

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,

First Servely

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. Mrs. Other:)									
Name: Brett Kennedy									
Title: Manager, HSSE									
Mailing Address: 303 Veterans Airpark Lane									
City: Midland	State: TX		ZIP Code: 7970)5					
Phone: (432) 242-8353		Fax:							
E-mail Address: brett.kennedy@alt	usmidstream.com	m							
All permit correspondence will be s	ent via e-mail.								
C. Technical Contact Informatior	n (🛛 Mr. 🗌 Mrs	s. 🗌 Ms. 🗌 Othe	r:)						
Name: Brett Kennedy									
Title: Manager, HSSE									
Company Name: Altus Midstream									
Mailing Address: 303 Veterans Airr	oark Lane								
City: Midland	State: TX		ZIP Code: 7970)5					
Phone: (432) 242-8353	·	Fax:							
E-mail Address: brett.kennedy@alt	usmidstream.com	m							
II. Facility and Site Informati	on								
A. Name and Type of Facility									
Facility Name: Cherokee CPF									
Type of Facility: Natural Gas Proce	ssing		🛛 Permanent 🗌 Te	mporary					
For portable units, please provide t	he serial number	r of the equipmen	t being authorized be	low.					
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: Reeve	S	ZIP Code: 7978	5						
Latitude (nearest second): 31.248300	Longitude (neares	st second): -103.9	911700						
C. Core Data Form (required for Standard Permi	ts 6004, 6006, 6007,	6008, and 6013).							
Is the Core Data Form (TCEQ Form 10400) attache	d?		S 🖾 NO						
If "NO," provide customer reference number (CN) ar	nd regulated entity nur	mber (RN) below							
Customer Reference Number (CN): CN605629864									
Regulated Entity Number (RN): RN109750190									
D. TCEQ Account Identification Number (if known	ו):								
E. Type of Action:									
☐ Initial Application	n 🗌 Renewal	🗌 Renewa	l Certification						
For Change to Registration, Renewal, or Renewal C	ertification actions pro	ovide the followin	ıg:						
Registration Number: 146381	Expiration Date: 08/0)1/2027							
F. Standard Permit Claimed: 6002 – Oil and Gas	Facilities								
G. Previous Standard Exemption or PBR Registra	ation Number								
Is this authorization for a change to an existing facili standard exemption or PBR?	ty previously authorize	ed under a	🗌 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 XES INO Exemption, PBR, or Standard Permit?									
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 Pern	nits								
Are there any other air preconstructi	on permits at this site?		🗌 YES 🖾 NO						
If "YES," enter permit number(s) in the second s	he spaces provided below.								
J. Affected Air Preconstruction Pe	ermits								
Does the standard permit directly aff	ect any permitted facility?		🗌 YES 🖾 NO						
If "YES," enter permit number(s) in the second s	he spaces provided below.								
K. Concrete Batch Plant	· · · · ·								
🗌 Central Mix 🛛 Ready Mix 🗌	Specialty Mix 🗌 Enhanced Contr	ols 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?										
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 UYES NO To Be pursuant to 30 TAC Chapter 122?	e 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 permi (<i>check all that apply).</i>	it is approved									
Initial Application for an FOP Significant Revision for an SOP Minor Rev	ision for an SOP									
Operational Flexibility/Off Permit Notification for an SOP Revision for	or a GOP									
□ To be Determined										
Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site (check all that apply)	9.									
□ SOP □ GOP □ GOP application/revision (submitted or under AP	D 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 <u>www.tceq.texas.</u> online)	<u>.gov/epay</u> to pay									
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. I	Vrs. 🗌 Ms. 🗌 Oth	er):							
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 th	e Texas Education	Code in the School	ol 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?									
If "YES," list which language(s) are r	equired by the bilir	ngual 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									
Doe than	Does this company (including parent companies and subsidiary companies) have fewer than 100 employees or less than \$6 million in annual gross receipts?									
Is th Prog	Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit [Program?									
Are 50 tp	Are the site emissions of any individual regulated air contaminant equal to or greater than [50 tpy?									
Are 75 tp	Are the site emissions of all regulated air contaminant combined equal to or greater than 75 tpy?									
E.	E. For Concrete Batch Plants									
1.	Public Works Project: Will the plant provide concrete to a public works project, an be located in or contiguous to the right of-way of the public works project? (If "YES," public notice is not required.)	d 🗌 YES 🗌 NO								
2.	Application in Public Place	YES NO								
Nam	e of Public Place:									
Phys	sical Address:									
City:	County:									
V.	Renewal Certification Option									
Α.	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								
В.	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 includ in the standard permit registration at this time?	ied YES NO								

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

۷.	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?									
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?									
4.	Are there any changes to the current emission rates table being proposed?	🗌 YES 🗌 NO								
Note certii Rene	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.									
*lf no quali	otice is applicable and comments are received in response to the public notice, the app ify for the renewal certification option.	blication does not								
Plac NOT the s and	e a check next to the appropriate box to indicate what you have included in your E: Any technical or essential information needed to confirm that facilities are meeting is standard permit must be provided. Not providing key information could result in an auto voiding of the project.	submittal. the requirements of ormatic deficiency								
Α.	Standard Permit requirements (Checklists are optional; however, your review will go f applicable checklists.)	aster if you provide								
Did y 116.0	ou demonstrate that the general requirements in 30 TAC Sections 116.610 and 615 are met?	🛛 YES 🗌 NO								
Did y are r	ou demonstrate that emission limitations in 30 TAC Sections 106.261 and 106.262 net?	🗌 YES 🖾 NO								
Did y met?	you demonstrate that the individual requirements of the specific standard permit are	YES 🗌 NO								
В.	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								

Texas Commission on Environmental Quality Form PI-1S Registrations for Air Standard Permit (Page 8)

VI.	Technical Information Including State and Federal Regulatory Requirements (continued)
Place NOTE the sta and vo	a check next to the appropriate box to indicate what you have included in your E: Any technical or essential information needed to confirm that facilities are meeting t andard permit must be provided. Not providing key information could result in an auto biding of the project.	submittal. he requirements of matic deficiency
G. F	Projected Start Of Construction Date, Start Of Operation Date, and Length of Time at Site:	🗌 YES 🖾 NO
Projec	ted Start of Construction (provide date):	
Projec	ted Start of Operation (provide date):	
Length	n of Time at the Site:	
VII.	Delinquent Fees and Penalties	
This fo the Att Protoc <u>www.t</u>	orm will not be processed until all delinquent fees and/or penalties owed to the TCE torney General on behalf of the TCEQ are paid in accordance with the Delinquent Fecol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ V ceq.texas.gov/agency/financial/fees/delin/index.html.	Q or the Office of e and Penalty Veb site at:
VIII.	Signature Requirements	
The si facts a knowle Texas Act (T goverr signat deteric signifie repres	gnature below confirms that I have knowledge of the facts included in this application are true and correct to the best of my knowledge and belief. I further state that to the k edge and belief, the project for which application is made will not in any way violate a Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the CAA) the air quality rules of the Texas Commission on Environmental Quality; or any mental ordinance or resolution enacted pursuant to the TCAA. I further state that I us ure indicates that this application meets all applicable nonattainment, prevention of si pration, or major source of hazardous air pollutant permitting requirements. The signa- es awareness that intentionally or knowingly making or causing to be made false mate tentations in the application is a criminal offense subject to criminal penalties.	and that these best of my ny provision of the e Texas Clean Air local nderstand my gnificant ature further erial statements or
Name	(printed): Brett Kennedy	

Signature (original signature required): Signed via e-Permitting on STEERS

Date: Signed via e-Permitting on STEERS

Texas Commission on Environmental Quality Form PI-1S **Registration for Air Standard Permit** (Page 9)

IX. Copies of the Reg	. 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	Originals of Form PI-1S, Core Data Form, all attachments. Not required if using ePermits ² .									
	Hand Delivery, Overnight Mail Mail Code 161, 12100 Park 35 Circle, Building C, Third Floor, Room 300 W, Austin, Texas 78753										
Revenue Section TCEQ	Regular, Certified, Priority Mail Mail Code 214, P.O. Box 13088, Austin, Texas 78711-3088 OR Hand Delivery, Overnight Mail	Original Money Order or Check, Copy of Form PI-1S, Core Date Form. Not required if fee was paid using ePay ³ .									
	Mail Code 214, 12100 Park 35 Circle, Building A, Third Floor, Austin, Texas 78753										
Appropriate TCEQ Regional Office	To find your regional office address go to <u>www.tceq.texas.gov/assets/public/comm_exec/pubs/gi/gi-</u> <u>002.pdf</u> 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 <u>www.tceq.texas.gov/permitting/air/local_programs.html</u> or call (512) 239-1250	Copy of Form PI-1S, Core Data Form, and all attachments									

² ePermits located at <u>www3.tceq.texas.gov/steers/</u>

³ ePay located at <u>www.tceq.texas.gov/epay/</u> TCEQ-10370 (APDG 5235v29, Revised 01/19) PI-1S This form is for use by facilities subject to air quality permit requirements and may be revised periodically.

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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).



Altus Midstream Processing LP (CN605629864) Cherokee CPF (RN109750190) TCEQ Emission Summary

ESTIMATED EMISSIONS																
Equipmont	Linit ID	Specific VOC or	V	00	N	Ox	C	0	S	O ₂	P	M ₁₀	PI	M _{2.5}	Ot	her
Equipment	Unit ID	Other Pollutants	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		*	*	-	-	-	-	-	-	-	-	-	-	-	-
Т	OTAL EMIS	SIONS (TPY):	\nearrow	98.50	\nearrow	79.79	\nearrow	95.34	\nearrow	0.56	\nearrow	7.48	\nearrow	7.48		-
MAXIMUM OPERATING SCHE	DULE:	Hours/Day	:	24	Da	ays/Week		7	We	eeks/Year	ę	52	Но	ours/Year	8,	760

Notes:

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

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 H₂S Emissions

Equipment	Linit ID	VC	DC ¹	N	Ox	C	0	S	0 ₂	PM		H₂S	
Equipment	UNITID	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.

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

				-		Estima	ated Emissions	(lb/hr)				
Equipment	Unit ID	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

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

			-	-		Estimat	ed Emissions	(tons/yr)	-	-		
Equipment	Unit ID	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.

