYLCYCLOHEXANE	0.0740	0.030
TRIMETHYLCYCLOPENTANES	0.0085	0.004
TOLUENE	0.0281	0.009
2-METHYLHEPTANE	0.0321	0.017
3-METHYLHEPTANE	0.0101	0.005
DIMETHYLCYCLOHEXANES	0.0270	0.012
N-OCTANE	0.0158	0.008
ETHYL BENZENE	0.0058	0.002
M&P-XYLENES	0.0134	0.005
O-XYLENE	0.0047	0.002
C9 NAPHTHENES	0.0207	0.011
C9 PARAFFINS	0.0197	0.012
N-NONANE	0.0079	0.005
N-DECANE	0.0034	0.002
UNDECANE PLUS	0.0288	0.019
TOTALS	100.0000	6.893

access

C6+ 1.1014

SPECIFIC GRAVITY	0.820
GROSS DRY BTU/CU.FT.	1294.0
GROSS WET BTU/CU.FT.	1271.9* - SS
TOTAL MOL. WT.	23.663
MOL. WT. C6+	94.521
SP. GRAVITY C6+	3.777
MOL. WT. C7+	108.894
SP. GRAVITY C7+	4.704

NOTES:
SAMPLED 08/14/18 BY: SR
8 PSIA @ 77 °F

CYLINDER NO. 2008
SPOT
DISTRIBUTION:
MS CINDY KLEIN

BASIS: 14.65 PSIA @ 60 °F

Mole Frac Heat: 1171.601

Residue Analysis 1

TARGA

Targa Midstream Services, L.P.
PO Box 67
Monument, NM 88265

Sample ID: STA118100001;Targa Resources

Lease: RES TO EL PASO

Location:

ID: Plant 118 at ,New Mexico

Sample Type: Spot

Sample Ran Date: 4/17/2012

Effective Date: 4/1/2012

Fractional Gas Analysis

at 14.65 and 60° F

Compound	Mol. %	GPM	Sp. Gr.
Carbon Dioxde:	0.0991		0.0015
Nitrogen:	2.5415		0.0246
Hydrogen Sulfide:	0.0000		0.0000
Methane:	94.3571		0.5227
Ethane:	2.6777	0.7120	0.0278
Propane:	0.2215	0.0607	0.0034
Iso-Butane:	0.0191	0.0062	0.0004
N-Butane:	0.0486	0.0152	0.0010
Iso-Pentane:	0.0129	0.0047	0.0003
N-Pentane:	0.0124	0.0045	0.0003
Hexane Plus:	0.0101	0.0041	0.0003
	100.0000	0.8075	0.5823

Specific Gravity

Field Gravity	0.583
Real, dry:	0.5832
Real, wet:	0.5830

Molecular Weight 16.862

B.T.U./CU. Foot (H2S Free)

Real - Dry Basis	1,009
Real - Wet Basis:	991

Pentane Plus

GPM: 0.0133

H2S PPM 0

Compressibility Factor

Z dry:	0.9979
Z wet:	0.9976

Pressure 190 psig.

Temperature 52 F.

Sampled and Analyzed by: Bruce Stingley

Comments: Notes:

RunID: C:\Monthly Samples\Sau000882.htm

NGL Analysis

www.permianls.com
575.397.3713 2609 W MARLAND HOBBS, NEW MEXICO 88240

EXTENDED LIQUID REPORT
SUMMARY OF CHROMATOGRAPHIC ANALYSIS

Sample Name:	Monument Demeth Tower	**For code:**	12123L
Sample Date:	07/14/2021	**Identification:**	2021043462
Sampled By:	DA	**Company:**	Targa
Time Sampled:	11:30	**Analysis Date:**	07/22/2021
Sample Temp:	41.0 F	**Analysis By:**	BH
Sample Press:	215.0	**Data File:**	LS_6191.D

Component	Mole%	Wt%	L.V.%
H2S	0.000	0.000	0.000
Nitrogen	0.044	0.028	0.017
Methane	0.124	0.045	0.073
CO2	0.004	0.004	0.002
Ethane	39.016	26.514	36.119
Propane	35.071	34.950	33.445
Isobutane	4.532	5.953	5.133
N-Butane	11.471	15.074	12.523
Isopentane	2.807	4.577	3.553
N-Pentane	2.794	4.556	3.506
*Hexanes+	4.137	8.299	5.629
Total	100.000	100.000	100.000

CALCULATED PARAMETERS

TOTAL ANALYSIS SUMMARY

MOLE WT:	44.248
SP. GRAVITY (IDEAL):	0.485
API GRAVITY @ 60F	160.100
ABS. DENSITY (LBS/GAL)	4.046
ft3 VAPOR/GAL LIQUID:	34.62
VAPOR PRESSURE:	394.87
REPORTED BASIS:	14.73
UNNORMALIZED TOTAL:	99.78

HEATING VALUE

BTU/CUFT	2518.9
BTU/GAL	87205.5
BTU/LB	21553.5

RATIOS

C1 to C2	0.20 : 1
CO2 to C2	0.01 : 1

BTEX SUMMARY

WT% BENZENE	6.353
WT% TOLUENE	3.389
WT% E BENZENE	0.202
WT% XYLENES	0.434

LAB MANAGER

* Hexane+ portion calculated by Allocation Process

575.397.3713 2609 W MARLAND HOBBS, NEW MEXICO 88240

Sample Name: Monument Demeth Tower
Company: Targa

Data File: LS_6191.D

ANALYSIS OF HEXANES PLUS

Component	MOLE%	WT%	L.V.%
2,2 DIMETHYL BUTANE	0.028	0.054	0.040
CYCLOPENTANE	0.285	0.504	0.345
2-METHYLPENTANE	0.616	1.199	0.885
3-METHYLPENTANE	0.360	0.701	0.508
HEXANE (C6)	0.657	1.278	0.931
DIMETHYLPENTANES	0.044	0.099	0.069
METHYLCYCLOPENTANE	0.397	0.756	0.487
2,2,3 TRIMETHYLBUTANE	0.000	0.000	0.000
BENZENE	0.297	0.524	0.288
CYCLOHEXANE	0.413	0.785	0.486
2-METHYLHEXANE	0.074	0.167	0.119
3-METHYLHEXANE	0.111	0.251	0.176
DIMETHYCYCLOPENTANES	0.042	0.094	0.060
OTHER HEPTANES	0.103	0.251	0.174
HEPTANE (C7)	0.134	0.304	0.214
METHYLCYCLOHEXANE	0.251	0.562	0.368
2,5 DIMETHYLHEXANE	0.004	0.011	0.008
TOLUENE	0.135	0.280	0.156
2-METHYLHEPTANE	0.025	0.064	0.044
OTHER OCTANES	0.089	0.222	0.145
OCTANE (C8)	0.019	0.049	0.034
ETHYLCYCLOHEXANE	0.009	0.023	0.014
ETHYL BENZENE	0.007	0.018	0.010
M,P-XYLENE	0.012	0.028	0.017
O-XYLENE	0.003	0.007	0.004
OTHER NONANES	0.015	0.045	0.030
NONANE (C-9)	0.003	0.010	0.007
IC3 BENZENE	0.001	0.001	0.001
CYCLOOCTANE	0.001	0.002	0.001
NC3 BENZENE	0.000	0.001	0.001
TM BENZENE(S)	0.000	0.001	0.001
IC4 BENZENE	0.000	0.000	0.000
NC4 BENZENE	0.000	0.000	0.000
DECANES + (C10+)	0.002	0.008	0.006

HEXANES PLUS SUMMARY

AVG MOLE WT	88.758
SP GRAV @ 60F	0.716
API GRAVITY @ 60F	66.2
ABS. DENSITY (LBS/GAL)	5.968
VAPOR PRESSURE:	4.38

COMPONENT RATIOS

HEXANES (C6) MOLE%	46.967
HEPTANES (C7) MOLE%	39.055
OCTANES (C8) MOLE%	12.636
NONANES (C9) MOLE%	1.221
DECANES+ (C10+) MOLE%	0.121
HEXANES (C6) WT%	44.984
HEPTANES (C7) WT%	38.954
OCTANES (C8) WT%	14.315
NONANES (C9) WT%	1.571
DECANES+ (C10+) WT%	0.176
HEXANES (C6) LV%	48.121
HEPTANES (C7) LV%	36.828
OCTANES (C8) LV%	13.412
NONANES (C9) LV%	1.459
DECANES+ (C10+) LV%	0.180

Remarks NF NR=NOT REPORTED ON FIELD TAG

Acid Gas Analysis

SHIPPING ADDRESS:
2800 WESTOVER STREET
ODESSA, TEXAS 79764

MOBILE ANALYTICAL LABORATORIES, INC.

BILLING ADDRESS:
P.O. BOX 69210
ODESSA, TEXAS 79769-0210

LABORATORIES IN ODESSA & GIDDINGS
PHONE (432) 337-4744 | FAX (432) 337-8781

08/18/20

EXTENDED GAS ANALYSIS

LAB # 56696

TARGA RESOURCES: MONUMENT
ACID GAS: 118-100092

	MOL %	GPM
HYDROGEN SULFIDE	12.6560	0.000
NITROGEN	0.0114	0.000
METHANE	0.5511	0.000
CARBON DIOXIDE	86.4915	0.000
ETHANE	0.0742	0.020
PROPANE	0.0384	0.011
ISO-BUTANE	0.0000	0.000
N-BUTANE	0.0105	0.003
ISO-PENTANE	0.0000	0.000
N-PENTANE	0.0000	0.000
NEOHEXANE	0.0000	0.000
CYCLOPENTANE	0.0019	0.001
2-METHYLPENTANE	0.0002	0.000
3-METHYLPENTANE	0.0002	0.000
N-HEXANE	0.0002	0.000
METHYLCYCLOPENTANE	0.0017	0.001
BENZENE	0.0935	0.026
CYCLOHEXANE	0.0040	0.001
2-METHYLHEXANE	0.0002	0.000
3-METHYLHEXANE	0.0003	0.000
DIMETHYLCYCLOPENTANES	0.0007	0.000
N-HEPTANE	0.0012	0.001
METHYLCYCLOHEXANE	0.0025	0.001
TRIMETHYLCYCLOPENTANES	0.0001	0.000
TOLUENE	0.0415	0.014
2-METHYLHEPTANE	0.0014	0.001
3-METHYLHEPTANE	0.0006	0.000
DIMETHYLCYCLOHEXANES	0.0012	0.001
N-OCTANE	0.0019	0.001
ETHYL BENZENE	0.0026	0.001
M&P-XYLENES	0.0049	0.002
O-XYLENE	0.0020	0.001
C9 NAPHTHENES	0.0006	0.000
C9 PARAFFINS	0.0013	0.001
N-NONANE	0.0004	0.000
N-DECANE	0.0001	0.000
UNDECANE PLUS	0.0017	0.001
TOTALS	100.0000	0.088

