March 10, 2020

Submitted via STEERS

To: Texas Commission on Environmental Quality (TCEQ)
Air Permits Initial Review Team (APIRT)
Mail Code 161
P.O. Box 13087
Austin, Texas 78711-3087

Air Quality Standard Permit for Oil and Gas Handling and Production Facilities Registration Modification Application
Altus Midstream Processing LP (CN605629864)
Regulated Entity: Cherokee CPF (RN109750190)
Registration number: 146381

Dear Sir or Madam,

Altus Midstream Processing LP (Altus) respectfully submits the referenced application for Cherokee CPF in Reeves County, Texas. This application is being submitted via the STEERS e-Permits Program.

If you need further information or have questions, please contact me at (432) 242-8353.

Sincerely,

Brett Kennedy
Manager, HSSE
Environmental, Health, & Safety Department

ALTUS MIDSTREAM PROCESSING LP

CHEROKEE CPF

AIR QUALITY STANDARD PERMIT FOR OIL AND GAS HANDLING AND PRODUCTION FACILITIES REGISTRATION MODIFICATION APPLICATION

SUBMITTED TO TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
OFFICE OF AIR
MARCH 2020

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 1)

I. Registrant Information		
A. Company or Other Legal Customer Name:		
Altus Midstream Processing LP		
B. Company Official Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)___		
Name: Brett Kennedy		
Title: Manager, HSSE		
Mailing Address: 303 Veterans Airpark Lane		
City: Midland	State: TX	ZIP Code: 79705
Phone: (432) 242-8353	Fax:	
E-mail Address: brett.kennedy@altusmidstream.com		
All permit correspondence will be sent via e-mail.		
C. Technical Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)_____		
Name: Brett Kennedy		
Title: Manager, HSSE		
Company Name: Altus Midstream		
Mailing Address: 303 Veterans Airpark Lane		
City: Midland	State: TX	ZIP Code: 79705
Phone: (432) 242-8353	Fax:	
E-mail Address: brett.kennedy@altusmidstream.com		
II. Facility and Site Information		
A. Name and Type of Facility		
Facility Name: Cherokee CPF		
Type of Facility: Natural Gas Processing	☒ Permanent ☐ Temporary	
For portable units, please provide the serial number of the equipment being authorized below.		
Serial No:	Serial No:	

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 2)

II. Facility and Site Information *(continued)*		
B. Facility Location Information		
Street Address:		
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).		
From Toyah, TX, take Co Rd 225 W for approx. 6.3 miles, turn left onto Co Rd 229 for approx. 4.9 miles to Site.		
City: Toyah	County: Reeves	ZIP Code: 79785
Latitude (nearest second): 31.248300	Longitude (nearest second): -103.911700	
C. Core Data Form (**required** for Standard Permits 6004, 6006, 6007, 6008, and 6013).		
Is the Core Data Form (TCEQ Form 10400) attached?	☐ YES ☒ NO	
If "NO," provide customer reference number (CN) and regulated entity number (RN) below.		
Customer Reference Number (CN): CN605629864		
Regulated Entity Number (RN): RN109750190		
D. TCEQ Account Identification Number (if known):		
E. Type of Action: ☐ Initial Application ☒ Change to Registration ☐ Renewal ☐ Renewal Certification		
For Change to Registration, Renewal, or Renewal Certification actions provide the following:		
Registration Number: 146381	Expiration Date: 08/01/2027	
F. Standard Permit Claimed: 6002 – Oil and Gas Facilities		
G. Previous Standard Exemption or PBR Registration Number		
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR?	☐ YES ☒ NO	
If "YES," enter previous standard exemption number(s) and PBR registration number(s), and associated effective date in the spaces provided below.		
Standard Exemption and PBR Registration Number(s)	Effective Date	

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 3)

II. Facility and Site Information *(continued)*		
H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit		
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit?	☒ YES ☐ NO	
If "YES," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.		
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s)	Effective Date	
146381	07/24/2018; 08/01/2017	
I. Other Air Preconstruction Permits		
Are there any other air preconstruction permits at this site?	☐ YES ☒ NO	
If "YES," enter permit number(s) in the spaces provided below.		
J. Affected Air Preconstruction Permits		
Does the standard permit directly affect any permitted facility?	☐ YES ☒ NO	
If "YES," enter permit number(s) in the spaces provided below.		
K. Concrete Batch Plant		
☐ Central Mix ☐ Ready Mix ☐ Specialty Mix ☐ Enhanced Controls for Concrete Batch Plants		
1. State Legislators		
State Senator:		
State Representative:		
2. County Judge		
Name:		
Mailing Address:		
City:	State:	ZIP Code:

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 4)

II. Facility and Site Information *(continued)*		
K. 3. Presiding Officer		
Is the facility located in a municipality or extraterritorial jurisdiction of a municipality?	☐ YES ☐ NO	
If "YES," list the name of the Presiding Officer for the municipality and/or extraterritorial jurisdiction:		
Presiding Officer Name:		
Title:		
Mailing Address:		
City:	State:	ZIP Code:
L. Federal Operating Permit (FOP) Requirements		
Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	☐ YES ☒ NO ☐ To Be Determined	
If the site currently has an existing FOP, enter the permit number:		
Check the requirements of 30 TAC Chapter 122 that will be triggered if this standard permit is approved (*check all that apply).*		
☐ Initial Application for an FOP	☐ Significant Revision for an SOP	☐ Minor Revision for an SOP
☐ Operational Flexibility/Off Permit Notification for an SOP		☐ Revision for a GOP
☐ To be Determined		☒ None
Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *(check all that apply)*		
☐ SOP	☐ GOP	☐ GOP application/revision (submitted or under APD review)
☒ N/A	☐ SOP application/revision (submitted or under APD review)	
III. Fee Information *(see Section IX. for address to send fee or go to www.tceq.texas.gov/epay to pay online)*		
A. Fee Amount: $850.00		
B. Payment Information		
Check/money order/transaction or voucher number:		
Individual or company name on check:		
Was fee paid online?	☒ YES ☐ NO	

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 5)

IV. Public Notice *(if applicable)*		
A. Responsible Person (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)_____		
Name:		
Title:		
Company:		
Mailing Address:		
City:	State:	ZIP Code:
Phone:	Fax No.:	
E-mail Address:		
B. Technical Contact (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other):__		
Name:		
Title:		
Company:		
Mailing Address:		
City:	State:	ZIP Code:
Phone No.:	Fax No.:	
E-mail Address:		
C. Bilingual Notice		
Is a bilingual program required by the Texas Education Code in the School District?		☐ YES ☐ NO
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?		☐ YES ☐ NO
If "YES," list which language(s) are required by the bilingual program?		

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 6)

IV.	**Public Notice** *(if applicable)* ***(continued)***	
D.	Small Business Classification and Alternate Public Notice	
Does this company (including parent companies and subsidiary companies) have fewer than 100 employees or less than $6 million in annual gross receipts?		☐ YES ☐ NO
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program?		☐ YES ☐ NO
Are the site emissions of any individual regulated air contaminant equal to or greater than 50 tpy?		☐ YES ☐ NO
Are the site emissions of all regulated air contaminant combined equal to or greater than 75 tpy?		☐ YES ☐ NO
E.	For Concrete Batch Plants	
1.	Public Works Project: Will the plant provide concrete to a public works project, and be located in or contiguous to the right of-way of the public works project? (If "YES," public notice is not required.)	☐ YES ☐ NO
2.	Application in Public Place	☐ YES ☐ NO
Name of Public Place:		
Physical Address:		
City:	County:	
V.	**Renewal Certification Option**	
A.	Does the permitted facility emit an air contaminant on the Air Pollutant Watch List, and is the permitted facility located in an area on the watch list?	☐ YES ☐ NO
B.	For facilities participating in the Houston/Galveston/Brazoria area (HGB) cap and trade program for highly reactive VOCs (HRVOCs), do the HRVOCs need to be speciated on the maximum allowable emission rates table (MAERT)?	☐ YES ☐ NO
C.	Does the company and/or site have an unsatisfactory compliance history?	☐ YES ☐ NO
D.	Are there any applications currently under review for this standard permit registration?	☐ YES ☐ NO
E.	Are scheduled maintenance, startup, or shutdown emissions required to be included in the standard permit registration at this time?	☐ YES ☐ NO

Texas Commission on Environmental Quality
Form PI-1S
Registrations for Air Standard Permit
(Page 7)

V.	**Renewal Certification Option *(continued)***	
F.	Are any of the following actions being requested at the time of renewal:	☐ YES ☐ NO
1.	Are there any facilities that have been permanently shutdown that are proposed to be removed from the standard permit registration?	☐ YES ☐ NO
2.	Do changes need to be made to the standard permit registration in order to remain in compliance?	☐ YES ☐ NO
3.	Are sources or facilities that have always been present and represented, but never identified in the standard permit registration, proposed to be included with this renewal?	☐ YES ☐ NO
4.	Are there any changes to the current emission rates table being proposed?	☐ YES ☐ NO
*Note: If answers to all of the questions in Section V. Renewal Certification Option are "NO," use the certification option and skip to Section VII. of this form. If the answers to any of the questions in Section V. Renewal Certification Option are "YES," the certification option **cannot** be used.*		
*If notice is applicable and comments are received in response to the public notice, the application does not qualify for the renewal certification option.		
VI.	**Technical Information Including State and Federal Regulatory Requirements** **Place a check next to the appropriate box to indicate what you have included in your submittal.** *NOTE: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the projec*t.	
A.	Standard Permit requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)	
Did you demonstrate that the general requirements in 30 TAC Sections 116.610 and 116.615 are met?		☒ YES ☐ NO
Did you demonstrate that emission limitations in 30 TAC Sections 106.261 and 106.262 are met?		☐ YES ☒ NO
Did you demonstrate that the individual requirements of the specific standard permit are met?		☒ YES ☐ NO
B.	Confidential Information (All pages properly marked "CONFIDENTIAL")	☒ YES ☐ NO
C.	Process Flow Diagram	☒ YES ☐ NO
D.	Process Description	☒ YES ☐ NO
E.	Maximum Emissions Data and Calculations	☒ YES ☐ NO
F.	Plot Plan	☒ YES ☐ NO

VI. Technical Information Including State and Federal Regulatory Requirements *(continued)* **Place a check next to the appropriate box to indicate what you have included in your submittal.** *NOTE: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the project*.	
G. Projected Start Of Construction Date, Start Of Operation Date, and Length of Time at Site:	☐ YES ☒ NO
Projected Start of Construction (provide date):	
Projected Start of Operation (provide date):	
Length of Time at the Site:	
VII. Delinquent Fees and Penalties	
This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at: www.tceq.texas.gov/agency/financial/fees/delin/index.html.	
VIII. Signature Requirements	
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA) the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.	
Name (printed): Brett Kennedy	
Signature (original signature required): Signed via e-Permitting on STEERS	
Date: Signed via e-Permitting on STEERS	

IX. Copies of the Registration		
Copies must be sent as listed below. Processing delays will occur if copies are not sent as noted.		
Air Permits Initial Review Team (APIRT)	Regular, Certified, Priority Mail Mail Code 161, P.O. Box 13087, Austin, Texas 78711-3087 OR Hand Delivery, Overnight Mail Mail Code 161, 12100 Park 35 Circle, Building C, Third Floor, Room 300 W, Austin, Texas 78753	Originals of Form PI-1S, Core Data Form, all attachments. Not required if using ePermits[2].
Revenue Section TCEQ	Regular, Certified, Priority Mail Mail Code 214, P.O. Box 13088, Austin, Texas 78711-3088 OR Hand Delivery, Overnight Mail Mail Code 214, 12100 Park 35 Circle, Building A, Third Floor, Austin, Texas 78753	Original Money Order or Check, Copy of Form PI-1S, Core Date Form. Not required if fee was paid using ePay[3].
Appropriate TCEQ Regional Office	To find your regional office address go to www.tceq.texas.gov/assets/public/comm_exec/pubs/gi/gi-002.pdf or call (512) 239-1250	Copy of Form PI-1S, Core Data Form, and all attachments. Not required if using ePermits[2]
Appropriate Local Air Pollution Control Program(s)	To find your local air pollution control programs go to www.tceq.texas.gov/permitting/air/local_programs.html or call (512) 239-1250	Copy of Form PI-1S, Core Data Form, and all attachments

[2] ePermits located at www3.tceq.texas.gov/steers/
[3] ePay located at www.tceq.texas.gov/epay/

TABLE OF CONTENTS

INTRODUCTION

Altus Midstream Processing LP (Altus) operates the Cherokee CPF (Site) in Reeves County, Texas. Altus requests authorization for modifications to the Site with this oil and gas non-rule standard permit registration modification application. The new project notification was submitted on July 24, 2019.

Modifications to the Site consist of removing three (3) 550-hp Doosan D219L engines, removing pressurized truck loading, adding one (1) 1,953-hp Cummins QSK60 engine, adding one (1) 520-gal fuel scrubber tank and associated truck loading, adding miscellaneous tanks, updating emissions for the existing engines, and updating gas compositions.

The Site will now consist of the following emission sources: five (5) 1,875-hp Caterpillar G3606 engines, three (3) 3,750-hp Caterpillar G3612 engines, one (1) 1,953-hp Cummins QSK60 engine, two (2) 500-bbl condensate tanks, one (1) 1,000-bbl produced water tank, one (1) 1,000-bbl condensate/produced water tank, one (1) 520-gal fuel scrubber tank, miscellaneous tanks, truck loading operations, one (1) standard flare, one (1) enclosed flare, emissions from fugitive sources, and planned MSS emissions.