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

	Stead	ly-State Rele	ases	< 30 psi	g Periodic R	eleases	≥ 30 psi	g Periodic R	eleases	Total			
	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)	TI	Þγ	(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 Perio	odic Release	s			≥ 30 psig Periodic Releases				
		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
Equipment	Unit ID	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	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) H₂S Impacts Evaluation

									30 TA	C §112.32 (ug/m ³)	10	62
									30 TA	C §112.31 (ug/m ³)	1	08
									-		EMAX HOURLY	EMAX HOURLY
		F	1 ₂ S	WREPN	Height	Distance to	Distance to		G _{P/L}	GRECEPTOR	P/L	RECEPTOR
Equipment	Unit ID	lb/hr	TPY	lb/hr	ft	property line (ft)	Receptor (ft)	Table	ug/m ⁻ /ibs/nr	ug/m²/ibs/nr	lb/hr	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	٠	*	-	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 = = POINT = 0.156200 EMISSION RATE (G/S) STACK HEIGHT (M) = STK INSIDE DIAM (M) = 7.6200 0.3810 49.8744 STK EXIT VELOCITY (M/S)= 49.8744 698.1500 293.0000 STK GAS EXIT TEMP (K) = AMBIENT AIR TEMP (K) = 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 *** U10M USTK MIX HT PLUME SIGMA DIST CONC 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	1 761	1	10 0	10 0	2200 0	10 0/	20 66
400.	NO	4./01	4	10.0	10.0	3200.0	19.94	29.00
500.	110	4.293	4	8.0	8.0	2560.0	23.02	36.41
18.82	NO							
600.	NTO	3.799	4	8.0	8.0	2560.0	23.02	42.94
700.	NO	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	3 007	Л	4 5	4 5	1440 0	31 99	62 38
30.49	NO	5.007	т	т.Ј	т.Ј	1110.0	34.99	02.50
1000.		2.793	4	4.0	4.0	1280.0	38.42	68.69
33.28	NO							
1100.	NTO	2.602	4	4.0	4.0	1280.0	38.42	74.83
35.24	NО	2 435	4	35	35	1120 0	42 81	81 07
37.47	NO	2.155	1	5.5	5.5	1120.0	12.01	01.07
1300.		2.293	4	3.5	3.5	1120.0	42.81	87.10
39.31	NO							
1400.	NTO	2.158	4	3.5	3.5	1120.0	42.81	93.10
41.11 1500	NО	2 050	4	3 0	3 0	960 0	48 68	99 24
43.29	NO	2.050	Т	5.0	5.0	200.0	10.00	JJ.24
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	2 1 2 /	Б	1 0	1 0	10000 0	72 20	00 01
36.38	NO	2.134	5	1.0	1.0	10000.0	12.29	00.91
1900.	1.0	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	NО	2 260	5	1 0	1 0	10000 0	72 29	101 72
39.08	NO	2.200	5	1.0	1.0	10000.0	12.27	101.72
2200.		2.278	5	1.0	1.0	10000.0	72.29	105.96
39.90	NO		_					
2300.	NO	2.291	5	1.0	1.0	10000.0	72.29	110.18
2400	NO	2 298	5	1 0	1 0	10000 0	72 29	114 39
41.51	NO	2.290	5	1.0	1.0	10000.0	12.29	111.00
2500.		2.300	5	1.0	1.0	10000.0	72.29	118.59
42.29	NO		_					
2600.	NTO	2.313	6	1.0	1.0	10000.0	61.28	82.21
29.29 2700	лО	2 352	б	1 0	1 0	10000 0	61 28	84 97
29.73	NO		0	±.0	1.0	10000.0	01.20	01.07
2800.		2.387	б	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	2 476	6	1 0	1 0	10000 0	61 28	106 76
32.79	NO	2.470	0	1.0	1.0	10000.0	01.20	100.70
4000.	1.0	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	2 200	C	1 0	1 0	10000 0	C1 00	146 40
5000. 37 49	NO	2.380	0	1.0	1.0	10000.0	01.28	140.48
5500.	110	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	0 1 0 1	~	1 0	1 0	10000 0	<i></i>	104 00
6500.	NO	2.181	6	1.0	1.0	10000.0	61.28	184.98
41.50	NO	2 111	6	1 0	1 0	10000 0	61 28	197 59
42.84	NO	2.111	Ũ	1.0	1.0	10000.0	01.20	197.59
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	1 905	6	1 0	1 0	10000 0	61 29	221 Q1
45.99	NO	1.095	0	1.0	1.0	10000.0	01.20	234.04
9000.	110	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	1 700	c	1 0	1 0	10000 0	C1 00	271 24
48 85	NO	1.708	0	1.0	1.0	10000.0	01.28	2/1.34
15000.	110	1.259	6	1.0	1.0	10000.0	61.28	388.73
56.99	NO							
20000.	0	.9816	б	1.0	1.0	10000.0	61.28	501.18
62.21	NO	0.014	~	1 0	1 0	10000 0	61 00	600 04
25000.		0.8014	6	1.0	1.0	10000.0	61.28	609.94
30000.	100	. 6752	6	1.0	1.0	10000.0	61.28	715.75
70.52	NO		Ū			2000010	01.10	0 , . 0
40000.	0	.5134	б	1.0	1.0	10000.0	61.28	920.35
76.05	NO		_					
50000.		.4133	6	1.0	1.0	10000.0	61.28	1117.53
80.00	NO							
MAXIMUM	1-н	IR CONCENTRAT	TION .	AT OR BEY	OND	15. M:		
194.		5.569	3	10.0	10.0	3200.0	19.94	23.32
14.11	NO							
	τ.	EANO NO CAT	ת גע ר		0 0	N		
DWASH= DWASH=N	M OR	IEANS NO CALC		DOWNWASH	USFI	\sim		
					- ~ - 1			

DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED

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

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 = = POINT = 0.312500 EMISSION RATE (G/S) STACK HEIGHT (M) = STK INSIDE DIAM (M) = 7.6200 0.5334 50.4048 STK EXIT VELOCITY (M/S)= 50.4048 708.7056 293.0000 STK GAS EXIT TEMP (K) = AMBIENT AIR TEMP (K) = 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 *** U10M USTK MIX HT PLUME SIGMA DIST CONC 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	1 2	0.0	20.0	6400.	D 17	.99	22.78
.41	NO									
400.		5.615	4	1 1	5.0	15.0	4800.	0 21	.44	29.72
. 77 E00	NO		,	1 1	F 0	1 5 0	4000	n 01	11	26.26
500. 72	NO	5.055	2	± ⊥	5.0	15.0	4800.	J ZI	.44	30.30
600.	110	4.573	2	1 1	0.0	10.0	3200.	0 28	. 35	43.13
.02	NO	110/0			•••	2010	02001			10,110
700.		4.209	4	1 1	0.0	10.0	3200.	28	.35	49.54
.75	NO									
800.		3.853	4	1	8.0	8.0	2560.	0 33	.54	56.06
.79	NO				~ ~		0560		- 4	<i>.</i>
900.		3.571	2	1	8.0	8.0	2560.	0 33	.54	62.32
.38	NO	2 200	,	1	0 0	0 0	2560	า วว	E /	60 50
1000. Q <i>1</i>	NO	3.200	4	±	0.0	0.0	2500.	5 55	.54	00.55
1100	NO	3 006	2	1	8 0	8 0	2560	n 33	54	74 68
.92	NO	5.000		1	0.0	0.0	2500.	5 55	. 5 1	/1.00
1200.		2.795	4	1	5.0	5.0	1600.	0 49	.09	81.31
.99	NO									
1300.		2.676	4	1	5.0	5.0	1600.	0 49	.09	87.33
.80	NO									
1400.		2.554	2	1	5.0	5.0	1600.	0 49	.09	93.31
.58	NO	0 405			- 0	- 0	1 6 0 0	- 10	0.0	00.05
1500.		2.435	Ζ.	£	5.0	5.0	1600.	J 49	.09	99.25
1600	NO	0 010	,	1	F 0	E O	1600	0 40	0.0	10E 16
1600. 02	NO	2.319	2	±	5.0	5.0	1600.	J 49	.09	105.10
1700	INO	2 208	2	1	5 0	5 0	1600	n 49	09	111 04
.70	NO	2.200		1	5.0	5.0	1000.	5 17	. 0)	
1800.		2.146	Ę	5	1.5	1.5	10000.	0 78	.82	89.32
.36	NO									
1900.		2.221	Ę	5	1.5	1.5	10000.	D 78	.82	93.59
. 28	NO									
2000.		2.287	ŗ,	5	1.5	1.5	10000.	0 78	.82	97.84
.18	NO	0 040		-	1 0	1 0	10000		1 0	100 00
2100. E7	NO	2.340			1.0	1.0	10000.	J 89	.13	102.70
2200	NO	2 298	C	5	1 0	1 0	10000	n 89	12	106 90
34	NO	2.570	-		1.0	1.0	10000.	0 0 0	. 13	100.90
2300.	110	2.450	ŗ	5	1.0	1.0	10000.	0 89	.13	111.09
.10	NO									
2400.		2.496	ŗ	5	1.0	1.0	10000.	D 89	.13	115.27
.86	NO									
2500.		2.536	ŗ	5	1.0	1.0	10000.	0 89	.13	119.43
.61	NO		_	_						
2600.		2.572	Ļ		1.0	1.0	10000.	5 89	.13	123.59
.34	NО	2 602	г	-	1 0	1 0	10000		1 0	107 70
⊿,00. 07	NО	2.002	2	. ر	. .0	1.0	T0000.	5 09	. ± 3	121.13
2800	INO	2,628	C	5	1.0	1.0	10000) 89	.13	131.86
.80	NO			-		±.0			0	00
	300. 41 400. 77 500. 72 600. 02 700. 75 800. 79 900. 38 1000. 94 1100. 92 1200. 99 1300. 80 1400. 58 1500. 32 1600. 02 1700. 32 1600. 02 1700. 32 1600. 36 1900. 34 2500. 34 2500. 34 2700. 38 30 34 34 34 34 35 35 35 35 34 35 34 35 35 35 35 35 35 35 35 35 35	300. 41 NO 400. 77 NO 500. NO 500. NO 500. NO 600. NO 72 NO 600. NO 70. NO 90. NO 900. NO 900. NO 900. NO 94 NO 1000. NO 94 NO 1200. NO 1300. NO 1400. NO 1500. NO 1600. NO 1700. NO 1800. NO 1900. NO 28 NO 2000. NO 1900. NO 2100. NO 2200. NO 10 NO 2400. NO 2500. NO 2600. NO 2600. NO <t< td=""><td>300. 6.156 41 NO 400. 5.615 77 NO 500. 5.055 72 NO 600. 4.573 02 NO 700. 4.209 75 NO 800. 3.853 79 NO 900. 3.571 38 NO 900. 3.280 94 NO 1000. 3.006 92 NO 1200. 2.795 99 NO 1300. 2.676 80 NO 1400. 2.554 52 NO 1400. 2.435 1500. 2.146 36 NO 1700. 2.208 70 NO 1800. 2.146 36 NO 2000. 2.340 57 NO 2100. 2.398 34 NO</td><td>300. 6.156 4 400. 5.615 4 400. 5.615 4 500. 5.055 4 500. 4.573 4 600. 4.573 4 600. 4.573 4 72 NO 4.209 4 700. 4.209 4 700. 3.853 4 79 NO 3.571 4 900. 3.571 4 38 NO 1000. 3.280 4 900. 3.571 4 4 94 NO 1100. 3.006 4 92 NO 1200. 2.795 4 1300. 2.676 4 4 1400. 2.554 4 4 1500. 2.435 4 4 1600. 2.319 4 4 100. 2.208 4 5 100. 2.287 5 4 2000. 2.340 5</td><td>300. 6.156 4 2 41 NO 5.615 4 1 77 NO 5.055 4 1 77 NO 5.055 4 1 72 NO 4.573 4 1 102 NO 4.209 4 1 70 4.209 4 1 75 NO 3.853 4 79 NO 3.280 4 900. 3.571 4 3 1000. 3.280 4 4 900. 3.571 4 4 900. 3.571 4 4 900. 3.280 4 4 900. 2.795 4 4 99 NO 100. 2.676 4 80 NO 1 4 2 1400. 2.554 4 4 4 1500. 2.435 4 5 5 1600. 2.146 5 5 5</td><td>300.$6.156$$4$$20.0$$41NO4.00.$$5.615$$4$$15.0$$77NO5.055$$4$$15.0$$72NO600.$$4.573$$4$$10.0$$02NO700.$$4.209$$4$$10.0$$75NO800.$$3.853$$4$$8.0$$900.$$3.571.$$4$$8.0$$900.$$3.571.$$4$$8.0$$900.$$3.280.$$4$$8.0$$94NO1000.$$3.280.$$4$$94NO2.795.$$4$$5.0$$99NO2.795.$$4$$5.0$$99NO2.554.$$4$$5.0$$99NO2.554.$$4$$5.0$$1300.$$2.676.$$4$$5.0$$1500.$$2.435.$$4$$5.0$$1500.$$2.435.$$4$$5.0$$1500.$$2.2146.$$5$$1.5$$1600.$$2.319.$$4$$5.0$$1700.$$2.2208.$$4$$5.0$$100.$$2.287.$$5$$1.5$$18.NO2.287.$$5$$1.5$$18.NO2.340.$$5$$1.0$$2000.$$2.398.$$5$$1.0$$2400.$$2.450.$$5$$1.0$$2400.$$2.450.$$5$$1.0$$2400.$$2.572.$$5$$1.0$$2600.$$2.572.$$5$</td><td>300. 6.156 4 20.0 20.0 410. 5.615 4 15.0 15.0 70. NO 5.055 4 15.0 15.0 72 NO 600. 4.573 4 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 800. 3.853 4 8.0 8.0 79 NO 3.571 4 8.0 8.0 900. 3.571 4 8.0 8.0 900. 3.571 4 8.0 8.0 900. 3.280 4 8.0 8.0 900. 3.280 4 8.0 8.0 900. 2.795 4 5.0 5.0 900. 2.676 4 5.0 5.0 1500. 2.435 4 5.0 5.0 1600.</td><td>300. 6.156 4 20.0 20.0 6400.4 410 NO 5.615 4 15.0 15.0 4800.4 77 NO 5.055 4 15.0 15.0 4800.4 72 NO 600. 4.573 4 10.0 10.0 3200.4 72 NO 600. 4.573 4 10.0 10.0 3200.4 600. 4.209 4 10.0 10.0 3200.4 70 NO 3.280 4 8.0 2560.4 79 NO 3.571 4 8.0 8.0 2560.4 900. 3.571 4 8.0 8.0 2560.4 1000. 3.280 4 8.0 8.0 2560.4 94 NO 1000. 3.006 4 8.0 2560.4 1000. 2.676 4 5.0 5.0 1600.4 1300. 2.676 4 5.0 5.0 1600.4 1300. 2.435 4 5.0 5.0<!--</td--><td>300. 6.156 4 20.0 20.0 6400.0 17 410. NO 5.615 4 15.0 15.0 4800.0 21 77 NO 500. 5.055 4 15.0 15.0 4800.0 21 700. 4.573 4 10.0 10.0 3200.0 28 700. 4.209 4 10.0 10.0 3200.0 28 75 NO 800. 3.853 4 8.0 8.0 2560.0 33 79 NO 3.280 4 8.0 8.0 2560.0 33 900. 3.571 4 8.0 8.0 2560.0 33 900. 3.280 4 8.0 8.0 2560.0 33 9100. 2.795 4 5.0 5.0 1600.0 49 92 NO 1200. 2.795 4 5.0 5.0 1600.0 49 1200. 2.435 4 5.0 5.0 1600.0 49</td><td>300. 6.156 4 20.0 20.0 6400.0 17.99 410. NO 5.615 4 15.0 15.0 4800.0 21.44 77 NO 500. 5.055 4 15.0 15.0 4800.0 21.44 70 NO 500. 4.209 4 10.0 10.0 3200.0 28.35 700. 4.209 4 10.0 10.0 3200.0 28.35 75 NO 800. 3.853 4 8.0 8.0 2560.0 33.54 900. 3.571 4 8.0 8.0 2560.0 33.54 94 NO 1000. 3.006 4 8.0 8.0 2560.0 33.54 94 NO 1200. 2.795 4 5.0 5.0 1600.0 49.09 1200. 2.676 4 5.0 5.0 1600.0 49.09 1200. 2.319 4 5.0<!--</td--></td></td></t<>	300. 6.156 41 NO 400. 5.615 77 NO 500. 5.055 72 NO 600. 4.573 02 NO 700. 4.209 75 NO 800. 3.853 79 NO 900. 3.571 38 NO 900. 3.280 94 NO 1000. 3.006 92 NO 1200. 2.795 99 NO 1300. 2.676 80 NO 1400. 2.554 52 NO 1400. 2.435 1500. 2.146 36 NO 1700. 2.208 70 NO 1800. 2.146 36 NO 2000. 2.340 57 NO 2100. 2.398 34 NO	300. 6.156 4 400. 5.615 4 400. 5.615 4 500. 5.055 4 500. 4.573 4 600. 4.573 4 600. 4.573 4 72 NO 4.209 4 700. 4.209 4 700. 3.853 4 79 NO 3.571 4 900. 3.571 4 38 NO 1000. 3.280 4 900. 3.571 4 4 94 NO 1100. 3.006 4 92 NO 1200. 2.795 4 1300. 2.676 4 4 1400. 2.554 4 4 1500. 2.435 4 4 1600. 2.319 4 4 100. 2.208 4 5 100. 2.287 5 4 2000. 2.340 5	300. 6.156 4 2 41 NO 5.615 4 1 77 NO 5.055 4 1 77 NO 5.055 4 1 72 NO 4.573 4 1 102 NO 4.209 4 1 70 4.209 4 1 75 NO 3.853 4 79 NO 3.280 4 900. 3.571 4 3 1000. 3.280 4 4 900. 3.571 4 4 900. 3.571 4 4 900. 3.280 4 4 900. 2.795 4 4 99 NO 100. 2.676 4 80 NO 1 4 2 1400. 2.554 4 4 4 1500. 2.435 4 5 5 1600. 2.146 5 5 5	300. 6.156 4 20.0 41 NO $4.00.$ 5.615 4 15.0 77 NO 5.055 4 15.0 72 NO $600.$ 4.573 4 10.0 02 NO $700.$ 4.209 4 10.0 75 NO $800.$ 3.853 4 8.0 $900.$ $3.571.$ 4 8.0 $900.$ $3.571.$ 4 8.0 $900.$ $3.280.$ 4 8.0 94 NO $1000.$ $3.280.$ 4 94 NO $2.795.$ 4 5.0 99 NO $2.795.$ 4 5.0 99 NO $2.554.$ 4 5.0 99 NO $2.554.$ 4 5.0 $1300.$ $2.676.$ 4 5.0 $1500.$ $2.435.$ 4 5.0 $1500.$ $2.435.$ 4 5.0 $1500.$ $2.2146.$ 5 1.5 $1600.$ $2.319.$ 4 5.0 $1700.$ $2.2208.$ 4 5.0 $100.$ $2.287.$ 5 1.5 $18.$ NO $2.287.$ 5 1.5 $18.$ NO $2.340.$ 5 1.0 $2000.$ $2.398.$ 5 1.0 $2400.$ $2.450.$ 5 1.0 $2400.$ $2.450.$ 5 1.0 $2400.$ $2.572.$ 5 1.0 $2600.$ $2.572.$ 5	300. 6.156 4 20.0 20.0 410. 5.615 4 15.0 15.0 70. NO 5.055 4 15.0 15.0 72 NO 600. 4.573 4 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 4.209 4 10.0 10.0 10.0 70. 800. 3.853 4 8.0 8.0 79 NO 3.571 4 8.0 8.0 900. 3.571 4 8.0 8.0 900. 3.571 4 8.0 8.0 900. 3.280 4 8.0 8.0 900. 3.280 4 8.0 8.0 900. 2.795 4 5.0 5.0 900. 2.676 4 5.0 5.0 1500. 2.435 4 5.0 5.0 1600.	300. 6.156 4 20.0 20.0 6400.4 410 NO 5.615 4 15.0 15.0 4800.4 77 NO 5.055 4 15.0 15.0 4800.4 72 NO 600. 4.573 4 10.0 10.0 3200.4 72 NO 600. 4.573 4 10.0 10.0 3200.4 600. 4.209 4 10.0 10.0 3200.4 70 NO 3.280 4 8.0 2560.4 79 NO 3.571 4 8.0 8.0 2560.4 900. 3.571 4 8.0 8.0 2560.4 1000. 3.280 4 8.0 8.0 2560.4 94 NO 1000. 3.006 4 8.0 2560.4 1000. 2.676 4 5.0 5.0 1600.4 1300. 2.676 4 5.0 5.0 1600.4 1300. 2.435 4 5.0 5.0 </td <td>300. 6.156 4 20.0 20.0 6400.0 17 410. NO 5.615 4 15.0 15.0 4800.0 21 77 NO 500. 5.055 4 15.0 15.0 4800.0 21 700. 4.573 4 10.0 10.0 3200.0 28 700. 4.209 4 10.0 10.0 3200.0 28 75 NO 800. 3.853 4 8.0 8.0 2560.0 33 79 NO 3.280 4 8.0 8.0 2560.0 33 900. 3.571 4 8.0 8.0 2560.0 33 900. 3.280 4 8.0 8.0 2560.0 33 9100. 2.795 4 5.0 5.0 1600.0 49 92 NO 1200. 2.795 4 5.0 5.0 1600.0 49 1200. 2.435 4 5.0 5.0 1600.0 49</td> <td>300. 6.156 4 20.0 20.0 6400.0 17.99 410. NO 5.615 4 15.0 15.0 4800.0 21.44 77 NO 500. 5.055 4 15.0 15.0 4800.0 21.44 70 NO 500. 4.209 4 10.0 10.0 3200.0 28.35 700. 4.209 4 10.0 10.0 3200.0 28.35 75 NO 800. 3.853 4 8.0 8.0 2560.0 33.54 900. 3.571 4 8.0 8.0 2560.0 33.54 94 NO 1000. 3.006 4 8.0 8.0 2560.0 33.54 94 NO 1200. 2.795 4 5.0 5.0 1600.0 49.09 1200. 2.676 4 5.0 5.0 1600.0 49.09 1200. 2.319 4 5.0<!--</td--></td>	300. 6.156 4 20.0 20.0 6400.0 17 410. NO 5.615 4 15.0 15.0 4800.0 21 77 NO 500. 5.055 4 15.0 15.0 4800.0 21 700. 4.573 4 10.0 10.0 3200.0 28 700. 4.209 4 10.0 10.0 3200.0 28 75 NO 800. 3.853 4 8.0 8.0 2560.0 33 79 NO 3.280 4 8.0 8.0 2560.0 33 900. 3.571 4 8.0 8.0 2560.0 33 900. 3.280 4 8.0 8.0 2560.0 33 9100. 2.795 4 5.0 5.0 1600.0 49 92 NO 1200. 2.795 4 5.0 5.0 1600.0 49 1200. 2.435 4 5.0 5.0 1600.0 49	300. 6.156 4 20.0 20.0 6400.0 17.99 410. NO 5.615 4 15.0 15.0 4800.0 21.44 77 NO 500. 5.055 4 15.0 15.0 4800.0 21.44 70 NO 500. 4.209 4 10.0 10.0 3200.0 28.35 700. 4.209 4 10.0 10.0 3200.0 28.35 75 NO 800. 3.853 4 8.0 8.0 2560.0 33.54 900. 3.571 4 8.0 8.0 2560.0 33.54 94 NO 1000. 3.006 4 8.0 8.0 2560.0 33.54 94 NO 1200. 2.795 4 5.0 5.0 1600.0 49.09 1200. 2.676 4 5.0 5.0 1600.0 49.09 1200. 2.319 4 5.0 </td