SPECIFIC GRAVITY	1.481
GROSS DRY BTU/CU.FT.	96.2
GROSS WET BTU/CU.FT.	94.5
TOTAL MOL. WT.	42.659
MOL. WT. C6+	86.643
SP. GRAVITY C6+	3.417
MOL. WT. C7+	99.576
SP. GRAVITY C7+	4.235

BASIS: 14.65 PSIA @ 60 °F

NOTES:
SAMPLED: 08/14/2020
6 PSIA @ 82 °F
DATE RUN 08/17/2020
SPOT BY: SR
CYLINDER NO. 46
DISTRIBUTION: MR ZACH MASON
126559.45 PPM H2S

Residue Analysis 2

SHIPPING ADDRESS:
2800 WESTOVER STREET
ODESSA, TEXAS 79764

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PHONE (432) 337-4744 | FAX (432) 337-8781

08/21/18 **GAS EXTENDED ANALYSIS** **LAB # 48585**

TARGA: MONUMENT
RESIDUE GAS

	MOL %	GPM
HYDROGEN SULFIDE	0.0000	0.000
NITROGEN	3.4340	0.000
METHANE	87.0329	0.000
CARBON DIOXIDE	0.1090	0.000
ETHANE	8.8096	2.348
PROPANE	0.5688	0.156
ISO-BUTANE	0.0098	0.003
N-BUTANE	0.0118	0.004
ISO-PENTANE	0.0006	0.000
N-PENTANE	0.0005	0.000
NEOHEXANE	0.0000	0.000
CYCLOPENTANE	0.0000	0.000
2-METHYLPENTANE	0.0001	0.000
3-METHYLPENTANE	0.0001	0.000
N-HEXANE	0.0001	0.000
METHYLCYCLOPENTANE	0.0001	0.000
BENZENE	0.0001	0.000
CYCLOHEXANE	0.0001	0.000
2-METHYLHEXANE	0.0000	0.000
3-METHYLHEXANE	0.0001	0.000
DIMETHYLCYCLOPENTANES	0.0001	0.000
N-HEPTANE	0.0001	0.000
METHYLCYCLOHEXANE	0.0003	0.000
TRIMETHYLCYCLOPENTANES	0.0000	0.000
TOLUENE	0.0005	0.000
2-METHYLHEPTANE	0.0002	0.000
3-METHYLHEPTANE	0.0001	0.000
DIMETHYLCYCLOHEXANES	0.0002	0.000
N-OCTANE	0.0002	0.000
ETHYL BENZENE	0.0005	0.000
M&P-XYLENES	0.0006	0.000
O-XYLENE	0.0003	0.000
C9 NAPHTHENES	0.0007	0.000
C9 PARAFFINS	0.0004	0.000
N-NONANE	0.0004	0.000
N-DECANE	0.0005	0.000
UNDECANE PLUS	0.0171	0.011
TOTALS	100.0000	2.522

C6+ = 023

SPECIFIC GRAVITY	0.620
GROSS DRY BTU/CU.FT.	1050.9*
GROSS WET BTU/CU.FT.	1032.8
TOTAL MOL. WT.	17.920
MOL. WT. C6+	149.362
SP. GRAVITY C6+	8.061
MOL. WT. C7+	151.114
SP. GRAVITY C7+	8.283

NOTES:
SAMPLED 08/14/18 BY: SR
206 PSIA @ 75 °F

CYLINDER NO. 580
SPOT
DISTRIBUTION:
MS CINDY KLEIN

BASIS: 14.65 PSIA @ 60 °F

Mole Heat Fraction = 948.948

October 2000
RG-109 (Draft)

Air Permit Technical Guidance for Chemical Sources:

Flares and Vapor Oxidizers

printed on recycled paper

Air Permits Division

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Waste Stream	Destruction/Removal Efficiency (DRE)		
VOC	98 percent (generic) 99 percent for compounds containing no more than 3 carbons that contain no elements other than carbon and hydrogen in addition to the following compounds: methanol, ethanol, propanol, ethylene oxide and propylene oxide		
H_2S	98 percent		
NH_3	case by case		
CO	case by case		
Air Contaminants	**Emission Factors**		
thermal NO_x	steam-assist:	high Btu	0.0485 lb/MMBtu
		low Btu	0.068 lb/MMBtu
	other:	high Btu	0.138 lb/MMBtu
		low Btu	0.0641 lb/MMBtu
fuel NO_x	NO_x is 0.5 wt percent of inlet NH_3, other fuels case by case		
CO	steam-assist:	high Btu	0.3503 lb/MMBtu
		low Btu	0.3465 lb/MMBtu
	other:	high Btu	0.2755 lb/MMBtu
		low Btu	0.5496 lb/MMBtu
PM	none, required to be smokeless		
SO_2	100 percent S in fuel to SO_2		

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

13.2.1 Paved Roads

13.2.1.1 General

Particulate emissions occur whenever vehicles travel over a paved surface such as a road or parking lot. Particulate emissions from paved roads are due to direct emissions from vehicles in the form of exhaust, brake wear and tire wear emissions and resuspension of loose material on the road surface. In general terms, resuspended particulate emissions from paved roads originate from, and result in the depletion of, the loose material present on the surface (i.e., the surface loading). In turn, that surface loading is continuously replenished by other sources. At industrial sites, surface loading is replenished by spillage of material and trackout from unpaved roads and staging areas. Figure 13.2.1-1 illustrates several transfer processes occurring on public streets.

Various field studies have found that public streets and highways, as well as roadways at industrial facilities, can be major sources of the atmospheric particulate matter within an area.[1-9] Of particular interest in many parts of the United States are the increased levels of emissions from public paved roads when the equilibrium between deposition and removal processes is upset. This situation can occur for various reasons, including application of granular materials for snow and ice control, mud/dirt carryout from construction activities in the area, and deposition from wind and/or water erosion of surrounding unstabilized areas. In the absence of continuous addition of fresh material (through localized trackout or application of antiskid material), paved road surface loading should reach an equilibrium value in which the amount of material resuspended matches the amount replenished. The equilibrium surface loading value depends upon numerous factors. It is believed that the most important factors are: mean speed of vehicles traveling the road; the average daily traffic (ADT); the number of lanes and ADT per lane; the fraction of heavy vehicles (buses and trucks); and the presence/absence of curbs, storm sewers and parking lanes.[10]

EPA's Office of Transportation and Air Quality plans to release the MOBILE6.1 model soon. This model will calculate particulate emissions from on road mobile sources from the engine exhaust, brake wear and tire wear. The emission factors in this section of AP-42 implicitly include the emissions of exhaust, brake wear, and tire wear that occurred in the field testing that produced the data used to develop the emission factor equation, in addition to resuspended particulate matter from the road surface. Therefore, adding the emission factors in this section to those calculated by MOBILE6.1 poses the problem of double counting. The double counting problem is of most concern when estimating the emissions on high traffic volume roads with low surface silt loadings. The following modifications should be made if double counting is a substantial issue for a particular application of this section. Where MOBILE6.1 predicts higher emissions of particulate matter than the equations in this section for a given combination of road and traffic variables, then only the MOBILE6.1 results should be used and resuspended particulate matter should be considered negligible. Where MOBILE6.1 predictions are less than the emissions that would be predicted from the equation in this section, then the emissions calculated with the equation in this section can be taken as a reasonable representation of total particulate emissions. If in such a case it is desired to separate emissions into resuspended particulate matter versus exhaust, brake and tire wear matter, then the MOBILE6.1 estimates can be subtracted from the estimates made using the equation in this section with the remainder taken as the resuspended portion of the emissions.

13.2.1.2 Emissions And Correction Parameters

Dust emissions from paved roads have been found to vary with what is termed the "silt loading" present on the road surface as well as the average weight of vehicles traveling the road. The term silt loading (sL) refers to the mass of silt-size material (equal to or less than 75 micrometers [μm] in physical diameter) per unit area of the travel surface. The total road surface dust loading consists of loose material that can be collected by broom sweeping and vacuuming of the traveled portion of the paved road. The silt fraction is determined by measuring the proportion of the loose dry surface dust that passes through a 200-mesh screen, using the ASTM-C-136 method. Silt loading is the product of the silt fraction and the total loading, and is abbreviated "sL". Additional details on the sampling and analysis of such material are provided in AP-42 Appendices C.1 and C.2.

The surface sL provides a reasonable means of characterizing seasonal variability in a paved road emission inventory. In many areas of the country, road surface loadings [11-21] are heaviest during the late winter and early spring months when the residual loading from snow/ice controls is greatest. As noted earlier, once replenishment of fresh material is eliminated, the road surface loading can be expected to reach an equilibrium value, which is substantially lower than the late winter/early spring values.

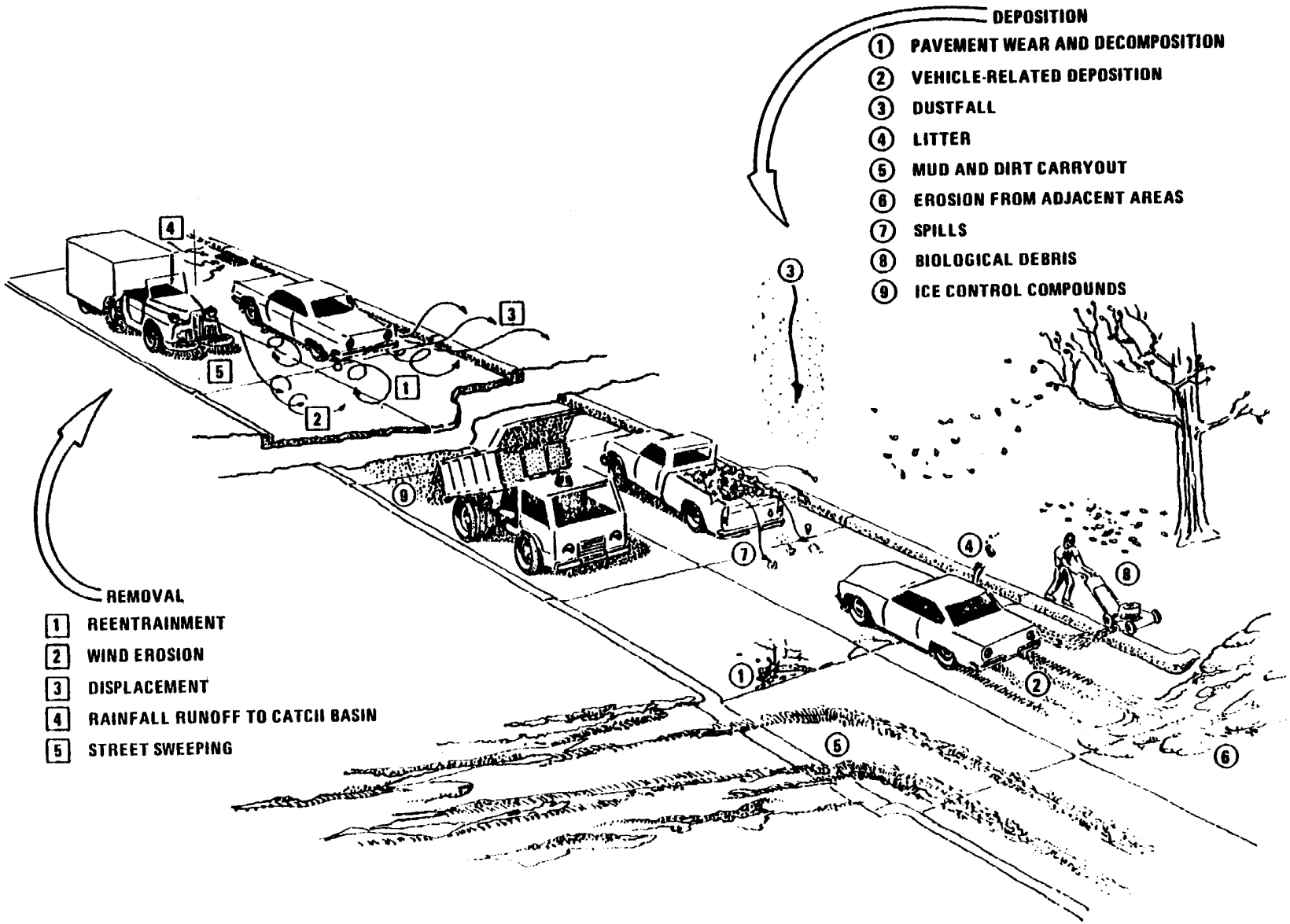

Figure 13.2.1-1. Deposition and removal processes.