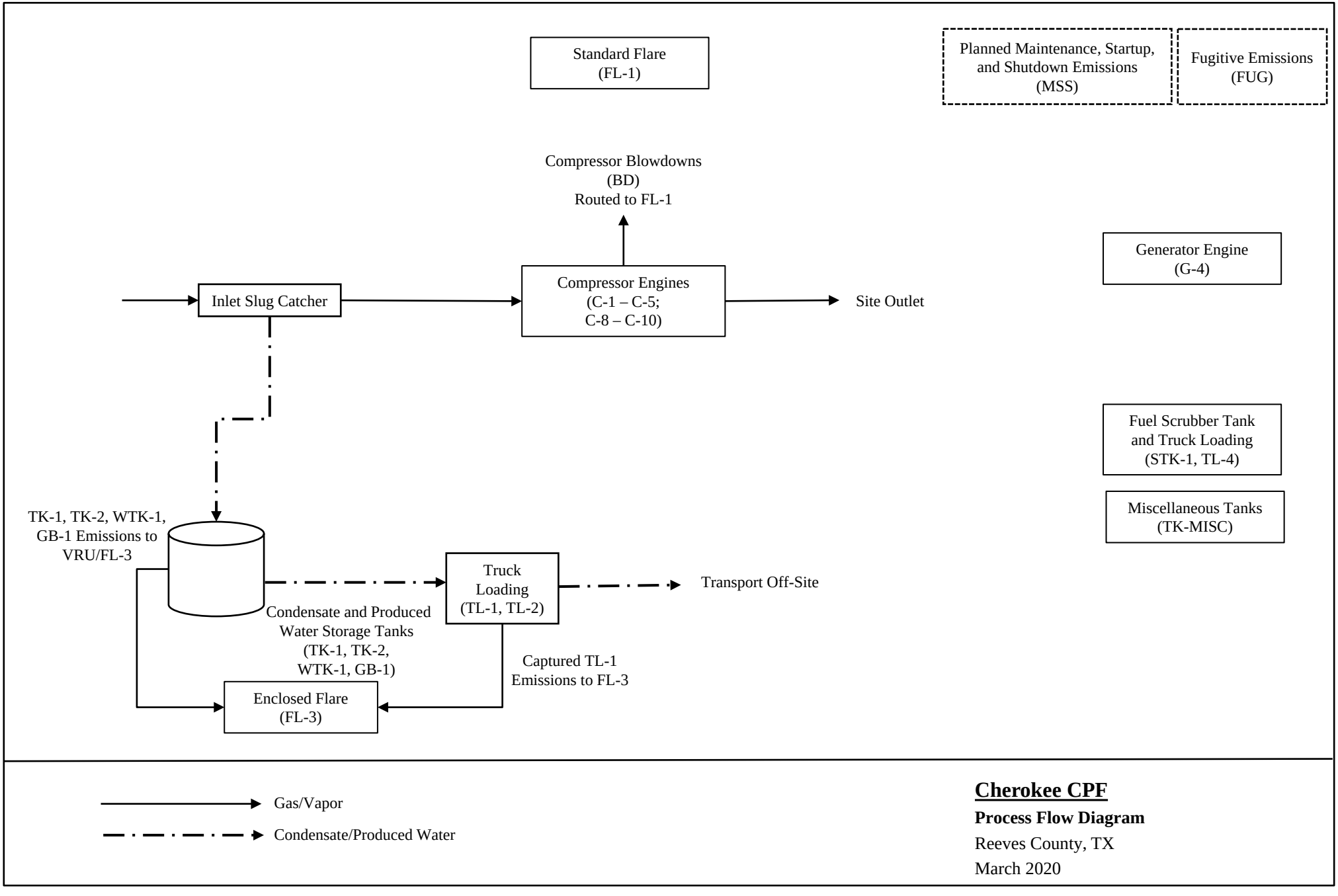
There are also sources that remain onsite, but they have been taken out of service and will no longer operate at this Site. Therefore, they are not addressed any further in this application. These sources include: two (2) 1,035-hp Caterpillar G3512B engines (C-6 – C-7), one (1) 1,380-hp Caterpillar G3516J engine (C-11), two (2) 50-MMSCFD ethylene glycol (EG) dehydration units (DEHY-1 – DEHY-2), one (1) 13.50-mmBtu/hr hot oil heater (H-1), and one (1) enclosed flare (FL-2).

PROCESS DESCRIPTION

The inlet gas enters the Site and is compressed by five (5) 1,875-hp Caterpillar G3606 engines (C-1 – C-5) and three (3) 3,750-hp Caterpillar G3612 engines (C-8 – C-10). Compression discharge exits the Site. Liquids from the inlet separator(s) and various other system drains are routed to one (1) 1,000-bbl condensate/produced water tank (GB-1) for additional separation. Condensate from GB-1 is routed to two (2) 500-bbl condensate tanks (TK-1 – TK-2) prior to exiting the Site via truck loading (TL-1). Produced water from GB-1 is routed to one (1) 1,000-bbl produced water tank (WTK-1) prior to exiting the Site via truck loading (TL-2). Captured vapors from GB-1, TK-1 – TK-2, and WTK-1 are captured by a VRU or routed to an enclosed flare (FL-3) for destruction. Captured vapors from TL-1 are routed to FL-3 for destruction.

The one (1) 1,953-hp Cummins QSK60 engine driven generator (G-4) provides power for site, as reliable power is not currently available.

In addition, there are emissions from one (1) 520-gal fuel scrubber tank (STK-1) and associated truck loading (TL-4), miscellaneous tanks (TK-MISC), fugitive sources (FUG), planned maintenance, startup, and shutdown activities and emissions (MSS), and compressor blowdowns (BD). Vessel blowdowns and BD emissions are routed to a standard flare (FL-1).



Cherokee CPF

Process Flow Diagram

Reeves County, TX

March 2020

ESTIMATED EMISSIONS

Equipment	Unit ID	Specific VOC or Other Pollutants	VOC		NOx		CO		SO_2		PM_{10}		$PM_{2.5}$		Other	
			lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
1,875-hp Caterpillar G3606 Engine	C-1	VOC includes Formaldehyde	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-2	VOC includes Formaldehyde	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-3	VOC includes Formaldehyde	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-4	VOC includes Formaldehyde	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-5	VOC includes Formaldehyde	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	0.14	0.63	-	-
3,750-hp Caterpillar G3612 Engine	C-8	VOC includes Formaldehyde	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	0.28	1.23	-	-
3,750-hp Caterpillar G3612 Engine	C-9	VOC includes Formaldehyde	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	0.28	1.23	-	-
3,750-hp Caterpillar G3612 Engine	C-10	VOC includes Formaldehyde	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	0.28	1.23	-	-
1,953-hp Cummins QSK60 Engine	G-4	VOC includes Formaldehyde	2.06	9.03	3.01	13.20	1.50	6.56	0.01	0.04	0.15	0.67	0.15	0.67	-	-
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2		*	*	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 1000-bbl Produced Water Tank	WTK-1		*	*	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1		*	*	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 520-gal Fuel Scrubber Tank	STK-1		112.54	1.42	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Tanks	TK-MISC		0.12	0.53	-	-	-	-	-	-	-	-	-	-	-	-
Uncaptured Condensate Truck Loading	TL-1		2.49	1.41	-	-	-	-	-	-	-	-	-	-	-	-
Produced Water Truck Loading	TL-2		3.67	2.75	-	-	-	-	-	-	-	-	-	-	-	-
Slop Truck Loading	TL-4		6.23	0.31	-	-	-	-	-	-	-	-	-	-	-	-
Standard Flare	FL-1		52.58	2.88	49.67	2.60	99.16	5.16	0.54	0.03	<0.01	<0.01	<0.01	<0.01	-	-
Enclosed Flare	FL-3		8.35	10.71	3.29	4.24	6.56	8.45	0.07	0.10	<0.01	<0.01	<0.01	<0.01	-	-
Fugitive Emissions	FUG		0.39	1.73	-	-	-	-	-	-	-	-	-	-	-	-
Planned Maintenance, Startup, and Shutdown Activities	MSS		155.60	4.78	-	-	-	-	-	-	-	-	-	-	-	-
Compressor Blowdowns	BD		*	*	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL EMISSIONS (TPY):				**98.50**		**79.79**		**95.34**		**0.56**		**7.48**		**7.48**		**-**
MAXIMUM OPERATING SCHEDULE:		**Hours/Day**	**24**		**Days/Week**		**7**		**Weeks/Year**		**52**		**Hours/Year**		**8,760**	

Notes:
**Tanks', captured condensate truck loading's, and compressor blowdowns' emissions are routed to and reported under their respective flares.*

Developed by Flatrock Engineering and Environmental, Ltd./Rev. 1-1-2014
All Rights Reserved

EMISSION CALCULATIONS

Only the Site Emission Summaries are included in this section, as backup documentation will be submitted in the Application Supplement – Confidential Information.

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
Summary of Criteria Air Pollutant and H_2S Emissions

Equipment	Unit ID	VOC[1]		NOx		CO		SO_2		PM		H_2S	
		lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
1,875-hp Caterpillar G3606 Engine	C-1	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-2	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-3	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-4	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	-	-
1,875-hp Caterpillar G3606 Engine	C-5	1.53	6.68	1.24	5.43	1.84	8.04	0.01	0.04	0.14	0.63	-	-
3,750-hp Caterpillar G3612 Engine	C-8	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	-	-
3,750-hp Caterpillar G3612 Engine	C-9	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	-	-
3,750-hp Caterpillar G3612 Engine	C-10	2.25	9.85	2.48	10.86	2.66	11.66	0.02	0.07	0.28	1.23	-	-
1,953-hp Cummins QSK60 Engine	G-4	2.06	9.03	3.01	13.20	1.50	6.56	0.01	0.04	0.15	0.67	-	-
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2	*	*	-	-	-	-	-	-	-	-	*	*
One (1) 1000-bbl Produced Water Tank	WTK-1	*	*	-	-	-	-	-	-	-	-	*	*
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1	*	*	-	-	-	-	-	-	-	-	*	*
One (1) 520-gal Fuel Scrubber Tank	STK-1	112.54	1.42	-	-	-	-	-	-	-	-	0.01	<0.01
Miscellaneous Tanks	TK-MISC	0.12	0.53	-	-	-	-	-	-	-	-	-	-
Uncaptured Condensate Truck Loading	TL-1	2.49	1.41	-	-	-	-	-	-	-	-	<0.01	<0.01
Produced Water Truck Loading	TL-2	3.67	2.75	-	-	-	-	-	-	-	-	<0.01	<0.01
Slop Truck Loading	TL-4	6.23	0.31	-	-	-	-	-	-	-	-	<0.01	<0.01
Standard Flare	FL-1	52.58	2.88	49.67	2.60	99.16	5.16	0.54	0.03	<0.01	<0.01	0.01	<0.01
Enclosed Flare	FL-3	8.35	10.71	3.29	4.24	6.56	8.45	0.07	0.10	<0.01	<0.01	<0.01	<0.01
Fugitive Emissions	FUG	0.39	1.73	-	-	-	-	-	-	-	-	<0.01	<0.01
Planned Maintenance, Startup, and Shutdown Activities	MSS	155.60	4.78	-	-	-	-	-	-	-	-	0.01	<0.01
Compressor Blowdowns	BD	*	*	-	-	-	-	-	-	-	-	*	*
	Total =	**358.42**	**98.50**	**69.61**	**79.79**	**124.38**	**95.34**	**0.71**	**0.56**	**1.71**	**7.48**	**0.03**	**<0.01**

**Tanks', captured condensate truck loading's, and compressor blowdowns' emissions are routed to and reported under their respective flares.*
1) Per manufacturer guidance, engine VOC emission factor does not include formaldehyde; therefore, it has been added to this summary to calculate total VOC for the site.