2900.	NTO	2.650	5	1.0	1.0	10000.0	89.13	135.98
47.51 3000.	NO	2.668	5	1.0	1.0	10000.0	89.13	140.08
48.22	NO		_					
3500.	NO	2.709	5	1.0	1.0	10000.0	89.13	160.45
51.66 4000	NO	2 690	5	1 0	1 0	10000 0	89 13	180 57
4000. 54 95	NO	2.090	5	1.0	1.0	10000.0	09.13	100.57
4500.	110	2.724	6	1.0	1.0	10000.0	75.26	133.90
37.87	NO							
5000.		2.751	б	1.0	1.0	10000.0	75.26	146.95
39.29	NO							
5500.		2.757	б	1.0	1.0	10000.0	75.26	159.86
40.64	NO	0 - 4 -	<i>_</i>	1 0		10000	==	100 66
6000.		2.747	6	1.0	1.0	10000.0	75.26	172.66
41.95	NO	2 7 2 5	E	1 0	1 0	10000 0	75 26	105 25
0500.	NO	2.725	0	1.0	1.0	10000.0	/5.20	185.35
7000	INO	2 694	6	1 0	1 0	10000 0	75 26	197 94
44.42	NO	2.071	Ũ	1.0	1.0	10000.0	13.20	±) / •) 1
7500.	-	2.643	б	1.0	1.0	10000.0	75.26	210.43
45.47	NO							
8000.		2.590	б	1.0	1.0	10000.0	75.26	222.82
46.49	NO							
8500.		2.536	б	1.0	1.0	10000.0	75.26	235.14
47.47	NO	0 100	c.	1 0	1 0	10000 0		
9000.	NTO	2.482	6	1.0	1.0	10000.0	75.26	247.36
40.42	NO	2 4 2 8	6	1 0	1 0	10000 0	75 26	259 51
49 35	NO	2.420	0	1.0	1.0	10000.0	13.20	239.31
10000.	110	2.375	6	1.0	1.0	10000.0	75.26	271.59
50.25	NO		-					
15000.		1.905	б	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	1 000	c	1 0	1 0	10000 0		c10 0C
25000.	NTO	1.298	6	1.0	1.0	10000.0	75.26	610.06
30000	NO	1 117	6	1 0	1 0	10000 0	75 26	715 85
71 50	NO	1.11/	0	1.0	1.0	10000.0	13.20	/13.05
40000.	110	.8706	6	1.0	1.0	10000.0	75.26	920.43
76.96	NO		-					
50000.	C	.7130	б	1.0	1.0	10000.0	75.26	1117.59
81.52	NO							
MAXIMUM	1-H	IR CONCEN	TRATION A	T OR BE	YOND	15. M:		•• = :
300.	110	6.156	4	20.0	20.0	6400.0	17.99	22.78
12.41	NО							
DWASH=	Ν	IEANS NO	CALC MADE	(CONC	= 0.0))		

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

3

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

CALCUL PROCE	ATION DURE	MAX CON (UG/M**3	C 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: POINT SOURCE TYPE = EMISSION RATE (G/S) = 0.379700STACK HEIGHT (M) = STK INSIDE DIAM (M) = 6.7056 0.4054 STK INSIDE DIAL STK EXIT VELOCITY (M/S) = 8.0301STK GAS EXIT TEMP (K) = 803.1500293.0000 20000 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 *** U10M USTK MIX HT PLUME SIGMA DIST CONC 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	2	2.79
12.42	NO									
400.		38.84	4	3.0	3.0	960.0)	19.87	2	9.69
15.73	NO		4	о г	о F	000	`	00 F0	2	< 12
500.	NO	34.53	+	2.5	2.5	800.0)	22.50	3	6.43
10.05 600	NО	30 92	1	2 0	2 0	640 ()	26 45	4	3 09
21.95	NO	50.72	1	2.0	2.0	010.0	,	20.15	1	5.05
700.		27.85	1	2.0	2.0	640.0)	26.45	4	9.51
24.69	NO									
800.		25.52	1	1.5	1.5	480.0)	33.03	5	6.08
27.82	NO	~							-	
900.		23.56	4	1.5	1.5	480.0)	33.03	6	2.34
30.41	NO	01 E O	1	1 E	1 5	100 0	`	<u>,,,,,</u> ,,	C	0 51
1000.	NO	21.59	±	1.5	1.5	400.0	J	33.03	0	0.04
1100	INO	19 75	1	15	15	480 (۱	33 03	7.	4 69
34.94	NO	17.75	I	1.5	1.5	100.0	,	55.05	1	1.07
1200.		18.66	4	1.0	1.0	320.0)	46.19	8	1.23
37.81	NO									
1300.		17.72	1	1.0	1.0	320.0)	46.19	8	7.25
39.64	NO									
1400.		17.95	5	1.0	1.0	10000.0)	39.07	4	6.97
19.58	NO		_							
1500.		18.63	5	1.0	1.0	10000.0)	39.07	4	9.89
20.26	NO	10 10	-	1 0	1 0	10000	`	20 07	-	0 01
1600.	NO	19.10	0	1.0	1.0	10000.0)	39.07	5.	2.81
20.93	NО	19 55	5	1 0	1 0	10000 (۱	39 07	5	5 71
21 60	NO	19.55	J	1.0	1.0	10000.0	,	59.07		5.71
1800.	110	19.83	5	1.0	1.0	10000.0)	39.07	5	8.60
22.25	NO								-	
1900.		20.01	5	1.0	1.0	10000.0)	39.07	6	1.48
22.89	NO									
2000.		20.10	5	1.0	1.0	10000.0)	39.07	6	4.34
23.52	NO		_					~ ~ ~ -	_	
2100.		20.00	5	1.0	1.0	10000.0)	39.07	6	1.20
24.06	NO	10 06	5	1 0	1 0	10000	h	20 07	7	0 01
2200.	NO	19.00	5	1.0	1.0	10000.0	J	39.07	1	0.04
2300	INO	19 68	5	1 0	1 0	10000 ()	39 07	7	2 87
25.10	NO	19.00		1.0	1.0	10000.0	,	55.07		
2400.		19.48	5	1.0	1.0	10000.0)	39.07	7	5.69
25.61	NO									
2500.		19.25	5	1.0	1.0	10000.0)	39.07	7	8.49
26.12	NO									
2600.		19.01	5	1.0	1.0	10000.0)	39.07	8	1.29
26.61	NO	10 56	-	1 0	1 0	10000		20 05	0	4 0 0
2700.	NTO	T8./0	C	1.0	1.0	T0000.(J	39.07	8	4.08
2/.IU 2000	UИ	18 /0	5	1 0	1 0	10000	h	20 07	Q	6 96
27.58	NO	10.12		- .0	±. 0	10000.0	,	52.07	0	
_,										

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	16 40	C	1 0	1 0	10000 0	20 07	100 00
3500.	NTO	16.42	6	1.0	1.0	10000.0	39.07	106.06
4000	NО	15 04	6	1 0	1 0	10000 0	30 07	119 53
4000.	NO	13.04	0	1.0	1.0	10000.0	39.01	119.55
4500	INO	13 81	6	1 0	1 0	10000 0	39 07	132 82
33.86	NO	10.01	Ũ	1.0	±.0	10000.0	55.07	191.01
5000.		12.72	б	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	0 401	c	1 0	1 0	10000 0	20 07	107 01
7000.	NO	9.491	0	1.0	1.0	10000.0	39.07	197.21
7500	INO	8 895	6	1 0	1 0	10000 0	39 07	209 74
42 19	NO	0.000	0	1.0	1.0	10000.0	57.07	200.71
8000.	110	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	6 500	~	1 0	1 0	10000	~ ~ ~ ~	0.51.06
10000.	NTO	6.702	6	1.0	1.0	10000.0	39.07	271.06
47.30	NО	1 269	6	1 0	1 0	10000 0	20 07	200 E1
55 66	NO	F.300	0	1.0	1.0	10000.0	59.07	300.34
20000.	110	3.221	6	1.0	1.0	10000.0	39.07	501.03
61.00	NO	0,111	Ū.					00100
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	1 000	~	1 0	1 0	10000	~ ~ ~ ~	
50000.		1.203	6	1.0	1.0	10000.0	39.07	1117.46
19.13	NO							
ΜΛΥΤΜΙΙΜ	1_1		ד∩אז אידי		רואר	15 M·		
100	т-1	52 05	3	8 0	8 0	2560 0	11 32	12 54
7.57 r	O		2			2000.0		10.01
	-							
DWASH=	N	MEANS NO CALC	MADE	(CONC =	0.0)		
DWASH=1	NO N	TEANS NO BUTTI	DING DO	OWNWASH	USEI)		

DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED

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

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

03/04/20 10:54:24 *** SCREEN3 MODEL RUN *** *** VERSION DATED 13043 *** Cherokee CPF_NOx Modeling_FL-1 SIMPLE TERRAIN INPUTS: FLARE 6.25860 SOURCE TYPE = EMISSION RATE (G/S) = 30.4800 FLARE STACK HEIGHT (M) = 298478. TOT HEAT RLS (CAL/S) = RECEPTOR HEIGHT (M) = URBAN/RURAL OPTION = 0.0000 RURAL EFF RELEASE HEIGHT (M) =RURALBUILDING HEIGHT (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 *** 0. M ABOVE STACK BASE USED FOR *** TERRAIN HEIGHT OF FOLLOWING DISTANCES *** U10M USTK MIX HT PLUME SIGMA DIST CONC 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 1 2.0 2.2 640.0 65.11 72.37 300. 105.9 48.35 NO