13.2.1.3 Predictive Emission Factor Equations[10]

The quantity of particulate emissions from vehicle traffic on a dry paved road may be estimated using the following empirical expression:

$$E=k\ (sL/2)^{0.65}\ (W/3\ )^{1.5} \quad (1)$$

where:

E = particulate emission factor (having units matching the units of k)
k = particle size multiplier for particle size range and units of interest (see below)
sL = road surface silt loading (grams per square meter) (g/m^2)
W = average weight (tons) of the vehicles traveling the road

It is important to note that Equation 1 calls for the average weight of all vehicles traveling the road. For example, if 99 percent of traffic on the road are 2 ton cars/trucks while the remaining 1 percent consists of 20 ton trucks, then the mean weight "W" is 2.2 tons. More specifically, Equation 1 is *not* intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor should be calculated to represent the "fleet" average weight of all vehicles traveling the road.

The particle size multiplier (k) above varies with aerodynamic size range as shown in Table 13.2.1-1. To determine particulate emissions for a specific particle size range, use the appropriate value of k shown in Table 13.2.1-1.

Table 13.2-1.1. PARTICLE SIZE MULTIPLIERS FOR PAVED ROAD EQUATION

Size range[a]	Particle Size Multiplier k[b]		
	g/VKT	g/VMT	lb/VMT
PM-2.5[c]	1.1	1.8	0.0040
PM-10	4.6	7.3	0.016
PM-15	5.5	9.0	0.020
PM-30[d]	24	38	0.082

[a] Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.

[b] Units shown are grams per vehicle kilometer traveled (g/VKT), grams per vehicle mile traveled (g/VMT), and pounds per vehicle mile traveled (lb/VMT). The multiplier k includes unit conversions to produce emission factors in the units shown for the indicated size range from the mixed units required in Equation 1.

[c] Ratio of PM-2.5 to PM-10 taken from Reference 22**.**

[d] PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

The above equation is based on a regression analysis of numerous emission tests, including 65 tests for PM-10.[10] Sources tested include public paved roads, as well as controlled and uncontrolled industrial paved roads. All sources tested were of freely flowing vehicles traveling at constant speed on relatively level roads . No tests of "stop-and-go" traffic or vehicles under load were available for inclusion in the data base. The equations retain the quality rating of A (B for PM-2.5), if applied within the range of source conditions that were tested in developing the equation as follows:

Silt loading:	0.02 - 400 g/m^2
	0.03 - 570 grains/square foot (ft^2)
Mean vehicle weight:	1.8 - 38 megagrams (Mg)
	2.0 - 42 tons
Mean vehicle speed:	16 - 88 kilometers per hour (kph)
	10 - 55 miles per hour (mph)

To retain the quality rating for the emission factor equation when it is applied to a specific paved road, it is necessary that reliable correction parameter values for the specific road in question be determined. With the exception of limited access roadways, which are difficult to sample, the collection and use of site-specific silt loading (sL) data for public paved road emission inventories are strongly recommended. The field and laboratory procedures for determining surface material silt content and surface dust loading are summarized in Appendices C.1 and C.2. In the event that site-specific values cannot be obtained, an appropriate value for a paved public road may be selected from the values given in Table 13.2.1-2, but the quality rating of the equation should be reduced by 2 levels. Also, recall that Equation 1 refers to emissions due to freely flowing (not stop-and-go) traffic at constant speed on level roads.

Equation 1 may be extrapolated to average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual (or other long-term) average emissions are inversely proportional to the frequency of measurable (> 0.254 mm [0.01 inch]) precipitation by application of a precipitation correction term. The precipitation correction term can be applied on a daily or an hourly basis. For the daily basis, equation 1 becomes:

$$E_{ext} = k\,(sL/2)^{0.65}\,(W/3)^{1.5}\,(1-P/4N) \quad (2)$$

where k, sL, and W are as defined in Equation 1 and

E_{ext} = annual or other long-term average emission factor in the same units as k
P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
N = number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly)

Note that the assumption leading to Equation 2 is based on analogy with the approach used to develop long-term average unpaved road emission factors in Section 13.2.2. However, Equation 2 above incorporates an additional factor of "4" in the denominator to account for the fact that paved roads dry more quickly than unpaved roads and that the precipitation may not occur over the complete 24-hour day.

For the hourly basis, equation 1 becomes:

$$E_{ext} = k\,(sL/2)^{0.65}\,(W/3)^{1.5}\,(1-1.2P/N) \quad (3)$$

where k, sL, and W are as defined in Equation 1 and

E_{ext} = annual or other long-term average emission factor in the same units as k
P = number of hours with at least 0.254 mm (0.01 in) of precipitation during the averaging period
N = number of hours in the averaging period (e.g., 8760 for annual, 2124 for seasonal, 720 for monthly)

Note: In the hourly moisture correction term (1-1.2P/N) for equation 3, the 1.2 multiplier is applied to account for the residual mitigative effect of moisture. For most applications, this equation will produce satisfactory results. However, if the time interval for which the equation is applied is short, e.g., for one hour or one day, the application of this multiplier makes it possible for the moisture correction term to become negative. This will result in calculated negative emissions which is not realistic. Users should expand the time interval to include sufficient "dry" hours such that negative emissions are not calculated. For the special case where this equation is used to calculate emissions on an hour by hour basis, such as would be done in some emissions modeling situations, the moisture correction term should be modified so that the moisture correction "credit" is applied to the first hours following cessation of precipitation. In this special case, it is suggested that this 20% "credit" be applied on a basis of one hour credit for each hour of precipitation up to a maximum of 12 hours.

Note that the assumption leading to Equation 3 is based on analogy with the approach used to develop long-term average unpaved road emission factors in Section 13.2.2.

Figure 13.2.1-2 presents the geographical distribution of "wet" days on an annual basis for the United States. Maps showing this information on a monthly basis are available in the *Climatic Atlas of the United States*[23] . Alternative sources include other Department of Commerce publications (such as local climatological data summaries). The National Climatic Data Center (NCDC) offers several products that provide hourly precipitation data. In particular, NCDC offers *Solar and Meteorological Surface Observation Network 1961-1990* (SAMSON) CD-ROM, which contains 30 years worth of hourly meteorological data for first-order National Weather Service locations. Whatever meteorological data are used, the source of that data and the averaging period should be clearly specified.

It is emphasized that the simple assumption underlying Equations 2 and 3 has not been verified in any rigorous manner. For that reason, the quality ratings for Equations 2 and 3 should be downgraded one letter from the rating that would be applied to Equation 1.

During the preparation of the background document (Reference 10), public road silt loading values from 1992 and earlier were assembled into a data base. This data base is available in the file named "r13s03-1b.zip" located at the Internet URL "http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-1.html" on the World Wide Web. Although hundreds of public paved road silt loading measurements had been collected, there was no uniformity in sampling equipment and analysis techniques, in roadway classification schemes, and in the types of data reported. Not surprisingly, the data set did not yield a coherent relationship between silt loading and road class, average daily traffic (ADT), etc., even though an inverse relationship between silt loading and ADT has been found for a subclass of curbed paved roads in urban areas. Further complicating the analysis is the fact that, in many parts of the country, paved road silt loading varies greatly over the course of the year, probably because of cyclic variations in mud/dirt carryout and in use of anti-skid materials. Although there were strong reasons to suspect that the assembled data base was skewed towards high values, independent data were not available to confirm the suspicions.