Developed by Flatrock Engineering and Environmental, Ltd./Rev. 1-1-2014
All Rights Reserved

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
Summary of Hazardous Air Pollutants

Equipment	Unit ID	Estimated Emissions (lb/hr)										
		Acetalde-hyde	Acrolein	Benzene	Ethyl-benzene	Formalde-hyde	Methanol	n-Hexane	Toluene	Xylenes	Other HAP	Total HAP
1,875-hp Caterpillar G3606 Engine	C-1	0.06	0.04	<0.01	<0.01	0.21	0.02	0.01	<0.01	<0.01	0.02	0.35
1,875-hp Caterpillar G3606 Engine	C-2	0.06	0.04	<0.01	<0.01	0.21	0.02	0.01	<0.01	<0.01	0.02	0.35
1,875-hp Caterpillar G3606 Engine	C-3	0.06	0.04	<0.01	<0.01	0.21	0.02	0.01	<0.01	<0.01	0.02	0.35
1,875-hp Caterpillar G3606 Engine	C-4	0.06	0.04	<0.01	<0.01	0.21	0.02	0.01	<0.01	<0.01	0.02	0.35
1,875-hp Caterpillar G3606 Engine	C-5	0.06	0.04	<0.01	<0.01	0.21	0.02	0.01	<0.01	<0.01	0.02	0.35
3,750-hp Caterpillar G3612 Engine	C-8	0.12	0.07	0.01	<0.01	0.22	0.04	0.02	0.01	<0.01	0.03	0.51
3,750-hp Caterpillar G3612 Engine	C-9	0.12	0.07	0.01	<0.01	0.22	0.04	0.02	0.01	<0.01	0.03	0.51
3,750-hp Caterpillar G3612 Engine	C-10	0.12	0.07	0.01	<0.01	0.22	0.04	0.02	0.01	<0.01	0.03	0.51
1,953-hp Cummins QSK60 Engine	G-4	0.06	0.04	<0.01	<0.01	0.29	0.02	0.01	<0.01	<0.01	0.02	0.45
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2	-	-	*	*	-	-	*	*	*	*	*
One (1) 1000-bbl Produced Water Tank	WTK-1	-	-	*	*	-	-	*	*	*	*	*
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1	-	-	*	*	-	-	*	*	*	*	*
One (1) 520-gal Fuel Scrubber Tank	STK-1	-	-	0.14	0.03	-	-	3.90	0.40	0.75	0.22	5.44
Miscellaneous Tanks	TK-MISC	-	-	-	-	-	0.12	-	-	-	-	0.12
Uncaptured Condensate Truck Loading	TL-1	-	-	<0.01	<0.01	-	-	0.09	0.01	0.02	<0.01	0.12
Produced Water Truck Loading	TL-2	-	-	<0.01	<0.01	-	-	0.13	0.01	0.02	0.01	0.18
Slop Truck Loading	TL-4	-	-	0.01	<0.01	-	-	0.22	0.02	0.04	0.01	0.30
Standard Flare	FL-1	-	-	0.07	0.05	-	-	2.04	0.30	1.33	0.15	3.94
Enclosed Flare	FL-3	-	-	0.01	<0.01	-	-	0.36	0.04	0.07	0.02	0.50
Fugitive Emissions	FUG	-	-	<0.01	<0.01	-	-	0.01	<0.01	0.01	<0.01	0.02
Planned Maintenance, Startup, and Shutdown Activities	MSS	-	-	0.17	0.10	-	-	4.93	0.65	2.46	0.33	8.64
Compressor Blowdowns	BD	-	-	*	*	-	-	*	*	*	*	*
	Total =	**0.71**	**0.44**	**0.45**	**0.19**	**2.00**	**0.33**	**11.77**	**1.47**	**4.71**	**0.94**	**23.02**

Developed by Flatrock Engineering and Environmental, Ltd./Rev. 1-1-2014
All Rights Reserved

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
Summary of Hazardous Air Pollutants

Equipment	Unit ID	Estimated Emissions (tons/yr)										
		Acetalde-hyde	Acrolein	Benzene	Ethyl-benzene	Formalde-hyde	Methanol	n-Hexane	Toluene	Xylenes	Other HAP	Total HAP
1,875-hp Caterpillar G3606 Engine	C-1	0.26	0.16	0.01	<0.01	0.91	0.08	0.03	0.01	0.01	0.07	1.55
1,875-hp Caterpillar G3606 Engine	C-2	0.26	0.16	0.01	<0.01	0.91	0.08	0.03	0.01	0.01	0.07	1.55
1,875-hp Caterpillar G3606 Engine	C-3	0.26	0.16	0.01	<0.01	0.91	0.08	0.03	0.01	0.01	0.07	1.55
1,875-hp Caterpillar G3606 Engine	C-4	0.26	0.16	0.01	<0.01	0.91	0.08	0.03	0.01	0.01	0.07	1.55
1,875-hp Caterpillar G3606 Engine	C-5	0.26	0.16	0.01	<0.01	0.91	0.08	0.03	0.01	0.01	0.07	1.55
3,750-hp Caterpillar G3612 Engine	C-8	0.51	0.32	0.03	<0.01	0.98	0.15	0.07	0.03	0.01	0.14	2.24
3,750-hp Caterpillar G3612 Engine	C-9	0.51	0.32	0.03	<0.01	0.98	0.15	0.07	0.03	0.01	0.14	2.24
3,750-hp Caterpillar G3612 Engine	C-10	0.51	0.32	0.03	<0.01	0.98	0.15	0.07	0.03	0.01	0.14	2.24
1,953-hp Cummins QSK60 Engine	G-4	0.28	0.17	0.01	<0.01	1.28	0.08	0.04	0.01	0.01	0.08	1.97
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2	-	-	*	*	-	-	*	*	*	*	*
One (1) 1000-bbl Produced Water Tank	WTK-1	-	-	*	*	-	-	*	*	*	*	*
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1	-	-	*	*	-	-	*	*	*	*	*
One (1) 520-gal Fuel Scrubber Tank	STK-1	-	-	<0.01	<0.01	-	-	0.05	0.01	0.01	<0.01	0.07
Miscellaneous Tanks	TK-MISC	-	-	-	-	-	0.53	-	-	-	-	0.53
Uncaptured Condensate Truck Loading	TL-1	-	-	<0.01	<0.01	-	-	0.05	0.01	0.01	<0.01	0.07
Produced Water Truck Loading	TL-2	-	-	<0.01	<0.01	-	-	0.10	0.01	0.02	0.01	0.13
Slop Truck Loading	TL-4	-	-	<0.01	<0.01	-	-	0.01	<0.01	<0.01	<0.01	0.02
Standard Flare	FL-1	-	-	<0.01	<0.01	-	-	0.11	0.02	0.07	0.01	0.20
Enclosed Flare	FL-3	-	-	0.02	<0.01	-	-	0.46	0.05	0.09	0.03	0.65
Fugitive Emissions	FUG	-	-	<0.01	<0.01	-	-	0.04	0.01	0.03	<0.01	0.08
Planned Maintenance, Startup, and Shutdown Activities	MSS	-	-	0.01	<0.01	-	-	0.15	0.02	0.09	0.01	0.27
Compressor Blowdowns	BD	-	-	*	*	-	-	*	*	*	*	*
	Total =	**3.13**	**1.93**	**0.20**	**0.03**	**8.74**	**1.46**	**1.38**	**0.26**	**0.38**	**0.93**	**18.43**

**Tanks', captured condensate truck loading's, and compressor blowdowns' emissions are routed to and reported under their respective flares.*

Developed by Flatrock Engineering and Environmental, Ltd./Rev. 1-1-2014
All Rights Reserved

EMISSION LIMITATIONS SUMMARY

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
Air Quality Standard Permit for Oil and Gas Handling and Production Facilities - (h) Emission Limitations

	Steady-State Releases			< 30 psig Periodic Releases			≥ 30 psig Periodic Releases			Total		
	Emission Limitation	Actual Emission Rate	Compliant?	Emission Limitation	Actual Emission Rate	Compliant?	Emission Limitation	Actual Emission Rate	Compliant?	Emission Limitation	Actual Emission Rate	Compliant?
Air Contaminant	lb/hr		(YES/NO)	lb/hr		(YES/NO)	lb/hr up to 600 hr/yr		(YES/NO)	TPY		(YES/NO)
Total VOC	-	-	-	-	-	-	-	-	-	250	98.50	YES
Total Crude Oil or Condensate VOC	145	118.04	YES	145	60.92	YES	318	54.35	YES	-		-
Total Natural Gas VOC	750	16.77	YES	750	0.00	YES	1635	108.33	YES	-		-
Benzene	7	0.18	YES	7	0.08	YES	15.4	0.19	YES	10.2	0.20	YES
Hydrogen Sulfide	10.8	0.01	YES	10.8	<0.01	YES	9.8	0.01	YES	47	<0.01	YES
Sulfur Dioxide	93.2	0.15	YES	93.2	0.03	YES	-	-	-	250	0.56	YES
Nitrogen Oxides	121	18.76	YES	121	1.19	YES	-	-	-	250	79.79	YES
Carbon Monoxide	104	22.86	YES	104	2.38	YES	-	-	-	250	95.34	YES
PM_{10} and $PM_{2.5}$	28	1.71	YES	28	0.00	YES	-	-	-	15	7.48	YES

		Steady-State Releases								< 30 psig Periodic Releases								≥ 30 psig Periodic Releases			
Equipment	Unit ID	Total Condensate VOC	Total Natural Gas VOC	Benzene	Hydrogen Sulfide	Sulfur Dioxide	Nitrogen Oxides	Carbon Monoxide	PM_{10} and $PM_{2.5}$	Total Condensate VOC	Total Natural Gas VOC	Benzene	Hydrogen Sulfide	Sulfur Dioxide	Nitrogen Oxides	Carbon Monoxide	PM_{10} and $PM_{2.5}$	Total Condensate VOC	Total Natural Gas VOC	Benzene	Hydrogen Sulfide
		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
1,875-hp Caterpillar G3606 Engine	C-1	-	1.53	<0.01	-	0.01	1.24	1.84	0.14	-	-	-	-	-	-	-	-	-	-	-	-
1,875-hp Caterpillar G3606 Engine	C-2	-	1.53	<0.01	-	0.01	1.24	1.84	0.14	-	-	-	-	-	-	-	-	-	-	-	-
1,875-hp Caterpillar G3606 Engine	C-3	-	1.53	<0.01	-	0.01	1.24	1.84	0.14	-	-	-	-	-	-	-	-	-	-	-	-
1,875-hp Caterpillar G3606 Engine	C-4	-	1.53	<0.01	-	0.01	1.24	1.84	0.14	-	-	-	-	-	-	-	-	-	-	-	-
1,875-hp Caterpillar G3606 Engine	C-5	-	1.53	<0.01	-	0.01	1.24	1.84	0.14	-	-	-	-	-	-	-	-	-	-	-	-
3,750-hp Caterpillar G3612 Engine	C-8	-	2.25	0.01	-	0.02	2.48	2.66	0.28	-	-	-	-	-	-	-	-	-	-	-	-
3,750-hp Caterpillar G3612 Engine	C-9	-	2.25	0.01	-	0.02	2.48	2.66	0.28	-	-	-	-	-	-	-	-	-	-	-	-
3,750-hp Caterpillar G3612 Engine	C-10	-	2.25	0.01	-	0.02	2.48	2.66	0.28	-	-	-	-	-	-	-	-	-	-	-	-
1,953-hp Cummins QSK60 Engine	G-4	-	2.06	<0.01	-	0.01	3.01	1.50	0.15	-	-	-	-	-	-	-	-	-	-	-	-
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2	*	-	*	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 1000-bbl Produced Water Tank	WTK-1	*	-	*	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1	*	-	*	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
One (1) 520-gal Fuel Scrubber Tank	STK-1	112.54	-	0.14	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Tanks	TK-MISC	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uncaptured Condensate Truck Loading	TL-1	-	-	-	-	-	-	-	-	2.49	-	<0.01	<0.01	-	-	-	-	-	-	-	-
Produced Water Truck Loading	TL-2	-	-	-	-	-	-	-	-	3.67	-	<0.01	<0.01	-	-	-	-	-	-	-	-
Slop Truck Loading	TL-4	-	-	-	-	-	-	-	-	6.23	-	0.01	<0.01	-	-	-	-	-	-	-	-
Standard Flare	FL-1	-	0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	-	-	-	-	-	-	-	-	-	52.57	0.07	0.01
Enclosed Flare	FL-3	5.31	0.01	0.01	<0.01	0.05	2.10	4.18	<0.01	3.04	-	<0.01	<0.01	0.03	1.19	2.38	-	-	-	-	-
Fugitive Emissions	FUG	0.07	0.32	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned Maintenance, Startup, and Shutdown Activities	MSS	-	-	-	-	-	-	-	-	45.49	-	0.06	<0.01	-	-	-	-	54.35	55.76	0.12	0.01
Compressor Blowdowns	BD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*	*	*
	Total =	**118.04**	**16.77**	**0.18**	**0.01**	**0.15**	**18.76**	**22.86**	**1.71**	**60.92**	**-**	**0.08**	**<0.01**	**0.03**	**1.19**	**2.38**	**0.00**	**54.35**	**108.33**	**0.19**	**0.01**

**Tanks', captured condensate truck loading's, and compressor blowdowns' emissions are routed to and reported under their respective flares.*