1

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	NC		0	1 -	1 6	400 0		00 00
600.	NO	95.82	2	1.5	1.0	480.0	/6.02	98.29
700	NO	95 56	3	2 0	2 2	640 0	63 97	75 04
45.04	NO	23.30	5	2.0	2.2	010.0	00.01	/5.01
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		-	1 0			<u></u>	110 00
1100.		86.49	3	1.0	1.1	320.0	95.58	113.90
69.II 1200	NO	04 02	r	1 0	1 1	220 0	05 50	100 05
1200.	NO	04.03	3	1.0	1.1	320.0	95.50	123.05
1300	INO	81 99	3	1 0	1 1	320 0	95 58	132 14
79.79	NO	01.77	5	1.0	±•±	520.0	23.30	192.11
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	NC		4	1 F	1 0	400 0	70 10	110 04
1800.	NO	64.62	4	1.5	1.8	480.0	/2.10	116.84
40.22	NO	62 06	1	1 5	1 0	180 0	72 10	122 66
49 83	NO	03.90	7	1.5	1.0	400.0	12.10	122.00
2000.	110	63.08	4	1.5	1.8	480.0	72.10	128.45
51.42	NO		-			10010		
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	F 0 0 1		1 -	1 0	400 0		1 - 1 0 4
2400. 57 52	NO	58.31	4	1.5	1.8	480.0	/2.10	151.34
2500	NO	56 97	Л	15	1 8	480 0	72 10	157 00
59 00	NO	50.97	7	1.5	1.0	400.0	12.10	157.00
2600	110	55.61	4	1.5	1.8	480.0	72.10	162.64
60.46	NO	33.01	-	1.5	1.0	100.0	, 2. 20	102.01
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	17 10		F	1 0	1 E	10000 0	76 52	170 E0
4000.	NO	4/.18		S	1.0	1.5	10000.0	/0.53	1/9.50
4500	INO	45 16		5	1 0	15	10000 0	76 53	199 48
54 31	NO	10.10		5	1.0	1.5	10000.0	10.55	100.40
5000.	110	42.98		5	1.0	1.5	10000.0	76.53	219.22
57.12	NO	12120		0					
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			c	1 0	1 0	10000 0		
8000.	NTO	33./4		6	1.0	1.9	10000.0	66.26	222.20
43.38	NO	22 06		c	1 0	1 0	10000 0		
0500.	NO	32.90		0	1.0	1.9	10000.0	00.20	234.54
9000	INO	32 16		б	1 0	1 9	10000 0	66 26	246 80
45 44	NO	52.10		0	1.0	1.7	10000.0	00.20	210.00
9500.	110	31.37		б	1.0	1.9	10000.0	66.26	258.97
46.43	NO			-					
10000.		30.58		б	1.0	1.9	10000.0	66.26	271.08
47.38	NO								
15000.		23.79		б	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	1 2 2 2		c	1 0	1 0	10000 0		
30000.	NO	13.33		6	1.0	1.9	10000.0	66.26	/15.65
40000	NO	10 24		6	1 0	1 0	10000 0	66 26	020 27
75 12	NO	10.24		0	1.0	1.9	10000.0	00.20	920.27
50000	110	8 296		6	1 0	19	10000 0	66 26	1117 46
79.78	NO	0.200		0	1.0	1.7	10000.0	00.20	±±±/.10
MAXIMUM	1-F	IR CON	CENTRATI	ON AT	OR BEYC	ND	15. M:		
346.		110.1		1	1.5	1.6	480.0	76.02	82.64
59.56	NO								
DWASH=	Ν	IEANS	NO CALC	MADE (CONC =	0.0)			
DWASH=N	10 N	IEANS I	NO BUILD	ING DC	WNWASH	USEI)		
DWASH=H	IS N	IEANS	HUBER-SN	YDER D	OWNWASH	USE	D		
DWASH=S	SS N	IEANS	SCHULMAN	-SCIRE		ASH U	ISED		
DWASH=N	ΝАΝ	IEANS	DOWNWASH	NOT A	VALTTCAE	۶ĿĽ,	х<з*⊔В		

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN 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 = = FLAREEMISSION RATE (G/S) = 0.414100 FLARE STACK HEIGHT (M) = 9.1440 TOT HEAT RLS (CAL/S) = 488812. RECEPTOR HEIGHT (M) = URBAN/RURAL OPTION = 0.0000 RURAL EFF RELEASE HEIGHT (M) = 11.5339BUILDING HEIGHT (M) = 0.0000BUILDING HEIGHT (M) = 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 *** ***** 0. M ABOVE STACK BASE USED FOR *** TERRAIN HEIGHT OF FOLLOWING DISTANCES *** U10M USTK MIX HT PLUME SIGMA DIST CONC SIGMA (M) (UG/M**3) STAB (M/S) (M/S) (M) HT (M) Y (M) Z (M) DWASH _____ ____ ____ _____ ___ 0.000 1 1.0 1.0 320.0 113.42 7.45 15. 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 3 8.0 8.1 2560.0 24.22 34.48 300. 11.47 20.65 NO

400.		10.74	3	3	4.5	4.6	1440.0	34.	08	45.11
27.22	NO	10 01					0560 0			
500. 19 65	NO	10.31	4	E 8	3.0	8.2	2560.0	24.	13	36.32
600.	INO	9.638	4		5.0	5.1	1600.0	31.	68	43.10
21.98	NO		-			0.12	2000.0	011	•••	10110
700.		9.271	4	Ł!	5.0	5.1	1600.0	31.	68	49.52
24.71	NO	0 51 6					1 4 4 0 0			4
800.	NO	8.716	4	<u> </u>	4.5	4.6	1440.0	33.	92	55.94
900	NO	8.204	4	L 4	4.0	4 1	1280.0	36	72	62.30
30.33	NO	0.201	-	-					, _	02.00
1000.		7.733	4	l :	3.5	3.6	1120.0	40.	31	68.62
33.13	NO									
1100.	NO	7.263	4	<u> </u>	3.5	3.6	1120.0	40.	31	74.76
35.1U 1200	NO	6 853			3 0	2 1	960 0	45	11	Q1 01
37.34	NO	0.000		۰. ۱	5.0	J.T	900.0	чу.	ΤT	01.01
1300.		6.500	4	Ł :	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	E 06E) E	26	000 0	E 1	02	00 21
43.23	NO	5.805	-	· ·	2.5	2.0	800.0	51.	05	99.21
1600.	110	5.618	4	L :	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	F (40	-		1 0		10000 0	70	<u>م</u> ۲	00 50
1800.	NO	5.048	5) -	1.0	1.1	10000.0	70.	25	88.58
1900.	NO	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	C 004	-		1 0	1 1	10000 0	70	25	101 40
2100.	NO	6.004	5) -	1.0	1.1	10000.0	70.	25	101.42
2200.	NO	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	C 100	-		1 0	1 1	10000 0	70	25	11/ 10
2400. 40 78	NO	0.108	5) -	1.0	1.1	10000.0	70.	25	114.13
2500.	INC	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	C 004	-		1 0		10000 0		0.5	100 00
2700.	NO	6.094	5) .	1.0	1.1	10000.0	70.	25	126.70
2800	TIO	6.070	5		1.0	1.1	10000.0	70.	25	130.86
43.92	NO			-		• =			-	
2900.		6.089	6	5 -	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	6.281		6	1.0	1.1	10000.0	59.80	106.55
32.09	NO	0.101		•			2000000		
4000.	NO	6.276		6	1.0	1.1	10000.0	59.80	119.96
4500.	NO	6.195		6	1.0	1.1	10000.0	59.80	133.22
35.37	NO	0.770		•					100111
5000.		6.066		б	1.0	1.1	10000.0	59.80	146.32
36.88	NO	5 909		6	1 0	1 1	10000 0		150 20
38.32	NO	5.909		0	1.0	±•±	10000.0	59.00	139.29
6000.		5.736		б	1.0	1.1	10000.0	59.80	172.13
39.70	NO			_					
6500.	NO	5.555		6	1.0	1.1	10000.0	59.80	184.86
41.03	NO	5 373		б	1 0	1 1	10000 0	59 80	197 47
42.31	NO	5.575		0	1.0	±•±	10000.0	57.00	177.17
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
44.4/	NO	1 910		6	1 0	1 1	10000 0		221 71
45.50	NO	1.010		0	1.0	±•±	10000.0	59.00	231.71
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	1 2 2 7		6	1 0	1 1	10000 0		271 25
48.39	NO	4.327		0	1.0	Τ.Τ	10000.0	59.00	2/1.29
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 25000	NO	2 007		6	1 0	1 1	10000 0	59 80	609 91
66.31	NO	2.007		0	1.0	±•±	10000.0	59.00	009.91
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
/5./5	NO	1 029		6	1 0	1 1	10000 0	59 80	1117 51
80.38	NO	1.029		0	1.0	1.1	10000.0	59.00	1117.91
MAXIMUM	1-F	IR CONC	CENTRATI	ON AT	OR BEYO	OND	15. M:		
240.	NO	12.27		3	8.0	8.1	2560.0	24.22	28.27
17.03	NO								
DWASH=	Ν	IEANS 1	10 CALC	MADE (CONC =	0.0)		
DWASH=N	10 N	IEANS 1	10 BUILD	ING DC	WNWASH	USEI)		
DWASH=H	IS N	IEANS I	IUBER-SN	YDER I	OWNWASI	I USE	ED		
DWASH=S	SN	IEANS S	CHULMAN	I-SCIRE	DOWNWA	ASH U	JSED		
DWASH=1	NA N	ICANS I	JOWINWASH	1001 F	ALLTCAL	பட்,	∨<́Э.⊓R		

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

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 nonrule 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.

(<u>c)(4)(B)</u> 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.

(i)(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 H₂S and VOC GC analysis for gas streams

(i)(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 NO₂ 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/m³)/(lb/hr).

(I) 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.

<u>Subpart Dc.</u> 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.

<u>Subpart Kb.</u> 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 m³ in storage space but have less than 1,589.874 m³ 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.

<u>Subpart JJJJ</u>, 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 emission limitations of this subpart. Altus will comply with all applicable requirements.

<u>Subpart OOOO</u>, 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.

<u>Subpart OOOOa</u>, 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.

<u>Subpart HH,</u> 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.

<u>Subpart ZZZZ</u>, Reciprocating Internal Combustion Engines (RICE).</u> 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.





Cherokee CPF Reeves County, TX



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 C	PF		Customer Reference No.:	CN605629864

AIR CONTAMINANT	T DATA		EMISSION POINT DISCHARGE PARAMETERS										
1. Emission Point			4. UTM Cod	ordinates of En	nission					Source			
			Point	r		5. Building	6. Height Above	7.	Stack Exit D	ata		8. Fuç	itives
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



I. Eng	gine Dat	a									
Manufact	urer:		Model N	0.		Serial No.			Manufac	ture Date:	
Caterpillar		(G3606			JFE00111			10/07/201	5	
Rebuilds	Date:		No. of C	vlinders:		Compress	ion Ratio		EPN:		
		f	3	,		7.6:1			C-1		
Applicati	ion: 🗙	Gas Compr	ession	Electric	Generati	on Ref	frigeratio	n 🗌 En	nergency/	Stand by	
× 4 Stro	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	gnited	Dual Fue	el 🗌 Fi	uel Injected	
Diesel	Na 🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged [Turbo	Charged a	nd I.C.	🗙 Turbo C	Charged
Interco	ooled	!	I.C. Wate	er Temperat	ure [🗙 Lean Bu	rn		Rich H	Burn	
Ignition/I	Injection	Timing:]	Fixed: X				Vari	able:			
Manufact	ure Horse	epower Rati	ing: 1,875	5		Proposed	Horsepo	wer Rating	: 1,875		
				Di	scharge	Parameter	S				
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)
25.00			1.25			797			163.63		
II. Fue	el Data	-					-			—	
Type of F	uel: 🗵	Field Gas		andfill Gas		Gas 🗋	Natural	Gas 📙 I	Digester C	as 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,63	7 He	eat Value	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 sct	- weight	. %): < 0.25	gr/100 sct	f					
III. Em	ission Fa	ictors (Befo	ore Cont	rol)			~			DIA	1.0
	X)		2		C	Formal	lehyde		10
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	Emissio	2.960	Manı	AP-42		0.840	Othor (an	0.190		AP-42	L
IV Fm	Elilission F	1 Factors (Pos	t Contro			\P-42 □ '	Other (sp	ecity).			
IV. Em	1551011 1 2			50	2	VO	C	Formal	dehvde	PM	10
g/hn-hr		σ/hn-hr	nnmy	g/hn-hr		σ/hn-hr	nnmy	σ/hn-hr	nnmy	σ/hn-hr	nnmy
0.300	phu.	0.444	ppm	AP-42	phu,	0.319	PP ^{III}	0.050	phu.	AP-42	ppmy
Method o	f Emissic	on Control:		CR Catalyst	X Le	an Operatio	n 🗌 F	Parameter A	<u> </u> \diustmer	nt	L
☐ Stratif	ied Char	ge		C Catalyst	 ▼ Otl	her (Specify): AFR(C: Oxidati	ve Cata	lvst	
Note: Mı	ust submi	t a copy of a	any manu	ifacturer co	ntrol info	prmation the	at demons	strates con	trol efficie	ency.	
Is Formal	dehyde ir	ncluded in t	he VOCs	;?						Yes 🗙	No
V. F	ederal a	nd State St	andards	(Check all	that app	oly)				_	
X NSPS	1111 🗙	MACT ZZ	ZZZ	NSPS IIII	Title	e 30 Chapte	r 117 - L	ist County:			
VI. A	dditiona	l Informat	ion								
1 Subm											
	nit a copy	of the engine	ne manuf	facturer's sit	te rating of	or general ra	ating spec	cification d	ata.		-
2. Subm	it a copy it a typic	of the engi al fuel gas a	ne manuf analysis, 1	facturer's si	te rating out	or general ra ent and hea	ating spec ting value	cification d e. For gase	ata. ous fuels,	provide mo	ole