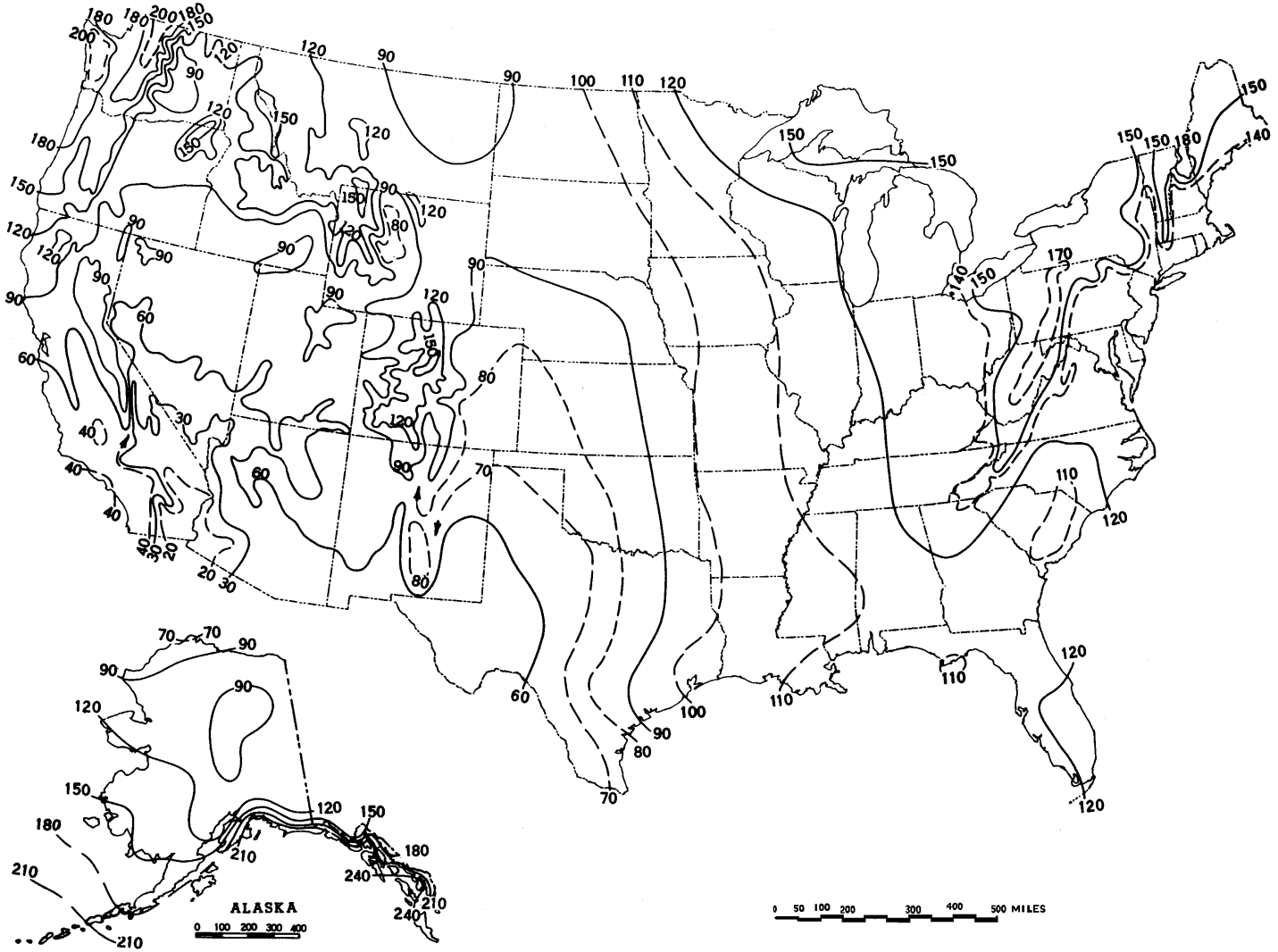

Figure 13.2.1-2. Mean number of days with 0.01 inch or more of precipitation in the United States.

Since the time that the background document was prepared, new field sampling programs have shown that the assembled silt loading data set is biased high for "normal" situations.[24] Just as importantly, however, the newer programs confirm that substantially higher than "normal" silt loadings can occur on public paved roads. As a result, two sets of default values are provided in Table 13.2.1-2, one for "normal" conditions and another for worst-case conditions (such as after winter storm seasons or in areas with substantial mud/dirt trackout). The "normal" silt loading data base is available in the file "r13s03-1a.zip" located at the Internet URL "http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-1.html" on the World Wide Web.

Table 13.2.1-2 (Metric Units). RECOMMENDED DEFAULT SILT LOADING (g/m^2) VALUES FOR PUBLIC PAVED ROADS[a]

	High ADT roads[b]	Low ADT roads
Normal conditions	0.1	0.4
Worst-case conditions[c]	0.5	3

[a] Excluding limited access roads. See discussion in text. 1 g/m^2 is equal to 1.43 grains/ft^2

[b] High ADT refers to roads with at least 5,000 vehicles per day.

[c] For conditions such as post-winter-storm or areas with substantial mud/dirt carryout.

The range of silt loading values in the data base for normal conditions is 0.01 to 1.0 for high-ADT roads and 0.054 to 6.8 for low-ADT roads. Consequently the use of a default value from Table 13.2.1-2 should be expected to yield only an order-of-magnitude estimate of the emission factor. Public paved road silt loadings are dependent upon: traffic characteristics (speed, ADT, and fraction of heavy vehicles); road characteristics (curbs, number of lanes, parking lanes); local land use (agriculture, new residential construction) and regional/seasonal factors (snow/ice controls, wind blown dust). As a result, the collection and use of site-specific silt loading data is highly recommended. In the event that default silt loading values are used, the quality ratings for the equation should be downgraded 2 levels.

Limited access roadways pose severe logistical difficulties in terms of surface sampling, and few silt loading data are available for such roads. Nevertheless, the available data do not suggest great variation in silt loading for limited access roadways from one part of the country to another. For annual conditions, a default value of 0.015 g/m^2 is recommended for limited access roadways.[9,22] Even fewer of the available data correspond to worst-case situations, and elevated loadings are observed to be quickly depleted because of high traffic speeds and high ADT rates. A default value of 0.2 g/m^2 is recommended for short periods of time following application of snow/ice controls to limited access roads.[22]

The limited data on silt loading values for industrial roads have shown as much variability as public roads. Because of the variations of traffic conditions and the use of preventive mitigative controls, the data probably do not reflect the full extent of the potential variation in silt loading on industrial roads. However, the collection of site specific silt loading data from industrial roads is easier and safer than for public roads. Therefore, the collection and use of site-specific silt loading data is preferred and is highly recommended. In the event that site-specific values cannot be obtained, an appropriate value for an industrial road may be selected from the mean values given in Table 13.2.1-3, but the quality rating of the equation should be reduced by 2 levels.

Table 13.2.1-3 (Metric And English Units). TYPICAL SILT CONTENT AND LOADING VALUES FOR PAVED ROADS AT INDUSTRIAL FACILITIES[a]

Industry	No. Of Sites	No. Of Samples	Silt Content (%)		No. Of Travel Lanes	Total Loading x 10^{-3}			Silt Loading (g/m^2)	
			Range	Mean		Range	Mean	Units[b]	Range	Mean
Copper smelting	1	3	15.4-21.7	19.0	2	12.9-19.5 45.8-69.2	15.9 55.4	kg/km lb/mi	188-400	292
Iron and steel production	9	48	1.1-35.7	12.5	2	0.006-4.77 0.020-16.9	0.495 1.75	kg/km lb/mi	0.09-79	9.7
Asphalt batching	1	3	2.6-4.6	3.3	1	12.1-18.0 43.0-64.0	14.9 52.8	kg/km lb/mi	76-193	120
Concrete batching	1	3	5.2-6.0	5.5	2	1.4-1.8 5.0-6.4	1.7 5.9	kg/km lb/mi	11-12	12
Sand and gravel processing	1	3	6.4-7.9	7.1	1	2.8-5.5 9.9-19.4	3.8 13.3	kg/km lb/mi	53-95	70
Municipal solid waste landfill	2	7	—	—	2	—	—	—	1.1-32.0	7.4
Quarry	1	6	—	—	2	—	—	—	2.4-14	8.2

[a] References 1-2,5-6,11-13. Values represent samples collected from *industrial* roads. Public road silt loading values are presented in Table-13.2.1-2. Dashes indicate information not available.

[b] Multiply entries by 1000 to obtain stated units; kilograms per kilometer (kg/km) and pounds per mile (lb/mi).

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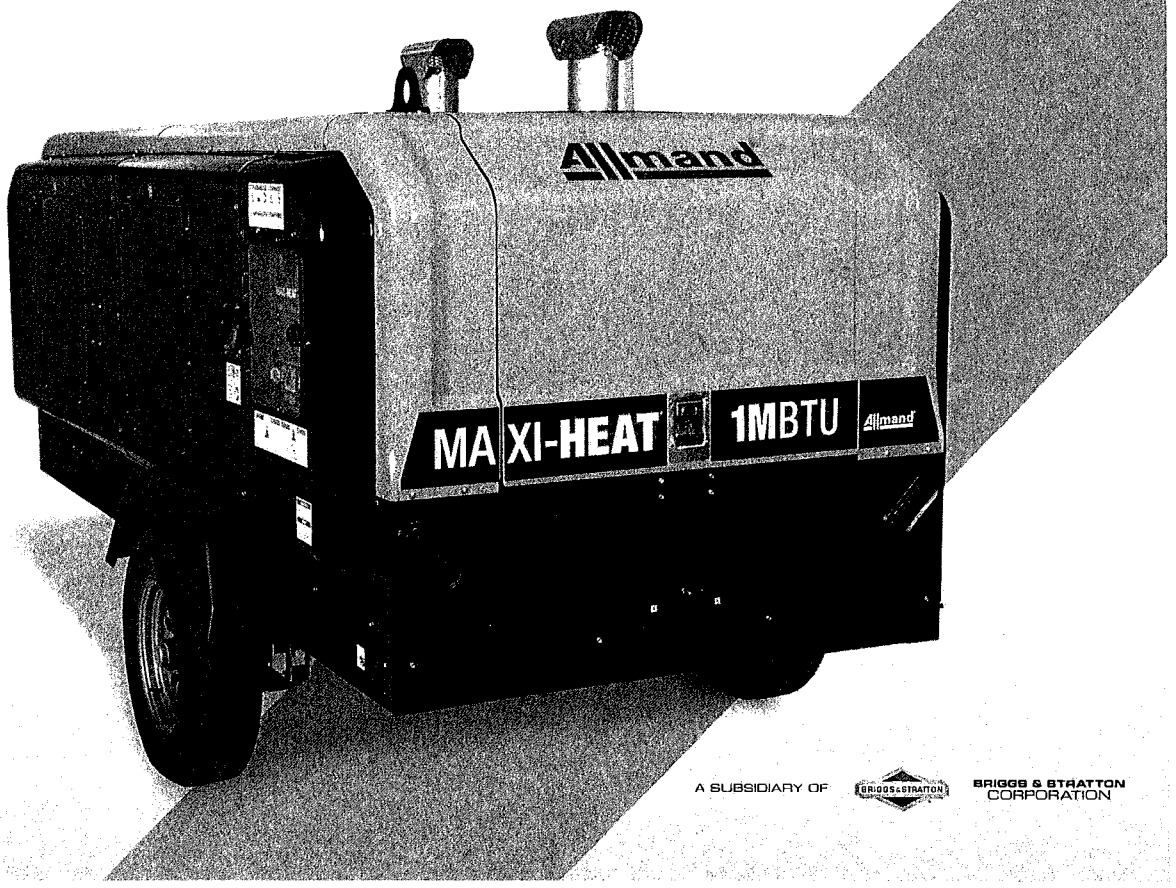

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External Control Panel Provides the operator with the necessary operating parameters needed during operation eliminating the need to open the heater door.