IMPACT ANALYSIS & NAAQS

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
H_2S Impacts Evaluation

										30 TAC §112.32 (ug/m^3)		162	
										30 TAC §112.31 (ug/m^3)		108	
Equipment	Unit ID	H_2S lb/hr	H_2S TPY	WREPN lb/hr	Height ft	Distance to property line (ft)	Distance to Receptor (ft)	Table	$G_{P/L}$ ug/m^3/lbs/hr	$G_{RECEPTOR}$ ug/m^3/lbs/hr	$E_{MAX\ HOURLY}$ P/L lb/hr	$E_{MAX\ HOURLY}$ RECEPTOR lb/hr
1,875-hp Caterpillar G3606 Engine	C-1	-	-	-	25.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
1,875-hp Caterpillar G3606 Engine	C-2	-	-	-	25.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
1,875-hp Caterpillar G3606 Engine	C-3	-	-	-	25.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
1,875-hp Caterpillar G3606 Engine	C-4	-	-	-	25.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
1,875-hp Caterpillar G3606 Engine	C-5	-	-	-	25.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
3,750-hp Caterpillar G3612 Engine	C-8	-	-	-	25.0	50	>5,280	Table 5F: Engines Greater Than 2,000 hp	5	2	-	-
3,750-hp Caterpillar G3612 Engine	C-9	-	-	-	25.0	50	>5,280	Table 5F: Engines Greater Than 2,000 hp	5	2	-	-
3,750-hp Caterpillar G3612 Engine	C-10	-	-	-	25.0	50	>5,280	Table 5F: Engines Greater Than 2,000 hp	5	2	-	-
1,953-hp Cummins QSK60 Engine	G-4	-	-	-	22.0	50	>5,280	Table 5E: Engines Greater Than 1,500 and Less Than 2,000 hp	7	3	-	-
Two (2) 500-bbl Condensate Tanks	TK-1 - TK-2	*	*	-	16.0	50	>5,280	Table 2: Fugitives and Process Vents	305	27	-	-
One (1) 1000-bbl Produced Water Tank	WTK-1	*	*	-	30.0	50	>5,280	Table 2: Fugitives and Process Vents	305	27	-	-
One (1) 1000-bbl Condensate/Produced Water Tank	GB-1	*	*	-	30.0	50	>5,280	Table 2: Fugitives and Process Vents	305	27	-	-
One (1) 520-gal Fuel Scrubber Tank	STK-1	0.01	<0.01	0.30	6.0	50	>5,280	Table 2: Fugitives and Process Vents	305	27	0.16	1.18
Miscellaneous Tanks	TK-MISC	-	-	-	6.0	50	>5,280	Table 2: Fugitives and Process Vents	305	27	-	-
Uncaptured Condensate Truck Loading	TL-1	<0.01	<0.01	0.01	10.0	50	>5,280	Table 2: Fugitives and Process Vents	1232	28	<0.01	0.03
Produced Water Truck Loading	TL-2	<0.01	<0.01	0.01	10.0	50	>5,280	Table 2: Fugitives and Process Vents	1232	28	<0.01	0.04
Slop Truck Loading	TL-4	<0.01	<0.01	0.02	10.0	50	>5,280	Table 2: Fugitives and Process Vents	1232	28	<0.01	0.06
Standard Flare	FL-1	0.01	<0.01	0.20	100.0	50	>5,280	Table 3: Flares and Thermal Destruction Devices	23	10	1.40	2.15
Enclosed Flare	FL-3	<0.01	<0.01	0.03	30.0	50	>5,280	Table 3: Flares and Thermal Destruction Devices	58	11	0.08	0.27
Fugitive Emissions	FUG	<0.01	<0.01	0.02	3.0	50	>5,280	Table 2: Fugitives and Process Vents	4375	22	<0.01	0.08
Planned Maintenance, Startup, and Shutdown Activities	MSS	0.01	<0.01	0.43	3.0	50	>5,280	Table 4: Blowdowns, Purging, and Pigging Generic Modeling Results	4304	29	0.02	1.60
Compressor Blowdowns	BD	*	*	-	10.0	50	>5,280	Table 4: Blowdowns, Purging, and Pigging Generic Modeling Results	25	12	-	-
	Total =	**0.03**	**<0.01**	**1.00**							**1.66**	**5.40**
										Compliance Check	**Compliant**	**Compliant**

Altus Midstream Processing LP (CN605629864)
Cherokee CPF (RN109750190)
Air Quality Modeling Analysis - Nitrogen Oxides (NO_X)

NO_X					
SCREEN Inputs	**1,875-hp Caterpillar G3606 Engine**	**3,750-hp Caterpillar G3612 Engine**	**1,953-hp Cummins QSK60 Engine**	**Standard Flare**	**Enclosed Flare**
Unit ID:	**C-1 - C-5**	**C-8 - C-10**	**G-4**	**FL-1**	**FL-3**
Source Type	Point	Point	Point	Flare	Flare
# of Units:	5	3	1	1	1
Emission Rate (lb/hr)	1.24	2.48	3.01	49.67	3.29
Emission Rate (g/s)	0.1562	0.3125	0.3797	6.2586	0.4141
Height (ft)	25.00	25.00	22.00	100.00	30.00
Diameter (ft)	1.25	1.75	1.33	3.00	2.50
Heat Rate (mmBtu/hr)	-	-	-	4.26	6.98
Heat Rate (cal/s)	-	-	-	298,477.84	488,811.99
Temperature (°F)	797	816	986	-	-
Flow Rate (acfm)	12,048	23,866	2,427	-	-
Flow Rate (ft/s)	163.63	165.37	28.97	-	-
SCREEN Outputs	**1,875-hp Caterpillar G3606 Engine**	**3,750-hp Caterpillar G3612 Engine**	**1,953-hp Cummins QSK60 Engine**	**Standard Flare**	**Enclosed Flare**
1-hour Concentration of NO_X per Unit [ug/m^3]	5.57	6.16	52.05	110.10	12.27
1-hour Concentration of NO_X [ug/m^3]	**27.85**	**18.47**	**52.05**	**110.10**	**12.27**
Annual Concentration of NO_X [ug/m3]	**2.23**	**1.48**	**4.16**	**8.81**	**0.98**
NO_2/NO_X Ratio	**0.20**	**0.20**	**0.20**	**0.80**	**0.80**
1-hour Concentration of NO_2 [ug/m^3]	**5.57**	**3.69**	**10.41**	**88.08**	**9.82**
Annual Concentration of NO_2 [ug/m^3]	**0.45**	**0.30**	**0.83**	**7.05**	**0.79**

Reeves County	
Background 1-hour Concentration [ug/m^3]	**70.00**
Background Annual Concentration [ug/m^3]	**20.00**

NO_2	
Total 1-hour Concentration [ug/m^3]	**187.57**
Total Annual Concentration [ug/m^3]	**29.41**
NAAQS 1-hour Concentration [ug/m^3]	**188**
NAAQS Annual Concentration [ug/m^3]	**100**

```
03/04/20

10:50:01
  ***  SCREEN3 MODEL RUN  ***
  *** VERSION DATED 13043 ***

 Cherokee CPF_NOx Modeling_C-1 - C-5

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE            =        POINT
    EMISSION RATE (G/S)    =     0.156200
    STACK HEIGHT (M)       =       7.6200
    STK INSIDE DIAM (M)    =       0.3810
    STK EXIT VELOCITY (M/S)=      49.8744
    STK GAS EXIT TEMP (K)  =     698.1500
    AMBIENT AIR TEMP (K)   =     293.0000
    RECEPTOR HEIGHT (M)    =       0.0000
    URBAN/RURAL OPTION     =        RURAL
    BUILDING HEIGHT (M)    =       0.0000
    MIN HORIZ BLDG DIM (M) =       0.0000
    MAX HORIZ BLDG DIM (M) =       0.0000

 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS
ENTERED.


 BUOY. FLUX =   10.300 M**4/S**3;  MOM. FLUX =   37.885 M**4/S**
2.

 *** FULL METEOROLOGY ***

 **********************************
 *** SCREEN AUTOMATED DISTANCES ***
 **********************************

 *** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR
FOLLOWING DISTANCES ***

   DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA
SIGMA
    (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)
Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------
------  -----
     15.   0.1942E-14    6     1.0    1.0 10000.0   61.28    6.80
6.78    NO
    100.    1.846        3    10.0   10.0  3200.0   19.94   12.65
7.74    NO
    200.    5.560        3    10.0   10.0  3200.0   19.94   23.86
14.44    NO
```

300.	5.183	4	15.0	15.0	4800.0	15.83	22.73	12.32 NO
400.	4.761	4	10.0	10.0	3200.0	19.94	29.66	15.67 NO
500.	4.293	4	8.0	8.0	2560.0	23.02	36.41	18.82 NO
600.	3.799	4	8.0	8.0	2560.0	23.02	42.94	21.66 NO
700.	3.486	4	5.0	5.0	1600.0	32.26	49.69	25.04 NO
800.	3.253	4	5.0	5.0	1600.0	32.26	56.02	27.69 NO
900.	3.007	4	4.5	4.5	1440.0	34.99	62.38	30.49 NO
1000.	2.793	4	4.0	4.0	1280.0	38.42	68.69	33.28 NO
1100.	2.602	4	4.0	4.0	1280.0	38.42	74.83	35.24 NO
1200.	2.435	4	3.5	3.5	1120.0	42.81	81.07	37.47 NO
1300.	2.293	4	3.5	3.5	1120.0	42.81	87.10	39.31 NO
1400.	2.158	4	3.5	3.5	1120.0	42.81	93.10	41.11 NO
1500.	2.050	4	3.0	3.0	960.0	48.68	99.24	43.29 NO
1600.	1.991	5	1.0	1.0	10000.0	72.29	80.30	34.46 NO
1700.	2.068	5	1.0	1.0	10000.0	72.29	84.62	35.43 NO
1800.	2.134	5	1.0	1.0	10000.0	72.29	88.91	36.38 NO
1900.	2.190	5	1.0	1.0	10000.0	72.29	93.20	37.32 NO
2000.	2.236	5	1.0	1.0	10000.0	72.29	97.47	38.25 NO
2100.	2.260	5	1.0	1.0	10000.0	72.29	101.72	39.08 NO
2200.	2.278	5	1.0	1.0	10000.0	72.29	105.96	39.90 NO
2300.	2.291	5	1.0	1.0	10000.0	72.29	110.18	40.71 NO
2400.	2.298	5	1.0	1.0	10000.0	72.29	114.39	41.51 NO
2500.	2.300	5	1.0	1.0	10000.0	72.29	118.59	42.29 NO
2600.	2.313	6	1.0	1.0	10000.0	61.28	82.21	29.29 NO
2700.	2.352	6	1.0	1.0	10000.0	61.28	84.97	29.73 NO
2800.	2.387	6	1.0	1.0	10000.0	61.28	87.72	30.17 NO

```
   2900.    2.418        6     1.0    1.0 10000.0   61.28   90.46
30.60    NO
   3000.    2.445        6     1.0    1.0 10000.0   61.28   93.19
31.03    NO
   3500.    2.476        6     1.0    1.0 10000.0   61.28  106.76
32.79    NO
   4000.    2.467        6     1.0    1.0 10000.0   61.28  120.15
34.44    NO
   4500.    2.431        6     1.0    1.0 10000.0   61.28  133.39
36.00    NO
   5000.    2.380        6     1.0    1.0 10000.0   61.28  146.48
37.49    NO
   5500.    2.318        6     1.0    1.0 10000.0   61.28  159.43
38.91    NO
   6000.    2.251        6     1.0    1.0 10000.0   61.28  172.26
40.27    NO
   6500.    2.181        6     1.0    1.0 10000.0   61.28  184.98
41.58    NO
   7000.    2.111        6     1.0    1.0 10000.0   61.28  197.59
42.84    NO
   7500.    2.036        6     1.0    1.0 10000.0   61.28  210.10
43.93    NO
   8000.    1.963        6     1.0    1.0 10000.0   61.28  222.51
44.98    NO
   8500.    1.895        6     1.0    1.0 10000.0   61.28  234.84
45.99    NO
   9000.    1.829        6     1.0    1.0 10000.0   61.28  247.08
46.97    NO
   9500.    1.767        6     1.0    1.0 10000.0   61.28  259.25
47.93    NO
  10000.    1.708        6     1.0    1.0 10000.0   61.28  271.34
48.85    NO
  15000.    1.259        6     1.0    1.0 10000.0   61.28  388.73
56.99    NO
  20000.   0.9816        6     1.0    1.0 10000.0   61.28  501.18
62.21    NO
  25000.   0.8014        6     1.0    1.0 10000.0   61.28  609.94
66.64    NO
  30000.   0.6752        6     1.0    1.0 10000.0   61.28  715.75
70.52    NO
  40000.   0.5134        6     1.0    1.0 10000.0   61.28  920.35
76.05    NO
  50000.   0.4133        6     1.0    1.0 10000.0   61.28 1117.53
80.66    NO

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    15. M:
    194.    5.569        3    10.0   10.0  3200.0   19.94   23.32
14.11    NO

  DWASH=   MEANS NO CALC MADE (CONC = 0.0)
  DWASH=NO MEANS NO BUILDING DOWNWASH USED
  DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
```

DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	5.569	194.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

```
03/04/20

10:51:28
  ***  SCREEN3 MODEL RUN  ***
  *** VERSION DATED 13043 ***

 Cherokee CPF_NOx Modeling_C-8 - C-10

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE            =        POINT
    EMISSION RATE (G/S)    =     0.312500
    STACK HEIGHT (M)       =       7.6200
    STK INSIDE DIAM (M)    =       0.5334
    STK EXIT VELOCITY (M/S)=      50.4048
    STK GAS EXIT TEMP (K)  =     708.7056
    AMBIENT AIR TEMP (K)   =     293.0000
    RECEPTOR HEIGHT (M)    =       0.0000
    URBAN/RURAL OPTION     =        RURAL
    BUILDING HEIGHT (M)    =       0.0000
    MIN HORIZ BLDG DIM (M) =       0.0000
    MAX HORIZ BLDG DIM (M) =       0.0000

 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS
ENTERED.


 BUOY. FLUX =   20.622 M**4/S**3;  MOM. FLUX =   74.712 M**4/S**
2.

 *** FULL METEOROLOGY ***

 **********************************
 *** SCREEN AUTOMATED DISTANCES ***
 **********************************

 *** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR
FOLLOWING DISTANCES ***

   DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA
SIGMA
    (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)
Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------
------  -----
     15.   0.1266E-13    6     1.0    1.0 10000.0   75.26    8.51
8.50    NO
    100.   0.1615        3    10.0   10.0  3200.0   28.35   12.75
7.92    NO
    200.    4.399        4    20.0   20.0  6400.0   17.99   15.71
8.77    NO
```

