Mail Application To:

New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505

Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb



AIRS No.:

Universal Air Quality Permit Application

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

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well. For NOI applications, submit the entire UA1, UA2, and UA3 applications on a single CD (no copies are needed). For NOIs, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required.

This application is submitted as (check all that apply):
□ Request for a No Permit Required Determination (no fee) Updating an application currently under NMED review. Include this page and all pages that are being updated (no fee required). Construction Status: 🗆 Not Constructed Existing Permitted (or NOI) Facility □ Existing Non-permitted (or NOI) Facility Minor Source: □ a NOI 20.2.73 NMAC □ 20.2.72 NMAC application or revision □ 20.2.72.300 NMAC Streamline application Title V Source: 🗆 Title V (new) 🗵 Title V renewal 🗆 TV minor mod. 🗆 TV significant mod. TV Acid Rain: 🗆 New 🗆 Renewal □ minor modification to a PSD source PSD Major Source: □ PSD major source (new) □ a PSD major modification

Acknowledgements:

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

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

 \Box Check No.: N/A in the amount of N/A

I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page. □ This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.

This facility qualifies to receive assistance from the Small Business Environmental Assistance Program (SBEAP) but does not qualify for 50% of the normal application and permit fees. To see if you qualify for SBEAP assistance and for the small business certification form go to https://www.env.nm.gov/aqb/sbap/small_business_criteria.html).

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.70.300.B.2 NMAC NMAC**

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

Section 1 – Facility Information

Sec	tion 1-A: Company Information	AI # if known (see 1 st 3 to 5 #s of permit IDEA ID No.):1331	Updating Permit/NOI #: P173R3			
1	Facility Name: Cedar Hill Compressor Station	Plant primary SIC Code (4 digits): 4922				
1		Plant NAIC code (6 dig	gits): 237120			
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From Cedar Hill, travel north on Hwy 550 then exit onto Road 2300 on the left. Travel on Road 2300 for 1.1 miles and take a slight left turn to stay on Road 2300. Continue on Road 2300 for 0.6 miles and the facility will be on your left.					
2	Plant Operator Company Name: Enterprise Products Operating LLC	Phone/Fax: (713) 381-6	5595 / (281) 887-8086			

a	Plant Operator Address: PO Box 4324, Houston TX 77210-4324						
b	Plant Operator's New Mexico Corporate ID or Tax ID: 3289188						
3	Plant Owner(s) name(s): Enterprise Field Services, LLC	Phone/Fax: (713) 381 - 6595 / (281) 887-8086					
a	Plant Owner(s) Mailing Address(s): PO Box 4324, Houston TX 77210-4324						
4	Bill To (Company): Enterprise Products Operating LLC	Phone/Fax: (713) 381- 6595 / (281) 887-8086					
a	Mailing Address: PO Box 4324, Houston TX 77210-4324	E-mail: environmental@eprod.com					
5	☑ Preparer: Robert Havalda □ Consultant:	Phone/Fax: (713) 381-6698 / (281) 887-8086					
а	Mailing Address: P.O. Box 4324, Houston, TX 77210-4324	E-mail: rmhavalda@eprod.com					
6	Plant Operator Contact: Jim Lieb	Phone/Fax: (505) 599-2159 / (505) 599-2538					
a	Address: 614 Reilly Ave Farmington NM 87401	E-mail: jplieb@eprod.com					
7	Air Permit Contact: Robert Havalda	Title: Sr. Environmental Engineer					
а	E-mail: rmhavalda@eprod.com	Phone/Fax: (713) 381- 6698 / (281) 887-8086					
b	Mailing Address: PO Box 4324, Houston TX 77210-4324						

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? \square Yes \square No	1.b If yes to question 1.a, is it currently operating in New Mexico?					
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? □ Yes ⊠ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ⊠ Yes □ No					
3	Is the facility currently shut down? □ Yes ⊠ No	If yes, give month and year of shut down (MM/YY): N/A					
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? □ Yes ⊠ No						
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since $8/31/1972$?						
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ⊠ Yes □ No	If yes, the permit No. is: P-173-R3					
7	Has this facility been issued a No Permit Required (NPR)? □ Yes ⊠ No	If yes, the NPR No. is: N/A					
8	Has this facility been issued a Notice of Intent (NOI)? □ Yes ⊠ No	If yes, the NOI No. is: N/A					
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ⊠ Yes □ No	If yes, the permit No. is: 1710-M3R2					
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? □ Yes ⊠ No	If yes, the register No. is: N/A					

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)								
a	Current	Hourly: 48 MMscf	Daily: 115 MMscf	Annually: 42 Bscf					
b	b Proposed Hourly: 48 MMscf Daily: 115 MMscf Annually: 42 Bscf								
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)								
a	Current	Hourly: 48 MMscf	Daily: 115 MMscf	Annually: 42 Bscf					
b	Proposed	Hourly: 48 MMscf	Daily: 115 MMscf	Annually: 42 Bscf					