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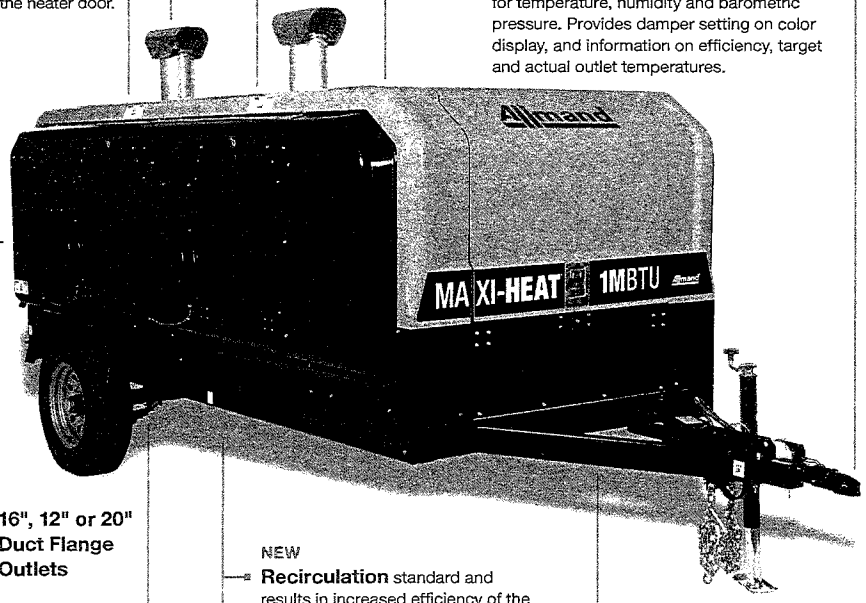

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CSA Approved
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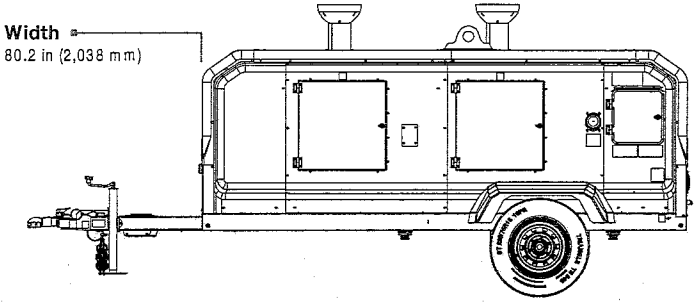
Maxi-Heat®

TECHNICAL SPECS

Model	Maxi-Heat® 1MBTU	Maxi-Heat® 1MBTU
Engine Brand	Kubota D1005	CAT C1.1
Engine Model	D1005	C1.1
Frequency	60 Hz	60 Hz
Ducting Length - Continuous Heating	3,354 cfm with 96°F rise over ambient @125 ft	3,354 cfm with 96°F rise over ambient @125 ft
Sound Level @ 23ft (FULL LOAD) dBA	67.1 dBA	65.7 dBA
Sound Level @ 23ft (NO LOAD) dBA	62.9 dBA	62.4 dBA
Phase	1-phase	1-phase
Prime Power (kW)*	8	8
BTU per Hour	1,000,000	1,000,000
Heated Air Output Maximum (cfm)	7,060	7,060
Horsepower (@ 1,600 RPM) ****	11.6	13.8
Oil Change Interval (hr)	200	1,000
Engine Tier	Tier 4 Final	Tier 4 Final
Fuel Tank - Single		
Fuel Capacity gal (L)	210 (794.9)	210 (794.9)
Operating Time - 1 Heater @ Full Load (hrs)	67.5	67.8
Operating Time - 2 Heater @ Full Load (hrs)	35.1	34.6
Fuel Tank - Multi (optional)		
Heater Fuel Tank - 1 Capacity gal (L)	116 (439.1)	116 (439.1)
Heater Fuel Tank - 2 Capacity gal (L)	116 (439.1)	116 (439.1)
Engine Fuel Tank Capacity gal (L)	50 (189.2)	50 (189.2)
Total Fuel Tank Capacity gal (L)	281.6 (1,065.9)	281.6 (1,065.9)
Operating Time - 1 Heater @ Full Load (hrs)	42.1	42.1
Operating Time - 2 Heater @ Full Load (hrs)	42.1	42.1
Weights & Shipping		
Operating Weight NO Fuel (lbs) Multi Tank	3,805	3,774
Operating Weight NO Fuel (lbs) Single Tank	3,760	3,774
Operating Weight FULL Fuel (lbs) Multi Tank	5,855	5,869
Operating Weight FULL Fuel (lbs) Single Tank	5,810	5,824
Number of Units on 48' Flatbed	4	4
Number of Units on 53' Flatbed	4	4

Height
Transport Position
83.9 in (2,130 mm)

Width
80.2 in (2,038 mm)



Length
183.4 in (4,657 mm)

* Prime generator electrical output per Allmand® testing. ** Based on one hour run test full load fuel consumption. *** All power levels are stated gross horsepower as rated by each engine's manufacturer.
Allmand® has a policy of continuous product improvement and reserves the right to modify its specifications at any time and without prior notice. See operator's manual or www.allmand.com website for complete warranty details.

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2 5/16" Bulldog Hitch

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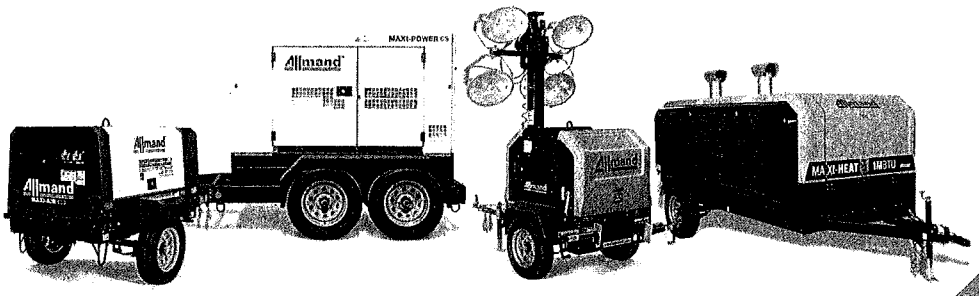
Air Shut off Valve

Custom Paint

Telematics (Customer supplied – consult factory)



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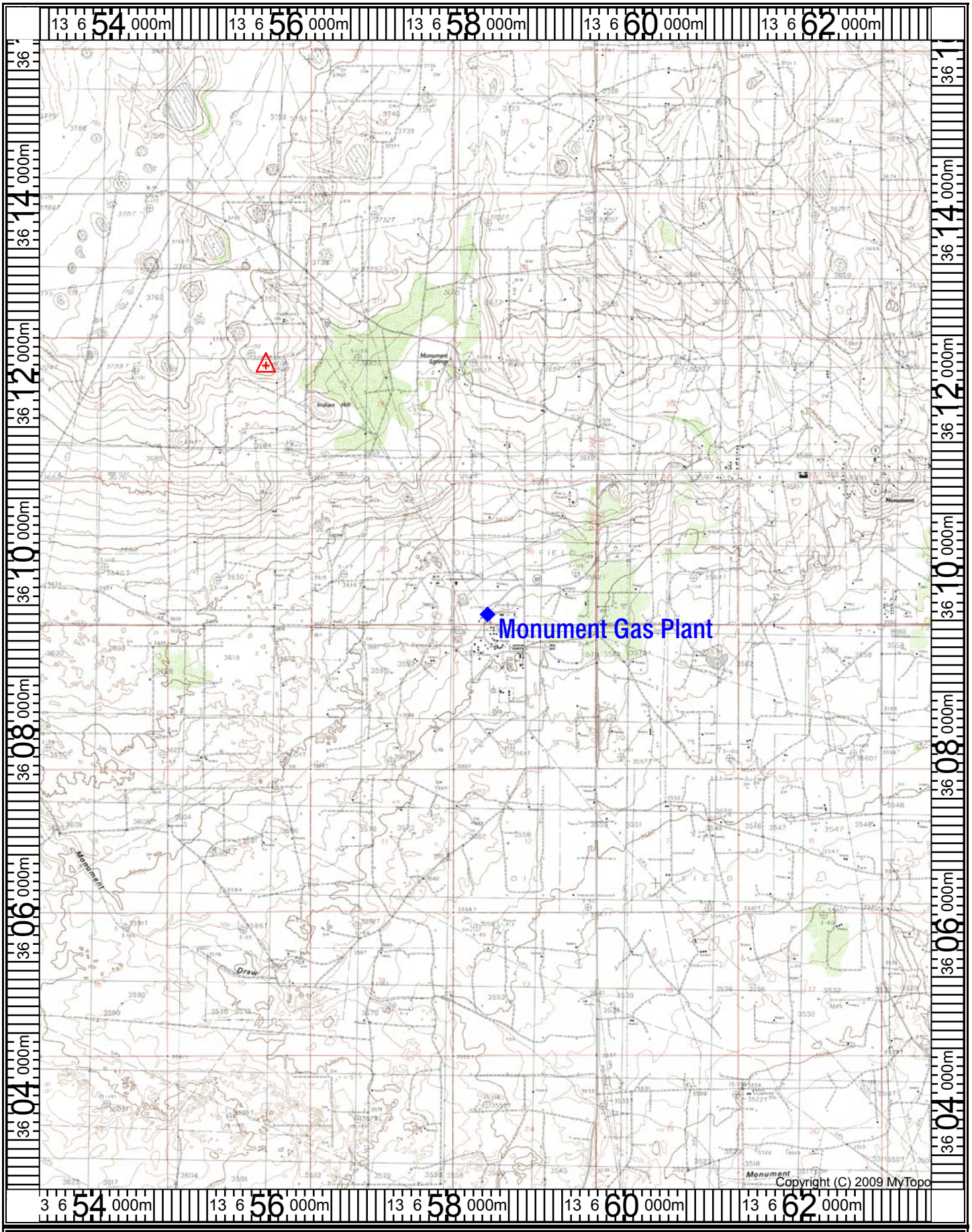
Section 8

Map(s)

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

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

A map showing the location of this facility is attached.



Map Name: MONUMENT SOUTH
Print Date: 01/13/16

Scale: 1 inch = 4,761 ft.
Map Center: 13 0658325 E 3609380 N

Horizontal Datum: WGS84

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)
(This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

☑ **I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications"**
This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant's Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. ☐ A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
2. ☐ A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
3. ☐ A copy of the property tax record (20.2.72.203.B NMAC).
4. ☐ A sample of the letters sent to the owners of record.
5. ☐ A sample of the letters sent to counties, municipalities, and Indian tribes.
6. ☐ A sample of the public notice posted and a verification of the local postings.
7. ☐ A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
8. ☐ A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
9. ☐ A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
10. ☐ A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
11. ☐ A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.

N/A – Public notice is not required for Title V permit applications.

Section 10

Written Description of the Routine Operations of the Facility

---

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

The function of the facility is to process natural gas through inlet separation, dehydration, acid gas removal and cooling, and separation of methane from natural gas liquids. The natural gas and natural gas liquid products are delivered to sales pipelines and the separated condensate is loaded into tank trucks for transport.

Field natural gas entering the plant is sent through an inlet separator designed to remove entrained solids and dissolved liquids from the field gas stream. Condensate from the inlet is stabilized, separated and stored prior to loadout via truck. The condensate can also bypass the stabilizer and be stored prior to loadout via truck. The loading emissions are controlled by vapor balancing. Working and breathing losses and flash losses from the tanks are controlled by a VRU and a backup VRU.

Once the field gas passes through the inlet separator it is routed to the inlet compressors to increase the pressure of the gas. The stream is then sent to an amine treater for the purpose of removing carbon dioxide and hydrogen sulfide entrained in the field gas stream. Emissions from the amine still overheads are routed to the AGI well or the emergency acid gas flare. After the amine treating, the field gas is then sent to a dehydration system for the purpose of removing water from the gas stream.