	ia									
Manufacturer:		Model N	0.	I	Serial No.			Manufac	ture Date:	
Caterpillar	(G3606		ļ	JFE00113			10/17/201	5	
Rebuilds Date:		No. of C ¹	vlinders:		Compress	ion Ratio	:]	EPN:		
	(6		ļ	7.6:1			C-2		
Application: 🗵	Gas Comp	ression	Electric	Generatio	on 🗌 Ref	frigeratio	n 🗌 En	nergency/	Stand by	
X 4 Stroke Cycle	2 Stro	ke Cycle	Carb	ureted	⊠ Spark Ig	nited	Dual Fue	2 <u>1</u> Γι	el Injected	
Diesel N	aturally Asp	irated	Blower /	/Pump Sc	avenged [Turbo	Charged a	nd I.C.	🗵 Turbo C	harged
Intercooled		I.C. Wate	r Temperat	ure	× Lean Bu	rn		Rich F	Burn	
Ignition/Injection	1 Timing:	Fixed: X				Vari	able:			
Manufacture Hors	epower Rat	ing: 1,875	;		Proposed	Horsepov	ver Rating:	1,875		
			Di	scharge	Parameters	5				
Stack Height	(Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (I	FPS)
25.00		1.25			797			163.63		
II. Fuel Data										
Type of Fuel:	✓ Field Gas		andfill Gas		Jas 🗌] Natural	Gas [] [Digester G	ias 🗌 Dies	el
Fuel Consumption	ı (BTU/bhp-	•hr): 7,63	7 He	at Value:	: 1,208	(HHV)				(LHV)
Sulfur Content (gr	ains/100 scf	f - weight	%): < 0.25	gr/100 scf	f					
III. Emission F	actors (Bef	ore Cont	rol)							
NO _X	CC)	SO	2	VO	C	Formalo	lehyde	PM	10
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 Emissio	n Factors:	🔀 Manu	ıfacturer Da	ita 🔀 A	<u>AP-42</u> □ 0	Other (sp	ecify):			
IV. Emission F	actors (Pos	t Control	()		N/O	~			DIC	
)	SO	2		С	Formal	lehyde	PM	10
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	1'	AP-42	
No. 1 1 CEnsioni	on Control		'V ('otolyot	IXI Let	an Operation	n lir	'arameter P	djustmen	it	
Method of Emissi					··· (Creatify). Ovidati		luat	
Method of Emissi	rge		C Catalyst	X Oth	ner (Specify	(): <u>AFR(</u>	: Oxidati	ve Cata	lvst	
Method of Emissi	it a copy of a	JIC	C Catalyst	X Otl ntrol info	her (Specify	r): AFR(ut demons	C: Oxidati	ve Cata rol efficie	$\frac{ vst }{ vcy }$	No
Method of Emissi Stratified Char Note: Must subm Is Formaldehyde	rge it a copy of a ncluded in t	JLC any manu he VOCs	C Catalyst facturer col Check all	X Otl	her (Specify prmation that	y): AFR(C: Oxidati	ve Cata rol efficie	ncy.	No
Method of Emissi Stratified Chai Note: Must subm Is Formaldehyde i V. Federal a	rge <i>it a copy of a</i> ncluded in t nd State St 1 MACT ZZ	in NSC JLC any manu he VOCs andards 'ZZ	C Catalyst C Catalyst <i>facturer co.</i> ? (Check all NSPS IIII	X Oti ntrol info that app Title	her (Specify <i>prmation that</i> ly) 30 Chapte	r 117 - Li	C: Oxidati	ve Cata rol efficie	lvst ncy.	No
Method of Emissi Stratified Char Note: Must subm Is Formaldehyde i V. Federal a NSPS JJJJ	it a copy of a ncluded in t nd State St MACT ZZ	ion	C Catalyst tfacturer co. ? (Check all NSPS IIII	Image: Constraint of the constr	her (Specify <i>prmation tha</i> ly) = 30 Chapte	r 117 - Li	C: Oxidati	ve Cata rol efficie	lvst ncy. □ Yes ⊠	No
Method of Emissi Stratified Char Note: Must subm Is Formaldehyde V. Federal a NSPS JJJJ VI. Addition 1. Submit a copy	it a copy of a ncluded in t nd State St MACT ZZ Informat of the engi	JLC any manu he VOCs andards ZZZ ion ne manuf	C Catalyst tfacturer co ? (Check all NSPS IIII acturer's sit	Image: Constraint of the second se	her (Specify <i>prmation that</i> ly) e 30 Chapte or general ra	r 117 - Li	C: Oxidati	ve Cata rol efficie	lvst ncy. □ Yes ⊠	No
Method of Emissi Stratified Char Note: Must subm Is Formaldehyde V. Federal a NSPS JJJJ VI. Addition 1. Submit a copy 2. Submit a typic	it a copy of included in t nd State St MACT ZZ Informat of the engination of the eng	inalysis, i	C Catalyst <i>facturer co</i> (Check all NSPS IIII acturer's sit including su	that app Title	her (Specify <i>prmation that</i> ly) e 30 Chapte or general rate ent and heat	r 117 - Li iting spec	C: Oxidati strates cont ist County: ification da . For gase	ve Cata rol efficie ata. ous fuels,	lvst ncy. □ Yes ⊠ provide mc	No
Method of Emissi					all Operation	41 1 1 1	alament r	ujusunon	ll	



I. Eng	gine Dat:	a									
Manufact	urer:		Model N	0.		Serial No.			Manufac	ture Date:	
Caterpillar		(J3606			JFE00136			05/25/201	6	
Rebuilds	Date:		No. of C	vlinders:		Compress	ion Ratio		EPN:		
		f	3			7.6:1			C-3		
Applicati	ion: 🗙	Gas Compr	ession	Electric	Generati	on 🗌 Ret	frigeratio	n 🗌 Er	nergency/	Stand by	
× 4 Stro	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	gnited [] Dual Fue	el 🗌 Fi	uel Injected	
Diesel	Na 🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged [Turbo	Charged a	nd I.C.	🗙 Turbo C	Charged
	ooled	<u> </u>	I.C. Wate	er Temperat	ure [🗙 Lean Bu	rn		Rich H	Burn	
Ignition/I	Injection	Timing:	Fixed: X				Vari	able:			
Manufact	ure Horse	epower Rati	ng: 1,875	5		Proposed	Horsepor	wer Rating	: 1,875		
				Di	ischarge	Parameter	s				
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)
25.00			1.25			797			163.63		
II. Fue	el Data										
Type of F	uel: 🛛 🗙	Field Gas		andfill Gas		Gas 🗌] Natural	Gas 📙 I	Digester C	as 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,63	7 He	eat Value	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 scf	- weight	: %): < 0.25	gr/100 sct	f					
III. Em	ission Fa	ictors (Befo	ore Cont	rol)							
NO	X	CO)	SO	2	VO	C	Formal	dehyde	PM	10
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	Q:1 (ar	0.190		AP-42	L
Source of	Emission E	1 Factors:	X Manu	lfacturer Da	ata 🔀 P	AP-42 ∟ '	Other (sp	ecity):			
IV. Em	ISSION F2	ictors (Posi	Control	I) 50	2	VO	C	Formal	dahada	DM	10
g/hn hr		g/hp hr		g/hp hr		g/hp hr	C nnmy	rorman		r wi	10
<u>g/np-m</u>	hhun	g/np-m	phuv	g/np-m	ppmv	g/np-m 0 319	ppmv	g/np-m	hhun	g/np-m AP-42	ppmv
Method o	 f Emissic	n Control.	\square NS(R Catalyst		an Operatio	m 🗆 F	Parameter /	 Adjustmer	Λι -τ2 ht	L
	ied Char			<u>'C Catalyst</u>		her (Specify	<u></u>	: Oxidati	ve Cata	lvst	
Note: Mi	ust submi	$\frac{5}{t a copy of c}$	anv manı	ufacturer co	ntrol infc	ormation the	at demons	strates con	trol efficie	encv.	
Is Formal	dehyde ii	ncluded in t	he VOCs	s?	J					Yes 🗙	No
V. F	ederal a	nd State St	andards	(Check all	that app	oly)					
X NSPS	1111 🗙	MACT ZZ	ZZZ	NSPS IIII	Title	e 30 Chapte	er 117 - L	ist County:			
VI. A	dditiona	l Informat	ion								
1. Subm	it a corre										
	nt a copy	of the engi	ne manul	facturer's sit	te rating of	or general ra	ating spec	cification d	ata.		-
2. Subm	nt a copy nit a typic	of the engial fuel gas a stituents	ne manut inalysis, i	facturer's sit	te rating of alfur cont	or general rates and hea	ating spec ting value	cification d e. For gase	ata. ous fuels,	provide mo	ole



I. Eng	gine Data	a									
Manufact	urer:		Model N	0.	_	Serial No.			Manufac	ture Date:	
Caterpillar		(G3606			JFE00146			09/07/201	6	
Rebuilds	Date:		No. of C	ylinders:		Compress	ion Ratio	:	EPN:		
		6	3			7.6:1			C-4		
Applicati	on: 🗙	Gas Compr	ession	Electric	Generati	on Re	frigeratio	n 🗌 En	nergency/	Stand by	
X 4 Strol	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	gnited	Dual Fue	el 🗌 Fi	uel Injected	
Diesel	🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged	Turbo	Charged a	nd I.C.	X Turbo C	Charged
	ooled	[]	I.C. Wate	er Temperat	ure [× Lean Bu	rn		Rich H	3urn	
Ignition/l	njection	Timing:	Fixed: X			1	Vari	able:			
Manufact	ure Horse	epower Rati	ing: 1,875	5		Proposed	Horsepo	wer Rating	1,875		
				Di	scharge	Parameter	s				
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (I	FPS)
25.00			1.25			797			163.63		
II. Fue	el Data										
Type of F	uel: 🗙	Field Gas		andfill Gas		Gas	Natural	Gas 🗌 I	Digester C	ias 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,63	7 Не	eat Value	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 scf	i - weight	: %): < 0.25	gr/100 sct	f					
III. Em	ission Fa	actors (Bef	ore Cont	rol)				1			
NO	x	CC)	SO	2	VO	С	Formal	lehyde	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	n Factors:	🔀 Manı	ıfacturer Da	ita 🔀 A	AP-42	Other (sp	ecify):			
IV. Em	ission Fa	actors (Pos	t Contro	l)							
NO	X	CC)	SO	2	VO	С	Formal	lehyde	PM	10
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	<u></u>	0.444		AP-42	T	0.319		0.050		AP-42	
Method of	t Emissic	on Control:		CR Catalyst		an Operatio		Parameter A	djustmen	1t	
Stratif	ied Charg	ge		C Catalyst		her (Specify): <u>AFR(</u>	J: Uxidati	ve Cata	IVSt	
Note: Mu	$\frac{1}{1}$	$\frac{t \ a \ copy \ of \ a}{1 \ 1 \ 1 \ copy \ of \ a}$	$\frac{1}{1}$	<i>ifacturer co</i>	ntrol info	ormation the	it demons	strates cont	rol efficie	ncy.	NT
Is Formal			ne vocs	(Charle all	41 4	·1)					INO
	ederal al	IMACT 75	andards	(Check all		oly)		ist Country			
XI NSP5				NSPS IIII		e 30 Chapte	er II / - L	ist County?			
VI. A		af the eneri		e otomon'a si	to notin o		tin a an a	ification d			
1. Subm 2. Subm	it a copy	al fuel gas a	analysis.	including su	alfur cont	tent and hea	ting spec	e. For gase	ata. ous fuels.	provide mo	ole
percer	nt of cons	stituents.	,	0			0	0	,	r	
3. Subm	it descrip	otion of air/	fuel ratio	control syst	tem (man	nufacturer ir	nformatio	n is accepta	able).		