300.	6.156	4	20.0	20.0	6400.0	17.99	22.78	12.41 NO
400.	5.615	4	15.0	15.0	4800.0	21.44	29.72	15.77 NO
500.	5.055	4	15.0	15.0	4800.0	21.44	36.36	18.72 NO
600.	4.573	4	10.0	10.0	3200.0	28.35	43.13	22.02 NO
700.	4.209	4	10.0	10.0	3200.0	28.35	49.54	24.75 NO
800.	3.853	4	8.0	8.0	2560.0	33.54	56.06	27.79 NO
900.	3.571	4	8.0	8.0	2560.0	33.54	62.32	30.38 NO
1000.	3.280	4	8.0	8.0	2560.0	33.54	68.53	32.94 NO
1100.	3.006	4	8.0	8.0	2560.0	33.54	74.68	34.92 NO
1200.	2.795	4	5.0	5.0	1600.0	49.09	81.31	37.99 NO
1300.	2.676	4	5.0	5.0	1600.0	49.09	87.33	39.80 NO
1400.	2.554	4	5.0	5.0	1600.0	49.09	93.31	41.58 NO
1500.	2.435	4	5.0	5.0	1600.0	49.09	99.25	43.32 NO
1600.	2.319	4	5.0	5.0	1600.0	49.09	105.16	45.02 NO
1700.	2.208	4	5.0	5.0	1600.0	49.09	111.04	46.70 NO
1800.	2.146	5	1.5	1.5	10000.0	78.82	89.32	37.36 NO
1900.	2.221	5	1.5	1.5	10000.0	78.82	93.59	38.28 NO
2000.	2.287	5	1.5	1.5	10000.0	78.82	97.84	39.18 NO
2100.	2.340	5	1.0	1.0	10000.0	89.13	102.70	41.57 NO
2200.	2.398	5	1.0	1.0	10000.0	89.13	106.90	42.34 NO
2300.	2.450	5	1.0	1.0	10000.0	89.13	111.09	43.10 NO
2400.	2.496	5	1.0	1.0	10000.0	89.13	115.27	43.86 NO
2500.	2.536	5	1.0	1.0	10000.0	89.13	119.43	44.61 NO
2600.	2.572	5	1.0	1.0	10000.0	89.13	123.59	45.34 NO
2700.	2.602	5	1.0	1.0	10000.0	89.13	127.73	46.07 NO
2800.	2.628	5	1.0	1.0	10000.0	89.13	131.86	46.80 NO

```
   2900.    2.650        5     1.0    1.0 10000.0   89.13  135.98
47.51    NO
   3000.    2.668        5     1.0    1.0 10000.0   89.13  140.08
48.22    NO
   3500.    2.709        5     1.0    1.0 10000.0   89.13  160.45
51.66    NO
   4000.    2.690        5     1.0    1.0 10000.0   89.13  180.57
54.95    NO
   4500.    2.724        6     1.0    1.0 10000.0   75.26  133.90
37.87    NO
   5000.    2.751        6     1.0    1.0 10000.0   75.26  146.95
39.29    NO
   5500.    2.757        6     1.0    1.0 10000.0   75.26  159.86
40.64    NO
   6000.    2.747        6     1.0    1.0 10000.0   75.26  172.66
41.95    NO
   6500.    2.725        6     1.0    1.0 10000.0   75.26  185.35
43.21    NO
   7000.    2.694        6     1.0    1.0 10000.0   75.26  197.94
44.42    NO
   7500.    2.643        6     1.0    1.0 10000.0   75.26  210.43
45.47    NO
   8000.    2.590        6     1.0    1.0 10000.0   75.26  222.82
46.49    NO
   8500.    2.536        6     1.0    1.0 10000.0   75.26  235.14
47.47    NO
   9000.    2.482        6     1.0    1.0 10000.0   75.26  247.36
48.42    NO
   9500.    2.428        6     1.0    1.0 10000.0   75.26  259.51
49.35    NO
  10000.    2.375        6     1.0    1.0 10000.0   75.26  271.59
50.25    NO
  15000.    1.905        6     1.0    1.0 10000.0   75.26  388.91
58.19    NO
  20000.    1.546        6     1.0    1.0 10000.0   75.26  501.32
63.32    NO
  25000.    1.298        6     1.0    1.0 10000.0   75.26  610.06
67.67    NO
  30000.    1.117        6     1.0    1.0 10000.0   75.26  715.85
71.50    NO
  40000.   0.8706        6     1.0    1.0 10000.0   75.26  920.43
76.96    NO
  50000.   0.7130        6     1.0    1.0 10000.0   75.26 1117.59
81.52    NO

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    15. M:
    300.    6.156        4    20.0   20.0  6400.0   17.99   22.78
12.41    NO

  DWASH=   MEANS NO CALC MADE (CONC = 0.0)
  DWASH=NO MEANS NO BUILDING DOWNWASH USED
  DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
```

DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	6.156	300.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

03/04/20

10:52:41
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 13043 ***

 Cherokee CPF_NOx Modeling_G-4

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   POINT
    EMISSION RATE (G/S)   =   0.379700
    STACK HEIGHT (M)   =   6.7056
    STK INSIDE DIAM (M)   =   0.4054
    STK EXIT VELOCITY (M/S)=   8.8301
    STK GAS EXIT TEMP (K) =   803.1500
    AMBIENT AIR TEMP (K)   =   293.0000
    RECEPTOR HEIGHT (M)   =   0.0000
    URBAN/RURAL OPTION   =   RURAL
    BUILDING HEIGHT (M)   =   0.0000
    MIN HORIZ BLDG DIM (M) =   0.0000
    MAX HORIZ BLDG DIM (M) =   0.0000

 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

 BUOY. FLUX =   2.260 M**4/S**3; MOM. FLUX =   1.169 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME   SIGMA   SIGMA
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   Y (M)   Z (M) DWASH
 ------- ---------- ---- ----- ----- ------ ------ ------ ------ -----
     15.   0.7460E-08   3   10.0   10.0 3200.0   10.15   2.20   1.38   NO
    100.   52.05   3   8.0   8.0 2560.0   11.32   12.54   7.57   NO
    200.   47.33   4   8.0   8.0 2560.0   11.32   15.63   8.62   NO

300.	43.81	4	4.0	4.0	1280.0	16.58	22.79	12.42 NO
400.	38.84	4	3.0	3.0	960.0	19.87	29.69	15.73 NO
500.	34.53	4	2.5	2.5	800.0	22.50	36.43	18.85 NO
600.	30.92	4	2.0	2.0	640.0	26.45	43.09	21.95 NO
700.	27.85	4	2.0	2.0	640.0	26.45	49.51	24.69 NO
800.	25.52	4	1.5	1.5	480.0	33.03	56.08	27.82 NO
900.	23.56	4	1.5	1.5	480.0	33.03	62.34	30.41 NO
1000.	21.59	4	1.5	1.5	480.0	33.03	68.54	32.96 NO
1100.	19.75	4	1.5	1.5	480.0	33.03	74.69	34.94 NO
1200.	18.66	4	1.0	1.0	320.0	46.19	81.23	37.81 NO
1300.	17.72	4	1.0	1.0	320.0	46.19	87.25	39.64 NO
1400.	17.95	6	1.0	1.0	10000.0	39.07	46.97	19.58 NO
1500.	18.63	6	1.0	1.0	10000.0	39.07	49.89	20.26 NO
1600.	19.16	6	1.0	1.0	10000.0	39.07	52.81	20.93 NO
1700.	19.55	6	1.0	1.0	10000.0	39.07	55.71	21.60 NO
1800.	19.83	6	1.0	1.0	10000.0	39.07	58.60	22.25 NO
1900.	20.01	6	1.0	1.0	10000.0	39.07	61.48	22.89 NO
2000.	20.10	6	1.0	1.0	10000.0	39.07	64.34	23.52 NO
2100.	20.00	6	1.0	1.0	10000.0	39.07	67.20	24.06 NO
2200.	19.86	6	1.0	1.0	10000.0	39.07	70.04	24.59 NO
2300.	19.68	6	1.0	1.0	10000.0	39.07	72.87	25.10 NO
2400.	19.48	6	1.0	1.0	10000.0	39.07	75.69	25.61 NO
2500.	19.25	6	1.0	1.0	10000.0	39.07	78.49	26.12 NO
2600.	19.01	6	1.0	1.0	10000.0	39.07	81.29	26.61 NO
2700.	18.76	6	1.0	1.0	10000.0	39.07	84.08	27.10 NO
2800.	18.49	6	1.0	1.0	10000.0	39.07	86.86	27.58 NO

```
   2900.    18.22        6     1.0    1.0 10000.0   39.07   89.63
28.05    NO
   3000.    17.95        6     1.0    1.0 10000.0   39.07   92.39
28.52    NO
   3500.    16.42        6     1.0    1.0 10000.0   39.07  106.06
30.42    NO
   4000.    15.04        6     1.0    1.0 10000.0   39.07  119.53
32.19    NO
   4500.    13.81        6     1.0    1.0 10000.0   39.07  132.82
33.86    NO
   5000.    12.72        6     1.0    1.0 10000.0   39.07  145.96
35.44    NO
   5500.    11.76        6     1.0    1.0 10000.0   39.07  158.96
36.93    NO
   6000.    10.92        6     1.0    1.0 10000.0   39.07  171.83
38.36    NO
   6500.    10.16        6     1.0    1.0 10000.0   39.07  184.57
39.74    NO
   7000.    9.491        6     1.0    1.0 10000.0   39.07  197.21
41.06    NO
   7500.    8.895        6     1.0    1.0 10000.0   39.07  209.74
42.19    NO
   8000.    8.362        6     1.0    1.0 10000.0   39.07  222.18
43.28    NO
   8500.    7.883        6     1.0    1.0 10000.0   39.07  234.52
44.33    NO
   9000.    7.451        6     1.0    1.0 10000.0   39.07  246.78
45.35    NO
   9500.    7.059        6     1.0    1.0 10000.0   39.07  258.96
46.34    NO
  10000.    6.702        6     1.0    1.0 10000.0   39.07  271.06
47.30    NO
  15000.    4.368        6     1.0    1.0 10000.0   39.07  388.54
55.66    NO
  20000.    3.221        6     1.0    1.0 10000.0   39.07  501.03
61.00    NO
  25000.    2.532        6     1.0    1.0 10000.0   39.07  609.82
65.51    NO
  30000.    2.076        6     1.0    1.0 10000.0   39.07  715.65
69.45    NO
  40000.    1.528        6     1.0    1.0 10000.0   39.07  920.27
75.06    NO
  50000.    1.203        6     1.0    1.0 10000.0   39.07 1117.46
79.73    NO

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    15. M:
    100.    52.05        3     8.0    8.0  2560.0   11.32   12.54
7.57    NO

  DWASH=   MEANS NO CALC MADE (CONC = 0.0)
  DWASH=NO MEANS NO BUILDING DOWNWASH USED
  DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
```

DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	52.05	100.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

```
03/04/20

10:54:24
  ***  SCREEN3 MODEL RUN  ***
  *** VERSION DATED 13043 ***

 Cherokee CPF_NOx Modeling_FL-1

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE            =        FLARE
    EMISSION RATE (G/S)    =      6.25860
    FLARE STACK HEIGHT (M) =      30.4800
    TOT HEAT RLS (CAL/S)   =      298478.
    RECEPTOR HEIGHT (M)    =       0.0000
    URBAN/RURAL OPTION     =        RURAL
    EFF RELEASE HEIGHT (M) =      32.3679
    BUILDING HEIGHT (M)    =       0.0000
    MIN HORIZ BLDG DIM (M) =       0.0000
    MAX HORIZ BLDG DIM (M) =       0.0000

 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS
ENTERED.


 BUOY. FLUX =    4.949 M**4/S**3;  MOM. FLUX =    3.018 M**4/S**
2.

 *** FULL METEOROLOGY ***

 **********************************
 *** SCREEN AUTOMATED DISTANCES ***
 **********************************

 *** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR
FOLLOWING DISTANCES ***

   DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA
SIGMA
    (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)
Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------
------  -----
     15.    0.000        1     1.0    1.1   320.0   97.85    6.61
5.00    NO
    100.    1.962        1     3.0    3.3   960.0   54.19   27.34
14.87    NO
    200.    78.94        1     3.0    3.3   960.0   54.19   50.36
29.96    NO
    300.    105.9        1     2.0    2.2   640.0   65.11   72.37
48.35    NO
```

```
    400.    108.9        1     1.0    1.1   320.0   97.85   94.58
73.58    NO
    500.    98.63        1     1.0    1.1   320.0   97.85  114.58
106.31    NO
    600.    95.82        2     1.5    1.6   480.0   76.02   98.29
63.64    NO
    700.    95.56        3     2.0    2.2   640.0   63.97   75.04
45.04    NO
    800.    94.30        3     1.5    1.7   480.0   74.51   85.00
51.29    NO
    900.    93.13        3     1.5    1.7   480.0   74.51   94.45
56.81    NO
   1000.    89.32        3     1.5    1.7   480.0   74.51  103.81
62.32    NO
   1100.    86.49        3     1.0    1.1   320.0   95.58  113.90
69.11    NO
   1200.    84.83        3     1.0    1.1   320.0   95.58  123.05
74.46    NO
   1300.    81.99        3     1.0    1.1   320.0   95.58  132.14
79.79    NO
   1400.    78.48        3     1.0    1.1   320.0   95.58  141.17
85.11    NO
   1500.    74.63        3     1.0    1.1   320.0   95.58  150.15
90.41    NO
   1600.    70.67        3     1.0    1.1   320.0   95.58  159.07
95.70    NO
   1700.    66.74        3     1.0    1.1   320.0   95.58  167.94
100.97    NO
   1800.    64.62        4     1.5    1.8   480.0   72.10  116.84
48.22    NO
   1900.    63.96        4     1.5    1.8   480.0   72.10  122.66
49.83    NO
   2000.    63.08        4     1.5    1.8   480.0   72.10  128.45
51.42    NO
   2100.    62.03        4     1.5    1.8   480.0   72.10  134.21
52.98    NO
   2200.    60.87        4     1.5    1.8   480.0   72.10  139.94
54.52    NO
   2300.    59.62        4     1.5    1.8   480.0   72.10  145.65
56.04    NO
   2400.    58.31        4     1.5    1.8   480.0   72.10  151.34
57.53    NO
   2500.    56.97        4     1.5    1.8   480.0   72.10  157.00
59.00    NO
   2600.    55.61        4     1.5    1.8   480.0   72.10  162.64
60.46    NO
   2700.    54.31        4     1.0    1.2   320.0   91.97  168.74
63.18    NO
   2800.    53.81        4     1.0    1.2   320.0   91.97  174.32
64.57    NO
   2900.    53.24        4     1.0    1.2   320.0   91.97  179.88
65.95    NO
```

```
   3000.    52.62        4     1.0    1.2   320.0   91.97  185.42
67.31    NO
   3500.    48.79        4     1.0    1.2   320.0   91.97  212.87
73.48    NO
   4000.    47.18        5     1.0    1.5 10000.0   76.53  179.50
51.34    NO
   4500.    45.16        5     1.0    1.5 10000.0   76.53  199.48
54.31    NO
   5000.    42.98        5     1.0    1.5 10000.0   76.53  219.22
57.12    NO
   5500.    40.78        5     1.0    1.5 10000.0   76.53  238.75
59.80    NO
   6000.    38.65        5     1.0    1.5 10000.0   76.53  258.08
62.37    NO
   6500.    36.61        5     1.0    1.5 10000.0   76.53  277.23
64.84    NO
   7000.    35.20        6     1.0    1.9 10000.0   66.26  197.23
41.16    NO
   7500.    34.49        6     1.0    1.9 10000.0   66.26  209.76
42.29    NO
   8000.    33.74        6     1.0    1.9 10000.0   66.26  222.20
43.38    NO
   8500.    32.96        6     1.0    1.9 10000.0   66.26  234.54
44.43    NO
   9000.    32.16        6     1.0    1.9 10000.0   66.26  246.80
45.44    NO
   9500.    31.37        6     1.0    1.9 10000.0   66.26  258.97
46.43    NO
  10000.    30.58        6     1.0    1.9 10000.0   66.26  271.08
47.38    NO
  15000.    23.79        6     1.0    1.9 10000.0   66.26  388.55
55.73    NO
  20000.    18.94        6     1.0    1.9 10000.0   66.26  501.04
61.07    NO
  25000.    15.67        6     1.0    1.9 10000.0   66.26  609.83
65.57    NO
  30000.    13.33        6     1.0    1.9 10000.0   66.26  715.65
69.51    NO
  40000.    10.24        6     1.0    1.9 10000.0   66.26  920.27
75.12    NO
  50000.    8.296        6     1.0    1.9 10000.0   66.26 1117.46
79.78    NO

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    15. M:
    346.    110.1        1     1.5    1.6   480.0   76.02   82.64
59.56    NO

  DWASH=   MEANS NO CALC MADE (CONC = 0.0)
  DWASH=NO MEANS NO BUILDING DOWNWASH USED
  DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
  DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
  DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB
```

```
     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   ---------   -------
SIMPLE TERRAIN       110.1          346.        0.


**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

03/04/20

10:55:57
  *** SCREEN3 MODEL RUN ***
  *** VERSION DATED 13043 ***

 Cherokee CPF_NOx Modeling_FL-3

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE   =   FLARE
    EMISSION RATE (G/S)   =   0.414100
    FLARE STACK HEIGHT (M) =   9.1440
    TOT HEAT RLS (CAL/S)   =   488812.
    RECEPTOR HEIGHT (M)   =   0.0000
    URBAN/RURAL OPTION   =   RURAL
    EFF RELEASE HEIGHT (M) =   11.5339
    BUILDING HEIGHT (M)   =   0.0000
    MIN HORIZ BLDG DIM (M) =   0.0000
    MAX HORIZ BLDG DIM (M) =   0.0000

 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

 BUOY. FLUX =   8.105 M**4/S**3; MOM. FLUX =   4.942 M**4/S**2.

 *** FULL METEOROLOGY ***

 ****
 *** SCREEN AUTOMATED DISTANCES ***
 ****

 *** TERRAIN HEIGHT OF   0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

   DIST   CONC   U10M   USTK MIX HT   PLUME   SIGMA SIGMA
    (M)   (UG/M**3)   STAB (M/S) (M/S)   (M)   HT (M)   Y (M) Z (M) DWASH
 ------- ---------- ---- ----- ----- ------ ------ ------ ------ -----
     15.   0.000   1   1.0   1.0   320.0 113.42   7.45   6.07   NO
    100.   2.526   3   10.0   10.1 3200.0   21.68   12.61   7.69   NO
    200.   12.13   3   10.0   10.1 3200.0   21.68   23.80   14.33   NO
    300.   11.47   3   8.0   8.1 2560.0   24.22   34.48   20.65   NO

400.	10.74	3	4.5	4.6	1440.0	34.08	45.11	27.22 NO
500.	10.31	4	8.0	8.2	2560.0	24.13	36.32	18.65 NO
600.	9.638	4	5.0	5.1	1600.0	31.68	43.10	21.98 NO
700.	9.271	4	5.0	5.1	1600.0	31.68	49.52	24.71 NO
800.	8.716	4	4.5	4.6	1440.0	33.92	55.94	27.54 NO
900.	8.204	4	4.0	4.1	1280.0	36.72	62.30	30.33 NO
1000.	7.733	4	3.5	3.6	1120.0	40.31	68.62	33.13 NO
1100.	7.263	4	3.5	3.6	1120.0	40.31	74.76	35.10 NO
1200.	6.853	4	3.0	3.1	960.0	45.11	81.01	37.34 NO
1300.	6.500	4	3.0	3.1	960.0	45.11	87.05	39.19 NO
1400.	6.154	4	3.0	3.1	960.0	45.11	93.05	41.00 NO
1500.	5.865	4	2.5	2.6	800.0	51.83	99.21	43.23 NO
1600.	5.618	4	2.5	2.6	800.0	51.83	105.13	44.94 NO
1700.	5.460	5	1.0	1.1	10000.0	70.25	84.26	34.57 NO
1800.	5.648	5	1.0	1.1	10000.0	70.25	88.58	35.54 NO
1900.	5.806	5	1.0	1.1	10000.0	70.25	92.88	36.51 NO
2000.	5.935	5	1.0	1.1	10000.0	70.25	97.16	37.46 NO
2100.	6.004	5	1.0	1.1	10000.0	70.25	101.42	38.30 NO
2200.	6.055	5	1.0	1.1	10000.0	70.25	105.68	39.14 NO
2300.	6.089	5	1.0	1.1	10000.0	70.25	109.91	39.96 NO
2400.	6.108	5	1.0	1.1	10000.0	70.25	114.13	40.78 NO
2500.	6.115	5	1.0	1.1	10000.0	70.25	118.33	41.58 NO
2600.	6.109	5	1.0	1.1	10000.0	70.25	122.53	42.37 NO
2700.	6.094	5	1.0	1.1	10000.0	70.25	126.70	43.15 NO
2800.	6.070	5	1.0	1.1	10000.0	70.25	130.86	43.92 NO
2900.	6.089	6	1.0	1.1	10000.0	59.80	90.21	29.86 NO

```
   3000.    6.170        6     1.0    1.1 10000.0   59.80   92.95
30.30    NO
   3500.    6.281        6     1.0    1.1 10000.0   59.80  106.55
32.09    NO
   4000.    6.276        6     1.0    1.1 10000.0   59.80  119.96
33.78    NO
   4500.    6.195        6     1.0    1.1 10000.0   59.80  133.22
35.37    NO
   5000.    6.066        6     1.0    1.1 10000.0   59.80  146.32
36.88    NO
   5500.    5.909        6     1.0    1.1 10000.0   59.80  159.29
38.32    NO
   6000.    5.736        6     1.0    1.1 10000.0   59.80  172.13
39.70    NO
   6500.    5.555        6     1.0    1.1 10000.0   59.80  184.86
41.03    NO
   7000.    5.373        6     1.0    1.1 10000.0   59.80  197.47
42.31    NO
   7500.    5.177        6     1.0    1.1 10000.0   59.80  209.99
43.41    NO
   8000.    4.989        6     1.0    1.1 10000.0   59.80  222.41
44.47    NO
   8500.    4.810        6     1.0    1.1 10000.0   59.80  234.74
45.50    NO
   9000.    4.641        6     1.0    1.1 10000.0   59.80  246.99
46.49    NO
   9500.    4.479        6     1.0    1.1 10000.0   59.80  259.16
47.45    NO
  10000.    4.327        6     1.0    1.1 10000.0   59.80  271.25
48.39    NO
  15000.    3.170        6     1.0    1.1 10000.0   59.80  388.67
56.59    NO
  20000.    2.464        6     1.0    1.1 10000.0   59.80  501.14
61.85    NO
  25000.    2.007        6     1.0    1.1 10000.0   59.80  609.91
66.31    NO
  30000.    1.687        6     1.0    1.1 10000.0   59.80  715.72
70.20    NO
  40000.    1.280        6     1.0    1.1 10000.0   59.80  920.33
75.75    NO
  50000.    1.029        6     1.0    1.1 10000.0   59.80 1117.51
80.38    NO

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    15. M:
    240.    12.27        3     8.0    8.1  2560.0   24.22   28.27
17.03    NO

  DWASH=   MEANS NO CALC MADE (CONC = 0.0)
  DWASH=NO MEANS NO BUILDING DOWNWASH USED
  DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
  DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
  DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB
```

```
     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   ---------   -------
SIMPLE TERRAIN       12.27          240.        0.


**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

STATE REGULATORY APPLICABILITY

Oil and Gas Non-Rule Standard Permit Emissions Description

Engine(s)

The five (5) 1,875-hp Caterpillar G3606 engines' (C-1 – C-5), three (3) 3,750-hp Caterpillar G3612 engines' (C-8 – C-10), and one (1) 1,953-hp Cummins QSK60 engine's (G-4) emissions are calculated using manufacturer's data and AP-42 emission factors. C-1 – C-5, C-8 – C-10, and G-4 are each installed with an oxidative catalyst.

Tank(s)

Condensate and produced water from the inlet separator(s) and various other system drains are routed to one (1) 1,000-bbl condensate/produced water tank (GB-1) for additional separation prior to being routed to the respective tanks. Tank emissions for GB-1 are calculated using AP-42 Chapter 7 (11/2019) and process simulation. Flash emissions occur at GB-1. Tank emissions from GB-1 are captured by a vapor recovery unit (VRU) or routed to FL-3 for destruction.

Condensate is produced and stored prior to being loaded into trucks in two (2) 500-bbl condensate tanks (TK-1 – TK-2). Tank emissions for TK-1 – TK-2 are calculated using AP-42 Chapter 7 (11/2019). Tank emissions from TK-1 – TK-2 are captured by a VRU or routed to FL-3 for destruction.

Produced water is produced and stored prior to being loaded into trucks in one (1) 1,000-bbl produced water tank (WTK-1). Produced water is estimated as 1% condensate. Tank emissions for WTK-1 are calculated using AP-42 Chapter 7 (11/2019). Tank emissions from WTK-1 are captured by a VRU or routed to FL-3 for destruction.

Emissions for the one (1) 520-gal fuel scrubber tank (STK-1) are calculated using AP-42 Chapter 7 (11/2019) and process simulation. Tank emissions from STK-1 are vented to the atmosphere.

Emissions for miscellaneous tanks (TK-MISC) are estimated.

Truck Loading

Truck loading emissions (TL-1, TL-2, TL-4) are calculated as per AP-42 Section 5.2.2.1 guidance. Captured TL-1 emissions are routed to FL-3.

Flare(s)

The one (1) standard flare's (FL-1) and one (1) enclosed flare's (FL-3) emissions are calculated using appropriate AP-42 and TCEQ emission factors. FL-1 and FL-3 are designed and operated in accordance with 40 CFR §60.18. A VOC destruction efficiency of 98% is assumed except for propane where a 99% reduction is assumed.

Fugitive Emissions

Fugitive emissions (FUG) are estimated using the component count for the Site and Oil and Gas Production factors from API. Fugitive emissions are reduced utilizing a leak detection and repair (LDAR) program.

Planned Maintenance, Start-ups, and Shutdowns (MSS)

Planned MSS emissions (MSS) and compressor blowdowns (BD) which includes routine maintenance, start-up and shutdown of facilities, and temporary maintenance emissions are estimated. Vessel blowdowns and BD emissions are routed to FL-1 for destruction.