The dry pipeline quality residue gas (consisting of primarily methane) from the top of the de-methanizer tower is sent to the suction header of the residue gas compressors. The residue gas is then compressed up to a pressure high enough for delivery into a high pressure and low pressure natural gas (sales) pipeline.

The NGLs which exit the bottom of the de-methanizer tower will be sent to the de-ethanizer tower and then to de-propanizer tower. These distillation columns will be used to separate the propane from the NGLs. The propane that is produced will be transported from the facility by pressurized truck.

Section 11
Source Determination

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

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

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

A. Identify the emission sources evaluated in this section (list and describe)**:**
See section 2-A.

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

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

☑ **Yes** ☐ **No**

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

☑ **Yes** ☐ **No**

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

☑ **Yes** ☐ **No**

C. Make a determination:

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

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

Section 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:
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets maximum allowable concentrations of the TSP, SO_2, H_2S, NOx, and CO under this regulation.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emission per 20.2.7.110 NMAC.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	N/A	This facility does not have existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.33.108 NMAC.
20.2.34 NMAC	Oil Burning Equipment: NO_2	No	N/A	This facility does not have oil burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. The facility is not subject to this regulation and does not have emission sources that meet the applicability requirements under 20.2.34.108 NMAC.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	N/A	This regulation establishes sulfur emission standards for natural gas processing plants. The facility meets the definition of a new natural gas processing plant under this regulation and is subject to the requirements of this regulation [20.2.35.7 (B) NMAC]. The facility meets requirements under 20.2.35.110(B).
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	N/A	N/A	There are no tanks or tank batteries that meet the storage capacity and weekly throughput requirements that would trigger this requirement. [20.2.38.109 NMAC][20.2.38.110 NMAC] [20.2.38.111 NMAC] [20.2.38.112 NMAC].
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	N/A	N/A	This regulation establishes sulfur emission standards for sulfur recovery plants which are not part of petroleum or natural gas processing facilities. This regulation does not apply to the facility because it is superseded by 20.2.35 NMAC.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	Stationary Combustion Equipment	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC). Equipment at this facility was subject to the repealed regulation 20.2.37 NMAC and it is now subject to 20.2.61 NMAC.
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining an operating permit. The facility is a major source for NOx, CO, VOC, and SO_2. The facility has an operating permit P110-R3 to meet the requirements of this regulation.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.70 NMAC and is therefore subject to requirements of this regulation. The facility will meet all fee requirements under 20.2.71.110 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	This regulation establishes the requirements for obtaining a construction permit. The facility is a stationary source that has potential emission rates greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Air Quality Standard. The facility has a construction permit (NSR Permit) 0110-M11R5 to meet the requirements of this regulation.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet reporting all applicable reporting requirements under 20.2.73.300.B.1 NMAC.

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	Yes	Facility	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. The facility is an existing PSD major source. The facility is PSD major for NOx, CO, and SO_2. The facility has not undergone a major modification and therefore does not currently require a PSD permit.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.72 NMAC and is therefore subject to requirements of this regulation.
20.2.77 NMAC	New Source Performance	Yes	Units subject to 40 CFR 60	This regulation establishes state authority to implement new source performance standards (NSPS) for stationary sources. The facility is subject to this regulation because it is a natural gas processing plant subject to NSPS Subpart A and Subpart KKK. Turbine Unit T-04 is subject to NSPS GG since it has a heat input capacity greater than 10 MMBtu/hr and commenced construction after October 3, 1977. [40 CFR Part 60.330(a)]. Turbine Unit T-03 is subject to NSPS GG but exempt from the standards for nitrogen oxides requirements under 40 CFR Part 60.330(a). This exemption is pursuant to 40 CFR Part 60.332(e). Turbines T-01 and T-02 are not subject to the requirements of NSPS GG as they were constructed prior to October 3, 1977. [40 CFR Part 60.330(b)] 40 CFR 60 Subpart OOOOa applies to fugitive leaks from the slug catcher (FUG-SC), and condensate stabilizer (FUG-CS). The fugitive emissions associated with the propane refractionation system (FUG-FRAC) are subject to NSPS OOOOa. Compressor unit RC-28 is subject to NSPS OOOOa. Unit C-40 is a reciprocating compressor and is subject to NSPS OOOOa 60.5385a per 60.5365a(a)(c). The fugitives associated with the C-40 compressor are not subject to NSPS OOOOa monitoring as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The fugitives associated with the redundant acid gas cooling are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The fugitives associated with the cryogenic units (FUG-GSP) are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f).
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This regulation establishes state authority to implement emission standards for hazardous air pollutants subject to 40 CFR Part 61. This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61 and is therefore not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights	No	N/A	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as all stacks at the facility follow good engineering practice.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	Units Subject to 40 CFR 63	This regulation established state authority to implement MACT Standards for source categories of HAPs. The facility is a major source of HAPs but all engines at the facility are existing 2-stroke lean burn engines located at a major source of HAPs and constructed before December 19, 2002. There are no requirements under 40 CFR Part 63 Subpart ZZZZ for engines at the facility per 40 CFR Part 63.6590(b)(3).

STATE REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	Yes	Facility	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. The facility is an existing PSD major source. The facility is PSD major for NOx, CO, and SO_2. The facility has not undergone a major modification and therefore does not currently require a PSD permit.

Table for Applicable FEDERAL REGULATIONS

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NOx, CO, SO_2, H_2S, PM_{10}, and $PM_{2.5}$ under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	Units subject to 40 CFR 60	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because 40 CFR Part 60 Subpart GG (Applies to T-03 and T-04) and Subpart KKK apply (Applies to lines, valves, flanges, and fittings). 40 CFR 60 Subpart OOOOa applies to fugitive leaks from the slug catcher (FUG-SC), backup VRU (FUG-VRU), condensate stabilizer (FUG-CS), RC-28 compressor (FUG-C28), and the fugitive emissions associated with the propane refractionation system (FUG-FRAC). The Unit C-40 compressor is in dedicated residue gas service and subject to NSPS OOOOa per 60.5365a(a)(c). The fugitives associated with the C-40 compressor are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The fugitives associated with the redundant acid gas cooling are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The new fugitives associated with the cryogenic units (FUG-GSP) will not be subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f).
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for **Electric Utility Steam Generating Units**	No	N/A	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.
NSPS 40 CFR60.40b Subpart Db	Standards of Performance for **Industrial-Commercial-Institutional Steam Generating Units**	No	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units with a heat capacity greater than 100 MMBtu/hr.
NSPS 40 CFR60.40b Subpart Dc	Standards of Performance for **small Industrial-Commercial-Institutional Steam Generating Units**	No	N/A	This regulation establishes standards of performance for small industrial-commercial-institutional steam generating units. Heaters HB-01, BMH-01, and RH-02 all have a capacity of less than 10 MMBtu/hr and are therefore not subject to this regulation. Heaters H-NO, H-SO and RH-01 commenced construction prior to 1989 and are therefore not subject to this regulation.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for **Storage Vessels for Petroleum Liquids** for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and **Prior** to July 23, 1984	No	N/A	This regulation establishes performance standards for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. The tanks at the facility are three 500 bbl (21,000 gallons). The capacities of the tanks at the facility are less than 40,000 gallons and are not subject to this regulation. [40 CFR Part 60.110a(a)]
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	No	N/A	This regulation establishes performance standards for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984. The tanks at the facility are three 500 bbl (21,000 gallons or 79.5 m^3). Even though the capacities of the tanks are greater than 75 m^3, the tanks at the facility are not subject to this regulation. Pursuant to 40 CFR Part 60.60110b(d)(4), these tanks have a design capacity less than 1,589.874 m^3 used for condensate stored, processed, or treaded prior to custody transfer and are not subject to this regulation.
NSPS 40 CFR 60.330 Subpart GG	**Stationary Gas Turbines**	Yes	T-03, T-04	This regulation establishes standards of performance for stationary gas turbines with a heat input at a peak load equal to or greater than 10 MMBtu/hr based on the lower heating value of the fuel fired and have commenced construction, modification, or reconstruction after October 3, 1977. Turbine Unit T-04 is subject to 40 CFR Part 60 Subpart GG since it has a heat input capacity greater than 10 MMBtu/hr and commenced construction after October 3, 1977. [40 CFR Part 60.330(a)]. Turbine Unit T-03 is subject to 40 CFR Part 60 Subpart GG but exempt from the standards for nitrogen oxides requirements under 40 CFR Part 60.330(a). This exemption is pursuant to 40 CFR Part 60.332(e). Turbines T-01 and T-02 are not subject to the requirements of 40 CFR Part 60 Subpart GG as they were constructed prior to October 3, 1977. [40 CFR Part 60.330(b)]
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from **Onshore Gas Plants**	Yes	Lines, valves, flanges, and fittings as defined in Subpart KKK	This regulation defines standards of performance for equipment leaks of VOC emissions from onshore natural gas processing plants for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. The facility is an affected facility (onshore natural gas processing plant) for which construction, reconstruction, or modification commenced after January 20, 1984. All equipment (each pump, pressure relief device, open-ended valve, and flange or other connector) that is in VOC service or in wet gas service and any device or system required by this subpart except for compressors (defined in 40 CFR Part 60.631) within the process unit is an affected facility, except as listed below for OOOOa applicability.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for **Onshore Natural Gas Processing**: SO_2 Emissions	No	N/A	This regulation establishes standards of performance for SO_2 emissions from onshore natural gas processing for which construction, reconstruction, or modification of the amine sweetening unit commenced after January 20, 1984 and on or before August 23, 2011. The facility is not subject to this regulation as the amine sweetening unit was constructed before January 20, 1984.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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	The rule applies to "affected" facilities that are constructed, modified, or reconstructed after Aug 23, 2011 (40 CFR 60.5365): gas wells, including fractured and hydraulically refractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, certain equipment at natural gas processing plants, sweetening units at natural gas processing plants, and storage vessels.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	AGI-C2, FUG-SC, FUG-CS, FUG-Frac, FUG-C28, FUG-VRU, RC-28, C-40	Subpart OOOOa was published in the Federal Register Volume 81, Number 107, on Friday, June 3, 2016. Subpart OOOOa applies to owners and operators of natural gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels, natural gas sweetening units, pneumatic pumps, and fugitive emissions which commence construction, modification, or reconstruction after September 18, 2015. Except as listed below, each of the reciprocating compressors, sweetening unit, pneumatic controllers, pneumatic pumps and storage vessels were constructed prior to September 18, 2015, and are, therefore, not subject to Subpart OOOOa. 40 CFR 60 Subpart OOOOa applies to fugitive leaks from the slug catcher (FUG-SC), backup VRU (FUG-VRU), condensate stabilizer (FUG-CS), RC-28 compressor (FUG-C28), and the fugitive emissions associated with the propane refractionation system (FUG-FRAC) since they were constructed or modified after the applicability date of September 18, 2015. The facility is subject to 60.5365a(f). Unit C-40 is a reciprocating compressor and will be subject to NSPS OOOOa 60.5385a per 60.5365a(a)(c). The fugitives associated with the C-40 compressor are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The fugitives associated with the redundant acid gas cooling are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f). The fugitives associated with the cryogenic units (FUG-GSP) are not subject to NSPS OOOOa as the VOC content will never exceed 10.0 percent by weight per 60.5400a(f).
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	Yes	BE/BH-1	This regulation establishes standards of performance for stationary compression ignition combustion engines. The engines at this facility are not compression ignition combustion engines. The facility has one dual-use diesel-fired emergency heater with a build-in engine used to power it (Unit BE/BH-1). This engine is subject to NSPS Subpart IIII requiring the engine to be certified by the manufacturer.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for stationary spark ignition combustion engines. The facility is not subject to this regulation because engines (C-01, C-02, C-04, C-05, C-06, C-24, and C-28) were constructed prior to June 12, 2006, and have not been modified or reconstructed since June 12, 2006 [40 CFR Part 60.4230(a)(5)].
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This regulation establishes standards of performance for greenhouse gas emissions for electric generating units. This facility does not have electric generating units. This regulation does not apply.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This regulation establishes emissions guidelines for greenhouse gas emissions and compliance times for electric generating units. This facility does not have electric generating units. This regulation does not apply.
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	This facility is not a municipal solid waste landfill. This regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units Subject to 40 CFR 61	NSPS 40 CFR 61 does not apply to the facility because the facility does not emit or have the triggering substances on site and/or the facility is not involved in the triggering activity. The facility is not subject to this regulation. None of the subparts of Part 61 apply to the facility.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for **Mercury**	No	N/A	The provisions of this subpart are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge
NESHAP 40 CFR 61 Subpart M	National Emission Standards for Asbestos	No	N/A	Although this standard does not apply to this facility under routine operating conditions, in the case of asbestos demolition, Subpart M would apply.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for **Equipment Leaks** (Fugitive Emission Sources)	No	N/A	This regulation establishes national emission standards for equipment leaks (fugitive emission sources). The facility does not have equipment that operates in volatile hazardous air pollutant (VHAP) service [40 CFR Part 61.240]. The regulated activities subject to this regulation do not take place at this facility. The facility is not subject to this regulation.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	Units Subject to 40 CFR 63	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because 40 CFR Part 63 Subpart ZZZZ applies to all engines [40 CFR 63.1(b)(1)(ii) Subpart ZZZZ].
MACT 40 CFR 63.760 Subpart HH	**Oil and Natural Gas Production Facilities**	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. The facility is a major of HAPs and meets the definition of a natural gas processing plant. The tanks at the facility do have the potential for flash emissions but do not have an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters. The tanks at the facility do not meet the definition of storage a storage vessel with the potential for flash emissions under 40 CFR 63.761 and are therefore not subject to this regulation. The facility does not have any affected units under this regulation.
MACT 40 CFR 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from natural gas transmission and storage facilities. This regulation does not apply because this facility is not a natural gas transmission or storage facility as defined in this regulation [40 CFR Part 63.1270(a)].
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	No	N/A	This regulation establishes national emission standards for hazardous air pollutants for major industrial, commercial, and institutional boilers and process heaters. The facility does not contain the affected units. This regulation does not apply.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	No	N/A	This regulation establishes national emission standards for hazardous air pollutants from coal and oil-fired electric utility steam generating units. The facility does not contain the affected units. This regulation does not apply.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	All RICE	This regulation defines national emissions standards for HAPs for stationary reciprocating Internal Combustion Engines. The facility is a major source of HAPs but all engines at the facility are existing 2-stroke lean burn engines located at a major source of HAPs and constructed before December 19, 2002. There are no requirements under 40 CFR Part 63 Subpart ZZZZ for engines at the facility per 40 CFR Part 63.6590(b)(3).
40 CFR 64	**Compliance Assurance Monitoring**	Yes	AM-01 F-03	This regulation defines compliance assurance monitoring. Emission from the amine unit (Unit AM-01) at the facility is subject to a CAM plan. The unit has potential pre-controlled device emissions of an applicable regulated pollutant required for a source to be classified as a major source [40 CFR 64.2(a)(3)]. The control devices for the amine unit at the facility are the AGI well (Unit AGI) and the acid gas flare (Unit F-03).
40 CFR 68	**Chemical Accident Prevention**	Yes	N/A	The facility is an affected facility as it uses quantities of flammable process chemicals such as propane which has threshold quantity of 10,000 lb per Table 3 to 40 CFR Part 68.130. The facility has quantities of propane and other chemicals which are above the threshold and must maintain a current RMP. The facility maintains a current RMP for these chemicals.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**	No	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation [40 CFR Part 72.6].
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions	No	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This part does not apply because the facility is not the type covered by this regulation [40 CFR Part 73.2].
Title IV-Acid Rain 40 CFR 75	**Continuous Emissions Monitoring**	No	N/A	The provisions of this part apply to each affected unit subject to Acid Rain emission limitations or reduction requirements for SO2 or NOX. The facility is not an acid rain source and is therefore not subject to this application.
Title IV – Acid Rain 40 CFR 76	**Acid Rain** Nitrogen Oxides **Emission Reduction Program**	No	N/A	This regulation establishes an acid rain nitrogen oxides emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO2. This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of **Stratospheric Ozone**	No	N/A	This regulation establishes a regulation for protection of the stratospheric ozone. The regulation is not Applicable because the facility does not "service", "maintain" or "repair" class I or class II appliances nor "disposes" of the appliances [40 CFR Part 82.1(a)].