r											
I. Eng	gine Data	a									
Manufact	urer:		Model N	0.	_	Serial No.			Manufac	ture Date:	
Caterpillar		(G3606			JFE00147			09/08/201	6	
Rebuilds	Date:		No. of C	ylinders:		Compress	ion Ratio	:	EPN:		
		6	6			7.6:1			C-5		
Applicati	on: 🗙	Gas Compr	ression	Electric	Generati	on Re	frigeratio	n 🗌 Er	nergency/	Stand by	
× 4 Strol	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	gnited	Dual Fu	el 🗌 Fi	uel Injected	
Diesel	🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged	Turbo	Charged a	nd I.C.	X Turbo C	Charged
	oled	[]	I.C. Wate	er Temperat	ure [× Lean Bu	rn		Rich H	3urn	
Ignition/I	njection	Timing:	Fixed: X			1	Vari	able:			
Manufact	ure Horse	epower Rati	ing: 1,875	5		Proposed	Horsepo	wer Rating	: 1,875		
				Di	scharge	Parameter	S				
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)
25.00			1.25			797			163.63		
II. Fue	l Data						_				
Type of F	uel: 🗵	Field Gas		andfill Gas		Gas	Natural	Gas I	Digester C	ias 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,63	7 Не	eat Value	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 scf	f - weight	: %): < 0.25	gr/100 sct	f					
III. Em	ission Fa	actors (Bef	ore Cont	rol)				1			
NO	x	CC)	SO	2	VO	С	Formal	dehyde	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	Emissio	n Factors:	🔀 Manı	ıfacturer Da	ita 🔀 A	AP-42	Other (sp	ecify):			
IV. Em	ission Fa	actors (Pos	t Contro	l)							
NO	x	CC)	SO	2	VO	С	Formal	dehyde	PM	10
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	t Emissic	on Control:		CR Catalyst		an Operatio		Parameter A	Adjustmen	1t	
Stratif	ied Charg	ge		C Catalyst		her (Specify): <u>AFR(</u>	: Oxidati	ve Cata	IVSt	
Note: Mu	$\frac{1}{1}$	$\frac{t \ a \ copy \ of \ a}{1 \ 1 \ 1 \ copy \ of \ a}$	$\frac{1}{1}$	<i>ifacturer co</i>	ntrol info	ormation the	it demons	strates con	rol efficie	ency.	NT
Is Format	aenyde ir		ne vocs	(Charle all	41 4	·1)					INO
	ederal al	IMACT 75	andards	(Check all	that app	oly)		ist Country			
VI A	JJJJ 🔼	MACT ZZ		NSPS IIII		e 30 Chapte	er II/ - L	ist County:	-		
VI. A		af the eneri		e otomon'a si	to notin o		tin a an a	ification d	ata		
1. Subm 2. Subm	it a copy	al fuel gas a	ne manui analysis.	including su	alfur cont	tent and hea	ting spec	e. For gase	ata. ous fuels.	provide mo	ole
percei	nt of cons	stituents.	<i>,</i>	0			U	U	,	1	
3. Subm	it descrip	otion of air/	fuel ratio	control syst	tem (man	nufacturer ir	nformatio	n is accept	able).		



. <u> </u>												
I. Eng	gine Data	a										
Manufact	urer:		Model N	0.		Serial No.			Manufac	ture Date:		
Caterpillar		(G3612			BB200121			02/11/201	7		
Rebuilds	Date:		No. of C	ylinders:		Compress	ion Ratio):	EPN:			
			12			7.6:1			C-8			
Applicati	on: 🗙	Gas Compr	ression	Electric	Generati	on Re	frigeratio	n 🗌 Er	nergency/	Stand by		
X 4 Strol	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	nited	Dual Fue	el 🗌 Fi	uel Injected		
Diesel	🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged [Turbo	Charged a	nd I.C.	X Turbo C	Charged	
	ooled	[I.C. Wate	r Temperat	ure	🗙 Lean Bu	rn		Rich H	Burn		
Ignition/I	njection	Timing:	Fixed: X				Vari	able:				
Manufact	ure Horse	epower Rati	ing: 3,750)		Proposed	Horsepo	wer Rating	3,750			
				Di	scharge	Parameter	S					
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)	
25.00			1.75			816			165.37			
II. Fue	el Data											
Type of F	uel: 🛛 🗙	Field Gas		andfill Gas		Gas 🗌] Natural	Gas I	Digester C	ias 🗌 Dies	sel	
Fuel Cons	sumption	(BTU/bhp-	hr): 7,47	5 He	at Value	: 1,208	(HHV)				(LHV)	
Sulfur Co	ntent (gra	ains/100 scf	i - weight	%): < 0.25	gr/100 sc	f						
III. Em	ission Fa	actors (Bef	ore Cont	rol)		1				1		
NO	х	CC)	SO	2	VO	С	Formal	dehyde	PM	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	n Factors:	X Manı	Ifacturer Da	ita 🔀 A	AP-42 □ 0	Other (sp	ecify):				
IV. Em	ission Fa	actors (Post	t Contro	l)	-							
NO	X	CC)	SO	2	VO	C	Formal	dehyde	PM	10	
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	<u></u>	0.322		AP-42		0.245		0.027		AP-42		
Method of	f Emissic	on Control:		CR Catalyst		an Operation		Parameter A	Adjustmen	1t		
Stratin	ied Charg	ge		C Catalyst	X Uti	her (Specify): <u>AFKU</u>	C Oxidau	Ve Cata	IVST		
Note: Mu	ist submit	t a copy of c	$\frac{1}{1}$ NOC	facturer con	ntrol injo	ormation the	it demons	strates con	rol efficie	$\frac{2ncy}{\Box}$	ът	
Is Format	denyde ir	iciudea in i	he vous	? (Check all	that any	1>					No	
	ederai ai	ad State Su	andards		that app	- 20 Chapta	- 117 T	-+ Country				
VI A	JJJJ 🔼	MACI ZZ		NSPS III		e 50 Chapte	Т I I / - L	Ist County.				
VI. A		I Intormau	ion	E sturor'a ai	to roting	ar conorol r	ting ano	fication d	ata			
2. Subm	it a copy	al fuel gas a	analysis,	including si	alfur cont	tent and hea	ting spec	e. For gase	ata. ous fuels,	provide mo	ole	
percer	nt of cons	stituents.			-			U U		r		
3. Subm	it descrip	otion of air/	fuel ratio	control sys ⁴	tem (man	ufacturer ir	oformatio	n is accept	able).			



I. Eng	gine Dat:	a									
Manufact	urer:		Model N	0.		Serial No.			Manufac	ture Date:	
Caterpillar		(G3612		I	BB200120			02/09/201	7	
Rebuilds	Date:		No. of C	vlinders:		Compress	ion Ratio		EPN:		
		-	12		I	7.6:1			C-9		
Applicati	ion: 🗙	Gas Compr	ession	Electric	Generati	on Ref	frigeratio	n 🗌 Er	nergency/	Stand by	
× 4 Strol	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	gnited] Dual Fue	əl 🗌 Fı	uel Injected	
Diesel	I 🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged [Turbo	Charged a	nd I.C.	🗙 Turbo C	Charged
	ooled	<u>ا </u>	I.C. Wate	er Temperat	ure	🗙 Lean Bu	rn		Rich H	Burn	
Ignition/I	Injection	Timing: J	Fixed: X				Vari	able:			
Manufact	ure Horse	epower Rati	ing: 3,750)		Proposed	Horsepor	wer Rating	: 3,750		
				Di	scharge	Parameter	S				
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)
25.00			1.75			816			165.37		
II. Fue	el Data										
Type of F	uel: 🗵	Field Gas		andfill Gas		Gas 🗋	Natural	Gas 🔲 I	Digester C	as 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,47	5 He	at Value:	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 sct	- weight	. %): < 0.25	gr/100 scf	f					
III. Em	ission Fa	ictors (Befo	ore Cont	rol)			~			DIA	1.0
	X)	50	2		C	Formal	dehyde	PM	10
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	Emissio	3.220	Man	AP-42		0.790	Othor (an	0.180		AP-42	<u> </u>
IV Em	Elilission Fe	1 Factors (Pos	t Contro			AP-42 ∟ '	Other (sp	ecity).			
IV. En	155101111			so	2	VO	C	Formal	dehvde	PM	10
σ/hn-hr		σ/hn-hr	nnmy	σ/hn-hr		σ/hn-hr	nnmy	σ/hn-hr	nnmv	σ/hn-hr	nnmy
0.300	phu.	0.322	ppm	AP-42	ppm,	0.245	PP ^{III}	0.027	Phu.	AP-42	phu,
Method o	f Emissic	on Control:		CR Catalyst	X Le	an Operatio	n 🗌 F	Parameter A	L Adiustmer	nt	<u>ا</u>
☐ Stratif	ied Char	ge		C Catalyst	 X Ot!	her (Specify): AFR(C: Oxidati	ve Cata	lvst	
Note: Mı	ust submi	t a copy of a	any manı	ifacturer co	ntrol infc	prmation the	at demons	strates con	trol efficie	ency.	
Is Formal	dehyde in	ncluded in t	he VOCs	;?						Yes 🗙	No
V. F	ederal a	nd State St	andards	(Check all	that app	oly)					
X NSPS	1111 🗙	MACT ZZ	ZZZ	NSPS IIII	Title	e 30 Chapte	r 117 - L	ist County:	·		
VI. A	dditiona	l Informat	ion								
1. Subm	vit a conv										
- a 1	in a copy	of the engi	ne manuf	facturer's sit	te rating of	or general ra	ating spec	cification d	ata.		-
2. Subm	it a typic	of the engi al fuel gas a stituents	ne manut analysis, i	facturer's si including su	te rating (ilfur cont	or general ratent and hea	ating spec ting value	cification d e. For gase	ata. ous fuels,	provide mo	ole