Non-Rule Air Quality Standard Permit for Oil and Gas Handling and Production Compliance Demonstration

(a)(1) Reeves County is not located in a Barnett Shale county; therefore, registration under the non-rule standard permit is voluntary.

(a)(2) Only one registration under this standard permit exists for the Site.

(b)(6)(D) The project (boundaries of the registration) includes the Site and emission sources as outlined in the attached plot plan.

(b)(8) Impacts analysis as specified in paragraph (k) of this standard permit has been completed and demonstrates compliance with applicable ambient air standards and effects screening levels.

(c)(2)(A) This project shall not exceed thresholds for a new 30 TAC §116.12 major source, or major modification under new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration Review).

(c)(2)(B) This project will comply with all applicable requirements of 40 CFR §60, §61, and §63.

(c)(2)(C) This project will comply with all applicable requirements of 30 TAC Chapters 111-114.

(c)(3) Altus shall meet all applicable requirements in this standard permit, shall not misrepresent or fail to fully disclose all relevant facts in obtaining the permit; and shall not be indebted to the state for failure to make payments of penalties or taxes imposed by the statutes or rules within the commission's jurisdiction.

(c)(4)(B) All facilities shall meet all emission limits established by this standard permit and review in accordance with paragraph (b)(8).

(c)(4)(C) All facilities shall meet requirements of paragraphs (e), (i), and (j) for Best Management Practices and Minimum Requirements, Planned MSS, and associated Records, Sampling, and Monitoring of this standard permit.

(d)(1) Only specific facilities and groups of facilities stated in this regulation are included in this project.

(e)(1-12) Altus will employ best management practices (BMP) for the existing facilities under the project and best available control technology (BACT), as applicable, for all new facilities added under this project. The following BMP and BACT requirements apply:

(e)(1) All new equipment will be maintained in good working order and operated properly during facility operations.

(e)(2) All new equipment shall be operated at least 50 ft from any property line or receptor.

(e)(3)(D) Please refer to the attached Federal Regulatory Applicability for all applicable requirements of 40 CFR §60 and 40 CFR §63.

(e)(6)(A) Fugitive component seals and gaskets shall be installed, checked, and properly maintained to prevent leaking. All components shall be physically inspected quarterly for leaks.

(e)(6)(B) Altus will comply with the leak detection and repair (LDAR) program as specified in Table 9 in paragraph (m).

(e)(6)(C) All components found leaking shall be repaired. All leaks not repaired immediately shall be tagged or noted in a log, and repaired within 60 days after the leak is found. If shutdown required, the repair may be delayed until the next shutdown.

(e)(6)(D) Tank hatches, not designed to be completely sealed, shall remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling, gauging, loading, unloading, or planned maintenance activities.

(e)(6)(E) New and reworked valves and piping connections shall be reasonably located such that they can be accessible for leak checking.

(e)(7) Tanks and vessels will utilize a paint color that minimizes the effects of solar heating. Paint shall be applied according to manufacturer's recommendations and maintained so as not to compromise tank integrity.

(e)(8) All calculation methods used in this application were used with monitoring data generated in accordance with Table 8 in subsection (m) and are used in a way that is

consistent with protocols established by the commission or promulgated in federal regulations.

(e)(11) Flare is designed and operated in accordance with 40 CFR §60.18 and are designed and operated with no visible emissions except for periods not to exceed 5 minutes during any two consecutive hours.

(f)(4)(A) and (B) Notification was submitted through e-Permits using the "APD OGS New Project Notification". A fee of $50 was also paid through the e-Pay system.

(f)(5) This registration meets (f)(5) requirements and includes the $850 fee.

(g) This registration complies with 30 TAC §116.610 (except emission limitations of §116.610 (a)(1)), §116.611, §116.614 and §116.615 (except notification requirements).

(h)(1) Total maximum estimated annual emissions of any air contaminant does not exceed PSD major source or major modification applicable limits.

(h)(2) Emissions meet the limitations established in paragraph (k).

(h)(3) Maximum emissions after any operator limitations or controls are less than those stated in the (h)(3) table.

(i)(1), (2), and (3) MSS emissions are included in this non-rule air quality standard permit registration and include planned MSS activities and emissions as outlined in (2) and (3).

(i)(4) Engine/compressor start-up emissions are included in MSS emissions as outlined above.

(j)(1) Sampling and demonstration of compliance include those requirements as outlined in Table 7, and include the following:

- Site specific analysis shall be pulled within 90 days of initial start of operation. They will include H_2S and VOC GC analysis for gas streams

(j)(2) Monitoring and records for demonstration of compliance include those requirements as outlined in Table 8, and include the following:

- Daily natural gas and condensate throughput
- Current and updated plot plan

- Copy of the registration and emission calculations and the plan and records for routine inspection, cleaning, repair and replacement
- LDAR program in place which complies with applicable requirements in Table 9 for Fugitive Component LDAR BACT
- Record of fugitive component count shall be maintained. A record of the date that each quarterly inspection was made, the date of any component found leaking, and the date of any planned shutdown shall be maintained.
- Records of minor changes and like-kind replacements
- Records of operational hours for all combustion devices.
- Records of hours of operation shall be maintained for units where full year operation was not assumed.
- Tank records which include (1) demonstration of design, inspection, and maintenance of paint color and vessel integrity, (2) material stored, and (3) records that show that thief hatches and relief valves are properly sealed.
- Records of truck loading including material loaded, amount transferred, method of transfer, condition of truck before loading, and control utilized.
- All valves designed and maintained to prevent leaks. All hatches and openings to be gasketed and sealed with the unit properly connected.
- Pigging, and purging records to include date and emissions estimated to atmosphere. This includes any degassing or purging of vessels, tanks, or other facilities.
- Records or copies of any work orders, etc. will be kept. These include any routine engine component maintenance, heater and heat exchangers cleanings, and pressure relief valve testing.

(k) Impacts evaluations (as required and outlined in (k)) were performed for facilities added under this non-rule air quality standard permit. Compliance with hourly ESLs for H_2S is shown at the nearest property line and nearest receptor (See H_2S Impacts evaluations). Compliance with federal NAAQS for NO_2 is shown at the property line (See Air Quality Modeling Analysis). For any distance to receptor or property between increments on emissions impact Tables 2-5F, the shortest distance was used to get the Hourly (ug/m^3)/(lb/hr).

(l) All facilities are subject to the non-rule air quality standard permit.

(m) Non-rule air quality standard permit Tables 1-10 were used as required by this standard permit registration.

FEDERAL REGULATORY APPLICABILITY

New Source Performance Standards Applicability

New Source Performance Standards (NSPS) contained in 40 CFR Part 60 regulate specific new, modified, or reconstructed sources of emissions. The following is an analysis of NSPS potentially applicable to the facility.

Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects industrial-commercial-institutional steam-generating units with a design capacity between 10 and 100 mmBtu/hr heat input and which commenced construction or modification after July 9, 1989. H-1 has a capacity between 10 and 100 mmbtu/hr and will therefore be subject to the requirements of this subpart. As referenced in the introduction, H-1 is still physically onsite; however, it is out of service and will no longer operate at this Site. Altus will comply with all applicable requirements.

Subpart Kb, Volatile Organic Liquid Storage Vessels. This subpart affects emission sources from storage vessels constructed, reconstructed, or modified after July 23, 1984. The condensate and produced water storage vessels in this application exceed 75 m^3 in storage space but have less than 1,589.874 m^3 storage space and are used for storage of petroleum or condensate prior to custody transfer. Therefore, the storage tanks in this application are exempt from the requirements of this subpart.

Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart promulgates emission standards for all new SI engines ordered after June 12, 2006, and all SI engines modified or reconstructed after June 12, 2006, regardless of size. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or nonemergency), and manufacture date. C-1, C-2, C-3, C-4, C-5, C-8, C-9, C-10, and G-4 each have an engine power rating greater than 1,350-hp and were manufactured after July 1, 2010. Therefore, C-1, C-2, C-3, C-4, C-5, C-8, C-9, C-10, and G-4 are subject to the Stage 2 emission limitations of this subpart. Altus will comply with all applicable requirements.

Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution. The emission sources affected by this subpart include well completions, pneumatic controllers, equipment leaks from natural gas processing plants,

sweetening units at natural gas processing plants, reciprocating compressors, centrifugal compressors and storage vessels which are constructed, modified or reconstructed after August 23, 2011, and on or before September 18, 2015.

This Site does not have reciprocating compressors, centrifugal compressors with wet gas seals, storage tanks, natural gas processing, or pneumatic controllers constructed, modified or reconstructed after August 23, 2011, and on or before September 18, 2015.

Therefore, the Site will not be subject to the requirements of this subpart.

Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilties. The emission sources affected by this subpart include well completions, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels, fugitive sources at well sites, fugitives sources at compressor stations, pneumatic pumps, equipment leaks from natural gas processing plants, and sweetening units at natural gas processing plants which are constructed, modified or reconstructed after September 18, 2015.

There is no well at this location and the facility is not subject to the well completion requirements of this Subpart.

Reciprocating compressors constructed after September 18, 2015 will be monitored for operation time and packing rod replacements.

The storage vessels have potential emissions less than six (6) tons per year (tpy) volatile organic compounds (VOC) and are not subject to this subpart.

The Site was previously considered an onshore natural gas processing plant that was subject to the equipment leak standards of this subpart. However, the processing plant equipment has been taken out of service and will no longer operate at this Site. Instead, additional horsepower capacity was installed at the facility since September 18, 2015 and the compressor station is subject to the fugitive source requirements of this subpart. Altus will comply with all applicable requirements.

This facility is not currently planned to have natural gas-driven pneumatic controllers, centrifugal compressors using wet gas seals, pneumatic pumps, or sweetening units constructed, modified or reconstructed after September 18, 2015 and will not be subject to the requirements of NSPS Subpart OOOOa for those affected facilities.

National Emissions Standards for Hazardous Air Pollutants Applicability

The project is not subject to current National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR Part 61. However, Maximum Achievable Control Technology (MACT) standards under 40 CFR Part 63 apply.

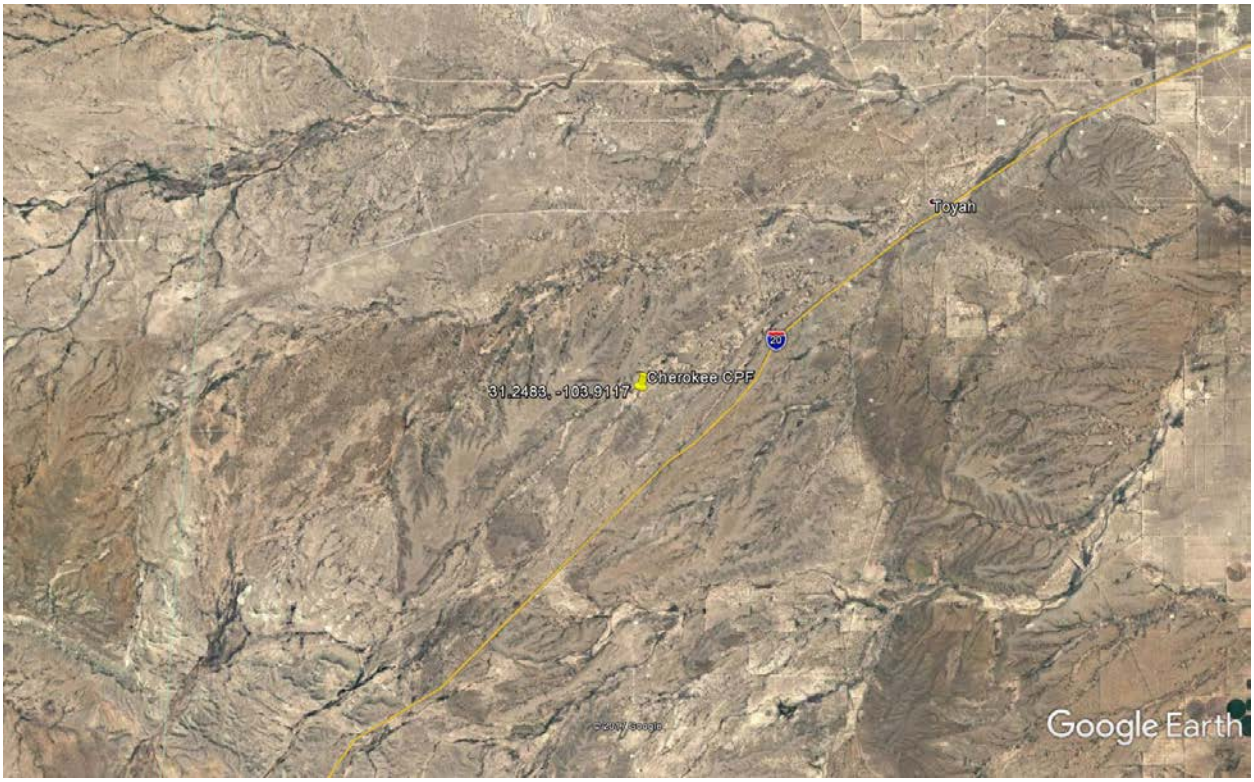
Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to affected emission points that are located at facilities that are major and area sources of HAPs, and either process, upgrade, or store hydrocarbon liquids prior to custody transfer or that process, upgrade, or store natural gas prior to entering the natural gas transmission and storage source category. 40 CFR §63.760(b)(2) states:

> For area sources, the affected source includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in paragraph (a) of this section.