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.

Startup and shutdown procedures are performed according to guidelines which dictate proper procedural sequence to minimize emissions from the facility during such activities.

Equipment located at the plant are equipped with various safety devices that aid in preventing excess emissions to the atmosphere in the event of an operational emergency. In the event of a malfunction, startup, shutdown, or scheduled maintenance in which emission rates from the facility exceed permitted allowable, Targa will notify the AQB in accordance with 20.2.7 NMAC and the equipment responsible for the exceedance will be repaired as soon as possible.

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.

Targa has permitted an alternate operating scenario for the condensate at the facility. In NSR 0110-M8, Targa permitted the condensate stabilizer and the condensate loading emissions were based on an RVP of 10. Targa subsequently permitted the ability to bypass the condensate stabilizer. To be conservative, Targa based the loadout emissions (L-01) on condensate that is not stabilized which increased the RVP from 10 psi to 20 psi. Targa uses a vapor balance to control the loading. Per AP-42 Section 5.2 (Transportation and Marketing of Petroleum Liquid), a collection efficiency of 98.7 percent (a 1.3 percent leakage rate) is assumed for trucks passing the NSPS-level annual test (3 inches pressure change). The trucks at the facility pass the NSPS-level annual test (3 inches pressure change).

The cryogenic GSP will operate in both recovery and rejection modes at the facility. A trim reboiler (hot oil user) associated with the system will be installed and operated only during rejection mode. In recovery mode the trim reboiler will be blocked in. In rejection mode when the trim reboiler is in service, hot oil will be redirected to it from the deethanizer reboiler. The deethanizer reboiler will not be needed as the demethanizer will be acting as a deethanizer. Emissions in excess of those requested with this application are not expected in either rejection or recovery modes. Any reportable emissions events will be disclosed to the agency.

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.

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

Compliance Test History Table

Unit No.	Test Description	Test Date
C-01	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	Down
C-02	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	5/14/2021
C-04	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	Down
C-05	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	5/13/2021
C-06	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	5/13/2021
C-24	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	5/13/2021
C-28	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A201B.	5/13/2021
H-NO	Tested in accordance with EPA test methods by NORDON Corporation for Title V permit P-110 condition 3.4.1.10 Initial Tests for Heaters and Title V permit P-110R2 A204A.	4/29/2021
H-SO	Tested in accordance with EPA test methods by NORDON Corporation for Title V permit P-110 condition 3.4.1.10 Initial Tests for Heaters and Title V permit P-110R2 A204A.	4/29/2021
T-01,-02, -03	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A205A.	5/13/2021
T-04	Tested using portable emission analyzer in accordance with Title V permit P-110R2 condition A205A.	5/14/2021

Section 19

Requirements for Title V Program

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.

Emission from the amine unit (Unit AM-01) and condensate loading (Unit L-01) at the facility are subject to a CAM plan. The units have potential pre-controlled device emissions of an applicable regulated pollutant required for a source to be classified as a major source [40 CFR 64.2(a)(3)]. The control devices for the amine unit at the facility are the AGI well (Unit AGI) and the acid gas flare (Unit F-03). The control for the condensate loading is vapor balance service. A CAM plan for amine unit (AM-01) and condensate loading (L-01) is attached to this section.

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.

Based on information and belief formed after reasonable inquiry, Targa believes that the Monument Gas Plant is in compliance with each applicable requirement identified in Section 13. In the event that Targa should discover new information affecting the compliance status of the facility, Targa will make appropriate notifications and/or take corrective actions.

Targa submits an annual compliance certification to the NMED. The most recent such certification was submitted by the November 30, 2020 deadline given in P110-R3. Due to a permit change effective April 12, 2020, Targa submitted two partial ACCs to the NMED. Since that time, Targa has continued to be in compliance with applicable requirements as described in Section 13. The next annual compliance certification will be submitted by the November 30, 2021 deadline.

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.

As described in Section 19.2 and based on information and belief formed after reasonable inquiry, Targa states that Monument Gas Plant will continue to be operated in compliance with applicable requirements for which it is in compliance as of the date of submittal of this application.

In addition, Targa will meet additional applicable requirements that become effective during the permit term in a timely manner or on such a time schedule as expressly required by the applicable requirement. In the event that Targa should discover new information affecting the compliance status of the Monument Gas Plant, Targa will make appropriate notifications and/or take corrective actions as appropriate.

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.

Compliance certification will be submitted annually as required by Title V Permit P110-R3M1, Condition A109.B.

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.)

Any comfort refrigeration systems are maintained and serviced by registered technicians per 40 CFR Part 82. Therefore, the requirements of Title VI, Sections 608 and 609 of the Clean Air Act are not applicable to the Monument Gas Plant.

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**.

Based on information and belief formed after reasonable inquiry and as described in Section 19.2, and with this filing, Targa states that Monument Gas Plant is in compliance with applicable requirements. No compliance plan, compliance schedule, or compliance reports are required.

In addition, based on information and belief formed after reasonable inquiry Targa states that Monument Gas Plant is not an acid rain source as defined at 40 CFR 72.6.

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.

The facility is an affected facility as it uses quantities of flammable process chemicals such as propane which has a threshold quantity greater than 10,000 lb per Table 3 to 40 CFR Part 68.130. The facility has quantities of propane and other flammable chemicals which are above the threshold and must maintain a current RMP. The facility maintains a current RMP for these chemicals. The current RMP for the facility was submitted to the EPA for approval on 4/17/2019.

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

Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B NMAC)?

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

Yes, the facility is 22 km from Texas.