I. Eng	gine Data	a									
Manufact	urer:		Model N	0.	_	Serial No.			Manufac	ture Date:	_
Caterpillar		(G3612			BB200122			02/14/201	7	
Rebuilds	Date:		No. of C	ylinders:		Compress	ion Ratio):	EPN:		
			12			7.6:1			C-10		
Applicati	on: 🗙	Gas Compr	ression	Electric	Generati	on Re	frigeratio	n 🗌 En	nergency/	Stand by	
× 4 Strol	ke Cycle	2 Stro	ke Cycle	Carb	ureted	🗙 Spark Ig	nited	Dual Fue	el 🗌 Fi	uel Injected	
Diesel	🗌 Na	turally Asp	irated	Blower	/Pump Sc	cavenged [Turbo	Charged a	nd I.C.	X Turbo C	Charged
	oled		I.C. Wate	er Temperat	ure	🗙 Lean Bu	rn		Rich H	Burn	
Ignition/I	njection	Timing:	Fixed: X				Vari	able:			
Manufact	ure Horse	epower Rati	ing: 3,750)		Proposed	Horsepor	wer Rating	3,750		
				Di	scharge	Parameter	S		1		
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (FPS)
25.00			1.75			816			165.37		
II. Fue	l Data										
Type of F	uel: 🛛 🗙	Field Gas		andfill Gas		Gas 🗋	Natural	Gas 📙 I	Digester C	ias 🗌 Dies	sel
Fuel Cons	sumption	(BTU/bhp-	hr): 7,47	5 He	eat Value	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 scf	î - weight	: %): < 0.25	gr/100 sc	f					
III. Em	ission Fa	actors (Bef	ore Cont	rol)		1		1		1	
NO	х	CC)	SO	2	VO	С	Formale	lehyde	PM	10
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	n Factors:	X Manu	Ifacturer Da	ita 🔀 A	AP-42 □ 0	Other (sp	ecify):			
IV. Em	ission Fa	actors (Post	t Contro	l)	-						
NO	X	CC)	SO	2	VO	C	Formal	lehyde	PM	10
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	<u>ь</u> т	0.245		0.027	1. (AP-42	L
Method of	t Emissic	on Control:		CR Catalyst		an Operation		² arameter <i>P</i>		it List	
Stratin	led Charg	ge		C Catalyst		her (Specify): <u>AFRU</u>		Ve Cala	IVSt	
INOLE: MIN	Ist submu	t a copy of a	$\frac{1}{1}$	<i>ifacturer co</i>	ntroi injo	ormation the	it aemons	strates com	<i>тоі е</i> дісіе	$\frac{2ncy}{\Box}$	NL
	adaral a	ad State St	ne vous	(Chook all	that ann	.l.,)					INO
		IMACT 72		NCDS IIII		a 20 Chapte	- 117 I	ist County:			
	dditiona	Informat		Noro IIII			1 1 1 / - L	Ist County.			
VI. 74	it a copy	of the engi	1011 na manuf	Footurar's sit	to rating	or general r	ating snow	aification d	ata		
2. Subm	it a typic	al fuel gas a	analysis,	including su	ulfur cont	tent and hea	ting valu	e. For gase	ous fuels,	provide mo	ole
percer	nt of cons	stituents.	-	-			-				
3. Subm	it descrip	otion of air/	fuel ratio	control syst	tem (man	ufacturer in	iformatio	n is accepta	able).		



I. Eng	gine Data	a									
Manufact	urer:		Model N	0.		Serial No.			Manufac	ture Date:	
Cummins		(JSK60			33186415			04/15/201	1	
Rebuilds I	Date:		No. of C	ylinders:		Compressi	ion Ratio	:]	EPN:		
		1	16			11.4:1			G-4		
Applicati	on:	Gas Compr	ession	× Electric	Generati	on 🗌 Ref	rigeratio	n 🗌 En	hergency/	Stand by	
X 4 Strol	ke Cycle	2 Stro	ke Cycle	Carbı	ureted	⊠ Spark Ig	nited] Dual Fue	el 🗌 Fi	uel Injected	
Diesel	🗌 Na	turally Asp	irated	Blower /	Pump Sc	avenged [Turbo	Charged a	nd I.C.	🗙 Turbo C	harged
	oled	ر <u>ا</u>	I.C. Wate	r Temperati	ure [× Lean Bu	rn		Rich H	Burn	
Ignition/I	njection	Timing: J	Fixed: X			1	Vari	able:			
Manufact	ure Horse	epower Rati	ng: 1,953	j		Proposed	Horsepov	wer Rating	1,953		
				Di	scharge	Parameters	5		1		
Stack	Height (Feet)	Stack	Diameter (Feet)	Stack T	emperat	ure (°F)	Exit	Velocity (I	FPS)
22.00			1.33			986			28.97		
II. Fue	l Data										
Type of F	uel: 🛛 🗙	Field Gas		andfill Gas		Jas 🗌] Natural	Gas [] I	Digester C	ias 🗌 Dies	el
Fuel Cons	sumption	(BTU/bhp-	hr): 7,858	3 He	at Value:	: 1,208	(HHV)				(LHV)
Sulfur Co	ntent (gra	ains/100 scf	- weight	%): < 0.25	gr/100 scf	f					
III. Em	ission Fa	actors (Befo	ore Cont	rol)							
NO	X	CC)	SO	2	VO	С	lehyde	PM	10	
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	I	1.740	لا	AP-42		2.740		0.340		AP-42	
Source of	Emission	n Factors:	🔀 Manu	Ifacturer Da	ita 🔀 A	∧P-42 □ 0	Other (sp	ecify):			
IV. Em	ission Fa	ictors (Post	t Control	l)							
NO	Х	CC)	SO2	2	VO	С	Formalo	lehyde	PM	10
g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp-hr	ppmv	g/hp hy	nnmv	g/hp-hr	ppmv	g/hp-hr	ppmv
0.700	1 '		, , , , , , , , , , , , , , , , , , , ,	8 - r	I I	g/np-nr	PP ^{III}	8 F			1
		0.348		AP-42		g/np-nr 0.411		0.068		AP-42	
Method of	f Emissic	0.348 on Control:		AP-42 CR Catalyst	X Lea	0.411 an Operation	n P	0.068 'arameter A	djustmen	AP-42 t	
Method of Stratif	f Emissic ied Charg	0.348 on Control: ge	□ NSC	AP-42 C Catalyst	X Lea	0.411 an Operation her (Specify	n P): Oxida	0.068 arameter A ative Cata	∖djustmen Il ∨st	AP-42 t	
Method of Stratif	f Emissic ied Char _ž st submit	0.348 on Control: ge t a copy of c	NSC	AP-42 CR Catalyst C Catalyst facturer cor	X Lea X Oth	0.411 an Operation her (Specify <i>rmation tha</i>	n P): Oxida t demons	0.068 Parameter A ative Cata	Adjustmen Ilvst rol efficie	AP-42 t <i>incy.</i>	
Method o Stratif Note: Mu Is Formal	f Emissic ied Char <i>ist submit</i> dehyde ir	0.348 on Control: ge t a copy of c ncluded in th	□ NSC □ JLC <i>iny manų</i> he VOCs	AP-42 CR Catalyst C Catalyst facturer con	X Lea Oth	0.411 an Operation ner (Specify <i>prmation tha</i>	n P P: Oxida It demons	0.068 Parameter A Pative Cata	Adjustmen Ilvst rol efficie	AP-42 t <i>ncy.</i> Yes X	No
Method o Stratif Note: Mu Is Formald V. Fo	f Emissic ied Char _i <i>ist submi</i> dehyde ir ederal a	0.348 on Control: ge <i>t a copy of a</i> ncluded in t 1d State St	NSC JLC Iny manu he VOCs andards	AP-42 CR Catalyst C Catalyst <i>facturer cov</i> ? (Check all	Lea Lea Oth ntrol info that app	0.411 an Operation ner (Specify prmation that ly)	n P): Oxida nt demons	0.068 Parameter A ative Cata	adjustmen Ilvst rol efficie	AP-42 t <i>ncy.</i> ☐ Yes ⊠	No
Method o Stratif Note: Mu Is Formalo V. Fo X NSPS	f Emissic ied Char _i <i>(st submi.</i> dehyde in ederal an JJJJ X	0.348 on Control: ge t a copy of a ncluded in t nd State State MACT ZZ	INSC JLC Iny manu he VOCs andards ZZ	AP-42 CR Catalyst C Catalyst facturer con ? (Check all NSPS IIII	K Lea Oth mtrol info that app □ Title	<pre>g/np-nr 0.411 an Operation her (Specify rmation that ly) e 30 Chapte</pre>	n _ F): Oxida it demons r 117 - Li	0.068 Parameter A ative Cata strates cont	Adjustmen	AP-42 t <i>ncy</i> . ☐ Yes ⊠	No
Method o Stratif Note: Mu Is Formale V. Fo X NSPS VI. A	f Emissic ied Chara <i>ist submi</i> dehyde in ederal an JJJJ X dditiona	0.348 on Control: ge t a copy of a neluded in t nd State State MACT ZZ I Informati	NSC JLC Iny manu he VOCs andards ZZZ	AP-42 CR Catalyst C Catalyst facturer con ? (Check all NSPS IIII	K Lean K Other information of the second	0.411 an Operation her (Specify <i>prmation that</i> ly) e 30 Chapter	n _ F): Oxida (): O	0.068 Parameter A <u>ative Cata</u> strates cont	Adjustmen	AP-42 t ncy.	No
Method o Stratif Note: Mu Is Formale V. Fo NSPS VI. A 1. Subm 2. Subm	f Emissic ied Char: <i>ist submi</i> dehyde in ederal an JJJJ X dditiona it a copy it a turio	0.348 on Control: ge t a copy of a ncluded in t nd State State MACT ZZ I Information of the enginal field gas a	NSC JLC Iny manu he VOCs andards ZZZ	AP-42 CR Catalyst C Catalyst facturer con ? (Check all NSPS IIII acturer's sit poluding su	Lea Oth ntrol info that app Title e rating o	ynp-nr 0.411 an Operation her (Specify prmation that ly) e 30 Chapte or general ra	n F): Oxida ut demons r 117 - Li uting spece	0.068 Parameter A ative Cata strates cont ist County:	Adjustmen Ilvst rol efficie	AP-42 t ncy. Yes X	No
Method o Stratif Note: Mu Is Formalo V. Fo NSPS VI. A 1. Subm 2. Subm percer	f Emissic ied Char; <i>ist submi</i> dehyde in ederal a JJJJ X dditiona it a copy it a typica it of cons	0.348 on Control: ge t a copy of a ncluded in t nd State St MACT ZZ I Informati of the engin al fuel gas a stituents.	□ NS(□ JLC any manu he VOCs andards ZZZ □ ion ne manufa unalysis, i	AP-42 CR Catalyst C Catalyst facturer con? (Check all NSPS IIII acturer's sit ncluding su	Lea Content Conte	 g/np-nr 0.411 an Operation her (Specify <i>prmation that</i> her (Specify) <i>prmation that</i> her (Specify) <i>prmation that</i> <i>her (Specify)</i> <i>prmation that</i> <i>prmatic that the problem the problem that the problem that the problem the problem the problem </i>	n F): Oxida (): Oxi	0.068 Parameter A Parameter A Pative Cata Parameter A Pative Cata Pative Cata	Adjustmen Ilvst rol efficie ata. ous fuels,	AP-42 t <i>ncy</i> .	No