Since the Site is an area source for HAPs and does not contain a TEG dehydration unit (only EG dehydration), there is no affected facility under this subpart.

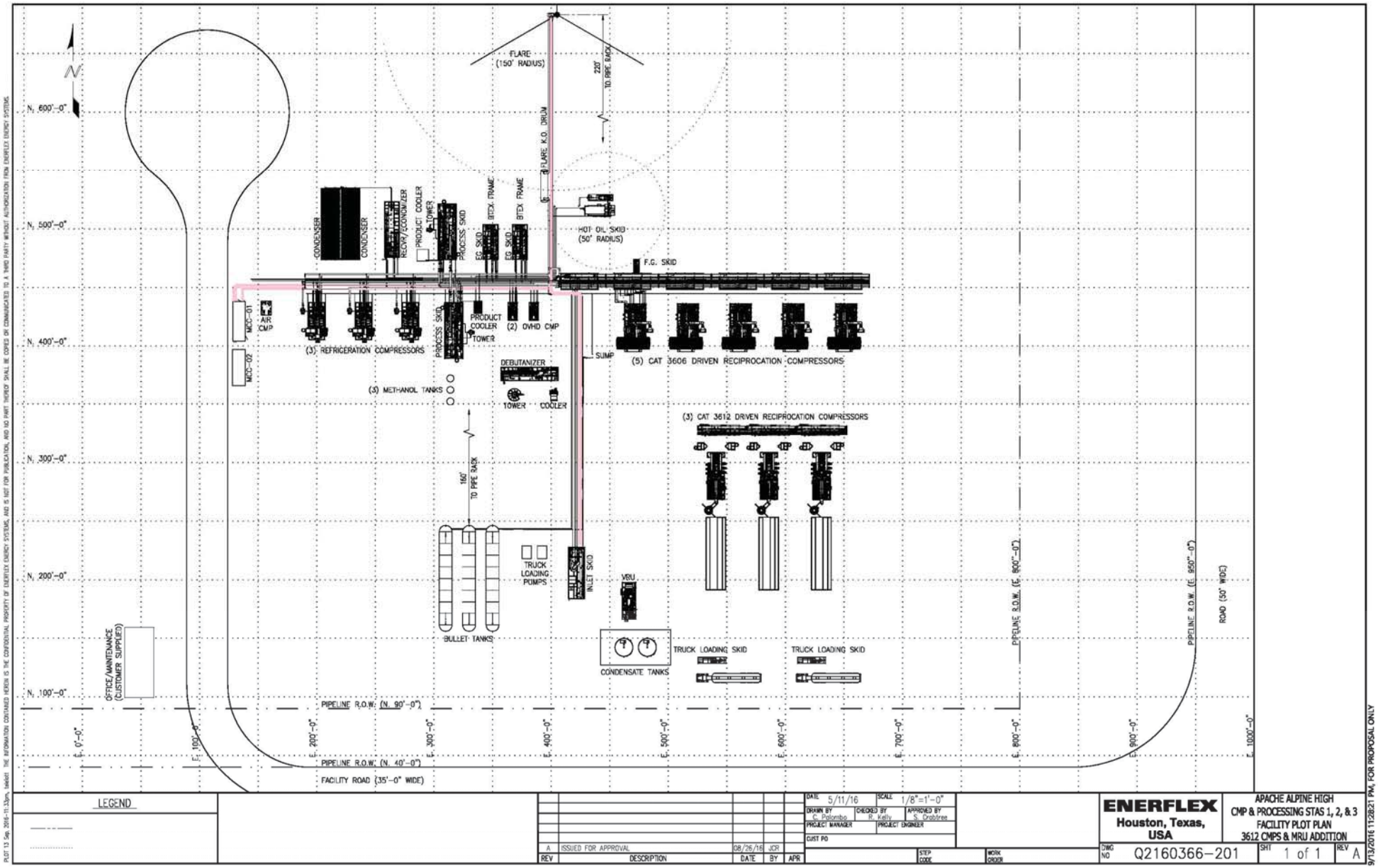
Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). Owners and operators of new, reconstructed, or existing engines at area sources must meet the requirements of Subpart ZZZZ. New or reconstructed engines at area sources will meet these requirements by complying with either 40 CFR Part 60 Subpart IIII (for CI engines) or 40 CFR Part 60 Subpart JJJJ (for SI engines). The Site is an area source for HAPs. C-1 – C-5, C-8 – C-10 and G-4 were constructed after June 12, 2006; therefore, they are new engines at an area source and will comply with this subpart by complying with Subpart JJJJ.

AREA MAP



Cherokee CPF

Reeves County, TX



LEGEND

REV	DESCRIPTION	DATE	BY	APR
A	ISSUED FOR APPROVAL	08/26/16	JCR	

DATE 5/11/16 SCALE 1/8"=1'-0"
DRAWN BY C. Palomba CHECKED BY R. Kelly APPROVED BY S. Crabtree
PROJECT MANAGER PROJECT ENGINEER
CUST PO
STEP CODE WORK ORDER

ENERFLEX
Houston, Texas, USA

APACHE ALPINE HIGH
CMP & PROCESSING STAS 1, 2, & 3
FACILITY PLOT PLAN
3612 CMPS & MRU ADDITION

DWG NO Q2160366-201 SHT 1 of 1 REV A

PLOT 13 Sep, 2016-11:33am, tweiert THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX ENERGY SYSTEMS, AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX ENERGY SYSTEMS

9/13/2016 11:28:21 PM, FOR PROPOSAL ONLY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	3/10/2020	Permit No.:	146381	Regulated Entity No.:	RN109750190
Area Name:	Cherokee CPF			Customer Reference No.:	CN605629864

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			EMISSION POINT DISCHARGE PARAMETERS										
1. Emission Point			4. UTM Coordinates of Emission Point			Source							
						5. Building	6. Height Above	7. Stack Exit Data			8. Fugitives		
EPN	FIN	Name	Zone	East	North	Height	Ground	Diameter	Velocity	Temperature	Length	Width	Axis
(A)	(B)	(C)		(Meters)	(Meters)	(Ft.)	(Ft.)	(Ft.) (A)	(FPS) (B)	(°F) (C)	(Ft.) (A)	(Ft.) (B)	Degrees (C)
C-1	C-1	1,875-hp Caterpillar G3606 Engine	13	603,628	3,457,631		25.00	1.25	163.63	797			
C-2	C-2	1,875-hp Caterpillar G3606 Engine	13	603,628	3,457,631		25.00	1.25	163.63	797			
C-3	C-3	1,875-hp Caterpillar G3606 Engine	13	603,628	3,457,631		25.00	1.25	163.63	797			
C-4	C-4	1,875-hp Caterpillar G3606 Engine	13	603,628	3,457,631		25.00	1.25	163.63	797			
C-5	C-5	1,875-hp Caterpillar G3606 Engine	13	603,628	3,457,631		25.00	1.25	163.63	797			
C-8	C-8	3,750-hp Caterpillar G3612 Engine	13	603,628	3,457,631		25.00	1.75	165.37	816			
C-9	C-9	3,750-hp Caterpillar G3612 Engine	13	603,628	3,457,631		25.00	1.75	165.37	816			
C-10	C-10	3,750-hp Caterpillar G3612 Engine	13	603,628	3,457,631		25.00	1.75	165.37	816			
G-4	G-4	1,953-hp Cummins QSK60 Engine	13	603,628	3,457,631		22.00	1.33	28.97	986			
TK-1 - TK-2	TK-1 - TK-2	Two (2) 500-bbl Condensate Tanks	13	603,628	3,457,631								
WTK-1	WTK-1	One (1) 1000-bbl Produced Water Tank	13	603,628	3,457,631								
GB-1	GB-1	One (1) 1000-bbl Condensate/Produced Water Tank	13	603,628	3,457,631								
STK-1	STK-1	One (1) 520-gal Fuel Scrubber Tank	13	603,628	3,457,631								
TK-MISC	TK-MISC	Miscellaneous Tanks	13	603,628	3,457,631								
TL-1	TL-1	Uncaptured Condensate Truck Loading	13	603,628	3,457,631								
TL-2	TL-2	Produced Water Truck Loading	13	603,628	3,457,631								
TL-4	TL-4	Slop Truck Loading	13	603,628	3,457,631								
FL-1	FL-1	Standard Flare	13	603,628	3,457,631		100.00	3.00	12.75				
FL-3	FL-3	Enclosed Flare	13	603,628	3,457,631		30.00	2.50	0.91				
FUG	FUG	Fugitive Emissions	13	603,628	3,457,631								
MSS	MSS	Planned Maintenance, Startup, and Shutdown Activities	13	603,628	3,457,631		3.0						
BD	BD	Compressor Blowdowns	13	603,628	3,457,631		10.0						

EPN = Emission Point Number
FIN = Facility Identification Number

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3606	JFE00111	10/07/2015
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	6	7.6:1	C-1

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,875 Proposed Horsepower Rating: 1,875

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.25	797	163.63

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,637 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		2.960		AP-42		0.840		0.190		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.444		AP-42		0.319		0.050		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3606	JFE00113	10/17/2015
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	6	7.6:1	C-2

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,875 Proposed Horsepower Rating: 1,875

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.25	797	163.63

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,637 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		2.960		AP-42		0.840		0.190		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.444		AP-42		0.319		0.050		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3606	JFE00136	05/25/2016
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	6	7.6:1	C-3

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,875 Proposed Horsepower Rating: 1,875

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.25	797	163.63

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,637 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		2.960		AP-42		0.840		0.190		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.444		AP-42		0.319		0.050		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3606	JFE00146	09/07/2016
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	6	7.6:1	C-4

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,875 Proposed Horsepower Rating: 1,875

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.25	797	163.63

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,637 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		2.960		AP-42		0.840		0.190		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.444		AP-42		0.319		0.050		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3606	JFE00147	09/08/2016
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	6	7.6:1	C-5

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,875 Proposed Horsepower Rating: 1,875

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.25	797	163.63

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,637 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		2.960		AP-42		0.840		0.190		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.444		AP-42		0.319		0.050		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3612	BB200121	02/11/2017
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	12	7.6:1	C-8

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 3,750 Proposed Horsepower Rating: 3,750

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.75	816	165.37

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,475 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		3.220		AP-42		0.790		0.180		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.322		AP-42		0.245		0.027		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3612	BB200120	02/09/2017
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	12	7.6:1	C-9

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 3,750 Proposed Horsepower Rating: 3,750

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.75	816	165.37

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,475 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		3.220		AP-42		0.790		0.180		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.322		AP-42		0.245		0.027		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Caterpillar	G3612	BB200122	02/14/2017
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	12	7.6:1	C-10

Application: ☒ Gas Compression ☐ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 3,750 Proposed Horsepower Rating: 3,750

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
25.00	1.75	816	165.37

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,475 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		3.220		AP-42		0.790		0.180		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.300		0.322		AP-42		0.245		0.027		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): AFRC: Oxidative Catalyst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data

Manufacturer:	Model No.	Serial No.	Manufacture Date:
Cummins	QSK60	33186415	04/15/2011
Rebuilds Date:	**No. of Cylinders:**	**Compression Ratio:**	**EPN:**
	16	11.4:1	G-4

Application: ☐ Gas Compression ☒ Electric Generation ☐ Refrigeration ☐ Emergency/Stand by

☒ 4 Stroke Cycle ☐ 2 Stroke Cycle ☐ Carbureted ☒ Spark Ignited ☐ Dual Fuel ☐ Fuel Injected

☐ Diesel ☐ Naturally Aspirated ☐ Blower /Pump Scavenged ☐ Turbo Charged and I.C. ☒ Turbo Charged

☐ Intercooled ☐ I.C. Water Temperature ☒ Lean Burn ☐ Rich Burn

Ignition/Injection Timing: Fixed: X Variable:

Manufacture Horsepower Rating: 1,953 Proposed Horsepower Rating: 1,953

Discharge Parameters

Stack Height (Feet)	Stack Diameter (Feet)	Stack Temperature (°F)	Exit Velocity (FPS)
22.00	1.33	986	28.97

II. Fuel Data

Type of Fuel: ☒ Field Gas ☐ Landfill Gas ☐ LP Gas ☐ Natural Gas ☐ Digester Gas ☐ Diesel

Fuel Consumption (BTU/bhp-hr): 7,858 Heat Value: 1,208 (HHV) (LHV)

Sulfur Content (grains/100 scf - weight %): < 0.25 gr/100 scf

III. Emission Factors (Before Control)

NO_X		CO		SO_2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.700		1.740		AP-42		2.740		0.340		AP-42	

Source of Emission Factors: ☒ Manufacturer Data ☒ AP-42 ☐ Other (specify):

IV. Emission Factors (Post Control)

NO_X		CO		SO2		VOC		Formaldehyde		PM10	
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.700		0.348		AP-42		0.411		0.068		AP-42	

Method of Emission Control: ☐ NSCR Catalyst ☒ Lean Operation ☐ Parameter Adjustment

☐ Stratified Charge ☐ JLCC Catalyst ☒ Other (Specify): Oxidative Catalvst

Note: *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*

Is Formaldehyde included in the VOCs? ☐ Yes ☒ No

V. Federal and State Standards (Check all that apply)

☒ NSPS JJJJ ☒ MACT ZZZZ ☐ NSPS IIII ☐ Title 30 Chapter 117 - List County: _____

VI. Additional Information

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).