19.9 - Responsible Official

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

R.O. :	Jimmy Oxford
R.O. Title:	Vice President Operations
R.O. Address:	401 North I-35 Suite 303, Denton, Texas, 76207
R.O. Phone:	(713) 220-2493
R.O. Email:	JOxford@targaresources.com

Targa Midstream Services, LLC
Monument Gas Plant
CAM Plan for the Truck Loadout Controlled by Vapor Recovery Unit

I. Background

A. Emissions Unit

Description:	Truck Loadout of Condensate 18,429,600 gal/yr
Identification:	L-01
Facility:	Monument Gas Plant

B. Applicable Regulation, Emission Limit, and Pre-CAM Monitoring Requirements

Regulation:	Operation and reporting requirements created in NSR Permit 0110-M8 and updated in NSR Permit 0110-M9 et seq. to establish federally enforceable recognition of the truck loadout.	
Emission limits:	Uncontrolled –	VOC: 544.3 tpy
	Controlled –	VOC: 7.1 tpy

C. Control Technology, Capture System, Bypass, PER

Controls:	Vapor Balance and Vapor Recovery Unit (VRU)
Capture System:	VRU
Potential pre-control device emissions:	Under 40 CFR 64.2 this is a CAM affected unit.
Potential post-control device emissions:	Vapor Recovery System (VRU) with a backup VRU. Also 98.7% capture/collection efficiency for trucks that are leak tested based on EPA NSPS standards.

II. Monitoring Approach

The key elements of the monitoring approach are presented in the attached table.

III. Response to Excursion

X Excursions of the vapor collection system will trigger an inspection, corrective action, and reporting. Maintenance personnel will inspect the vapor collection system within 24 hours and make needed repairs as soon as practicable.

Monitoring Approach: Monument Gas Plant Vapor Balance

	Indicator No. 1	**Indicator No. 2**
I. Indicator	Equipment Inspection	VOC Concentration
Measurement Approach	Ensure all hoses are properly connected. Inspect vapor return system for signs of cracks or other signs of leakage. Listen for hissing/whistling or smell of excessive vapor while loading which may indicate a leak.	Annual leak check of vapor recovery system
II. Indicator Range	An excursion is defined as equipment malfunctions which result in a release of uncontrolled emissions from the loading operations. No more than 6 excursions in any semi-annual reporting period.	An excursion occurs if VOC fugitive emissions at the outlet of the vapor collection system exceed 10,000 ppm above background. Leaks will be repaired within 15 days.
III. Performance Criteria A. Data Representativeness	Inspections and maintenance are being conducted on the vapor collection system semi-annually.	Monitor the VOC concentration at the outlet of a control device by use of a portable analyzer.
B. QA/QC Practices and Criteria	The vapor collection system is inspected on a semi-annual basis to ensure that the process is properly controlled.	Follow procedures in 40 CFR 60, Appendix A, Method 21.
C. Monitoring Frequency	Semi-annually.	Annually
D. Data Collection Procedures	Semi-annually inspections are performed and documented by the observer. Any repairs or adjustments are documented.	Records of inspections, leaks found, leaks repaired.
E. Averaging Period	Not applicable.	Not applicable

Justification

I. Background

The monitoring approach outlined here applies to the vapor collection system which is a control device for the truck loading emissions. The truck loading is the CAM affected unit.

II. Rationale for Selection of Performance Indicators

The collection of VOC is dependent upon a leak-proof system. Thus, the monitoring approach is based on one primary indicator: integrity of the collection system.

An annual leak inspection program also is performed to ensure that the vapors released during loading are captured and conveyed to the vapor recovery unit. A handheld monitor is used to detect leaks in the vapor collection system outlet.

III. Rationale for Selection of Indicator Ranges

For the second indicator, an excursion is defined as detection of a leak greater than or equal to 10,000 ppm (as methane) VOC concentration at the outlet of a control device during normal loading operations. This is the limit established by the applicable requirement. If a leak is detected, corrective action will be initiated, and the leak will be repaired within 15 days. All excursions will be documented and reported.

Targa Midstream Services LLC / Monument Gas Processing Plant
CAM Plan for Amine Treater Controlled by Acid Gas Injection and Flare

I. Background

A. Emissions Unit

Description:	Amine Still
Identification:	AM-01
Facility:	Monument Gas Processing Plant

B. Applicable Regulation, Emission Limit, and Pre-CAM Monitoring Requirements

Regulation:	Operation and reporting requirements created in NSR Permit 0110-M5-R1 et seq. to establish federally enforceable recognition of the Amine Still.
Emission limits:	There are no emission limits for the Amine still

Pre-CAM Monitoring Requirements: There are no pre-CAM monitoring requirements.

C. Control Technology, Capture System, Bypass, PER

Controls:	Acid Gas Injection System (Compressor, Injection Well) and Acid Gas Flare
Capture System:	N/A
Bypass:	Alternate scenario emissions are routed to the flare or acid gas injection system. No other bypass on still vent stream.
Potential pre-control device emissions:	Under 40 CFR 64.2. this is a CAM affected unit.
Potential post-control device emissions:	100% controlled, emission rate = 0 tpy for all pollutants from acid gas injection. 98% controlled for acid gas flare.

II. Monitoring Approach

The key elements of the monitoring approach are presented in the attached table.

III. Response to Excursion

X Excursions of the AGI compressor injection pressure or flare system that monitors the presence of combustion or visual emissions will trigger an inspection, corrective action, and reporting. Maintenance personnel will inspect the compressor, injection well, or acid gas flare within 24 hours and make needed repairs as soon as practicable.

Monitoring Approach: Monument Gas Processing Plant AGI

	Indicator No. 1	Indicator No. 2.
I. AGI Performance Indicator	Injection pressure (psig)	Monitoring flow of acid gas to flare and AGI.
II. Indicator Range	10 – 2900 psig	Flow to flare during non-maintenance downtime.
III. Performance Criteria		
a. Data Representativeness	Pressure will be monitored by a pressure transducer	Flow rate will be monitoring with a flow rate monitor.
b. QA/QC Practices/Criteria	Pressure transducer will be verified at least annually.	Acid gas flow meters will be calibrated quarterly.
c. Monitoring Frequency	Injection pressure will be monitored continuously.	Acid gas flow rates will be monitored continuously.
d. Data Collection Procedures	Injection pressure monitoring data will be reduced to daily averages.	Flow monitor data will be reduced to daily totals. Records of AGI system outages for maintenance or upset will be maintained. Targa will report acid gas compressor downtime, as required.
e. Averaging Time	Daily average.	Daily total.

Monitoring Approach: Monument Gas Processing Plant Acid Gas Flare

	Indicator No. 1	**Indicator No. 2**	**Indicator No. 3**
I. Indicator	Presence of combustion in the flare.	Presence of Visible Emissions	Totalized flow volume
Measurement Approach	The presence of combustion in the flare shall be monitored by a well-maintained thermocouple with alarm that signals non-combustion of gas.	The flare should be monitored for visible emissions once during each week that the flare is operational, in accordance with 40 CFR 60.18(c)	Flow rate shall be measured continuously with a flow meter, and the volume shall be totalized once every 24hr period.
II. Indicator Range	Flame present (sensed) or no flame present (sensed).	Visible emissions present or not present, in accordance with 40 CFR 60.18(c)	Flow rate should be within the operating velocities specified in NSPS Subpart A
III. Performance Criteria A. Data Representativeness	Destruction depends upon the presence of a flame. If the flame is not present, VOCs and H_2S are not being destroyed.	Efficient combustion is assumed if no visible emissions are observed.	Efficient combustion is assumed if flow rates are within the operating velocities specified in NSPS Subpart A.
B. QA/QC Practices and Criteria	Proper operation of the flare achieved by maintaining the non-combustion thermocouple with alarm system. Operators record the date and result of each such maintenance activity, and repairs or replacement are made as indicated.	Visible emissions to be determined in accordance with Method 22 of Appendix A of 40 CFR 60 subpart A (40 CFR 60.18(f)(1).	Verification will be in accordance with Appendix A Test method used to measure flow
C. Monitoring Frequency	The thermocouple and alarm system will be tested once in January and once in July of each year by turning off the thermocouples and recording the time required for the alarm to respond.	Visible emissions monitoring to occur once each week that the flare is operational	Continuous monitoring with totalized flow rate measured once per 24hr period
	Presence of the flare pilot flame will be monitored once per 24 hour period.		
D. Data Collection Procedures	Records will be maintained of flare shutdown for any reason, including failure of to deliver fuel, and of inspection and maintenance to the flare and flare pilot.	Records shall be maintained of all visible emissions observations	Totalized flow recorded once per each 24 hr period that the flare is in operation
E. Averaging Period	Not applicable.	Visible emissions must not be visible except for periods not to exceed a total of 5 minutes during any 2 consecutive hours..	24 hour

Justification

I. Background

The monitoring approach outlined here applies to the AGI and the acid gas flare, which are control devices for the amine still. The amine system is the CAM affected unit.

II. Rationale for Selection of Performance Indicators

The destruction and removal of VOCs and H_2S is dependent upon combustion, and on proper operation of the AGI. Thus, the monitoring approach is based on three primary indicators: correct operation of the flare, integrity of the ducting from the process equipment to the flare and integrity of the ducting from the amine unit to the AGI.

Measuring AGI injection pressure will indicate proper operation of the injection well. Proper operation of the AGI system results in zero emissions to the atmosphere. AGI injection pressure indicates that the acid gas from the Amine Sweetening System is being injected into the subterranean formation. Monitoring of this pressure can also indicate any problems with the injection well or injecting gas into the formation. A high injection pressure could result in overpressuring of the receiving formation.

III. Rationale for Selection of Indicator Ranges

Maintaining the AGI injection pressure in the ranges specified will indicate proper operation of the injection well for acid gas injection. Based on Targa's experience with this AGI System, the AGI injection pressure range represented in the Monitoring Plan is representative and is based on geologist surveying of the injection formation.

In accordance with 40 CFR 60.18, flares should be designed for operated with no visible emissions, as determined by the methodology in this subpart.

In the case of ensuring proper operation of the flare, the presence of a flame to initiate or maintain combustion has only two states: a flame is present or a flame is not present. By design, a well-maintained thermocouple-based alarm system will indicate accurately the state of combustion.

The operation of the flare as a control device is validated by adhering to the maximum tip velocity specifications identified in 40 CFR 60 Subpart A. Measurement of totalized flow volume will determine if the volumetric flow is in line with the design specifications, and the max velocity determined from earlier testing of the flare.

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.

There is no other relevant information.

Section 22: Certification

Company Name: Targa Midstream Services, LLC

I, Jimmy Oxford, 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 ____ day of _____, _____, upon my oath or affirmation, before a notary of the State of

_____.

_____ _____
*Signature Date

_____ _____
Printed Name Title

Scribed and sworn before me on this ____ day of _____, _____.

My authorization as a notary of the State of _____ expires on the

_____ day of _____, _____.

_____ _____
Notary's Signature Date

_____
Notary's Printed Name

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