Section 1-D: Facility Location Information

1	Section: 29	Range: 9W	Township: 32N	County: S	an Juan		Elevation (ft): 6,190	
2	UTM Zone: 12 or 🛛 13				□ NAD 27	D NAD 8	33 🛛 WGS 84	
а	UTM E (in meter	s, to nearest 10 meter	s): 241100 m E	UTM N (in	n meters, to neares	t 10 meters):	4093210 m N	
b	AND Latitude ((deg., min., sec.):	36°56'58.00"N	Longitude	e (deg., min., se	ec.): 107°54	4'27.00''W	
3	Name and zip c	ode of nearest Ne	ew Mexico town: Cedar Hi	ll, NM 8741	0			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Cedar Hill, travel north on Hwy 550 then exit onto Road 2300 on the left. Travel on Road 2300 for 1.1 miles and take a slight left turn to stay on Road 2300. Continue on Road 2300 for 0.6 miles and the facility will be on your left.							
5	The facility is 2	2.2 miles northwe	st of Cedar Hill, NM.					
6	Status of land a (specify)	t facility (check o	one): ⊠ Private □ Indian/P	ueblo 🗆 Fe	deral BLM	Federal Fo	rest Service Other	
7	List all municip which the facili	balities, Indian tri ty is proposed to	bes, and counties within a t be constructed or operated	en (10) mile : Aztec, NM	e radius (20.2.7 IL Southern Ut	2.203.B.2 e Indian Re	NMAC) of the property on eservation	
8	20.2.72 NMAC closer than 50 www.env.nm.gov/a distances in kilo	c applications on km (31 miles) to aqb/modeling/class1ar pometers: N/A	ly: Will the property on v o other states, Bernalillo (reas.html)? □ Yes □ No (2	which the fa County, or a 0.2.72.206.4	acility is propo Class I area (s A.7 NMAC) I	osed to be see If yes, list a	constructed or operated be ll with corresponding	
9	Name nearest C	Class I area: Mesa	Verde National Park					
10	Shortest distance	ce (in km) from fa	cility boundary to the boundary	ndary of the	nearest Class	l area: 48.7	km	
11	Distance (meter lands, including	rs) from the pering mining overburg	neter of the Area of Operati len removal areas) to neare	ions (AO is est residence	defined as the e, school or occ	plant site in supied struc	nclusive of all disturbed eture: approximately 595 m	
12	Method(s) used to delineate the Restricted Area: Fence " Restricted Area " is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.							
13	Does the owner □ Yes ⊠ No A portable stati one location or	operator intend to onary source is not that can be re-ins	to operate this source as a pot a mobile source, such as talled at various locations,	an automot	ionary source a bile, but a sourc ot mix asphalt j	the second se	n 20.2.72.7.X NMAC? be installed permanently at moved to different job sites.	
14	Will this facility If yes, what is t	y operate in conju he name and perr	nction with other air regul nit number (if known) of th	ated parties ne other faci	on the same pr lity?	operty?	🖾 No 📋 Yes	

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

1	Facility maximum operating $(\frac{\text{hours}}{\text{day}})$: 24	$\left(\frac{\text{days}}{\text{week}}\right)$: 7	$(\frac{\text{weeks}}{\text{year}}): 52$	$(\frac{\text{hours}}{\text{year}})$: 8760			
2	Facility's maximum daily operating schedule (if less	s than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A	□AM □PM	End: N/A	□AM □PM		
3	Month and year of anticipated start of construction: N/A						
4	Month and year of anticipated construction completion: N/A						
5	Month and year of anticipated startup of new or modified facility: N/A						
6	Will this facility operate at this site for more than or	ne year? 🛛 Yes 🗆 No					

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? \Box Yes \boxtimes No If yes, specify: N/A							
а	If yes, NOV date or description of issue: N/A			NOV Tracking No: N/A				
b	Is this application in response to any issue listed in 1-F, 1 of	or 1a above? 🗆 Yes 🛙	No If Y	Yes, provide the 1c & 1d info below:				
с	c Document Title: N/A Date: N/A Requirement # (or page # and paragraph #): N/A							
d	Provide the required text to be inserted in this permit: N/A							
2	Is air quality dispersion modeling or modeling waiver being submitted with this application?							
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? □ Yes ⊠ No							
4	Will this facility be a source of federal Hazardous Air Poll	utants (HAP)? 🛛 Yes	□ No					
a	If Yes, what type of source? \boxtimes Major ($\boxtimes \ge 10$ tpy of aOR \square Minor ($\square < 10$ tpy of an	any single HAP OI y single HAP AND	$\begin{array}{c} \mathbf{R} \Box \geq 2 \\ \mathbf{D} \Box < 2 \end{array}$	5 tpy of any combination of HAPS) 5 tpy of any combination of HAPS)				
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? □ Yes	s 🛛 No						
	If yes, include the name of company providing commercia	l electric power to the	facility: N	V/A				
a	Commercial power is purchased from a commercial utility site for the sole purpose of the user.	company, which spe	cifically d	loes not include power generated on				

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

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

Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications) and/or 20.2.70 NMAC (Title V))

20.2.7	4/20.2.79 T(MAC (Major 1 5D/1(15K applications), and/or 20.2.70 T(1)		
1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Graham W. Bacon		Phone: (713) 381-6595
а	R.O. Title: Executive Vice President R.O. e-mail: environ		onmental@eprod.com
b	R. O. Address: P.O Box 4324, Houston TX 77210 - 4324		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): Ivan W. Zirbes		Phone (713) 381-6595
a	A. R.O. Title: Vice President	A. R.O. e-mail: en	vironmental@eprod.com
b	A. R. O. Address: P.O. Box 4324, Houston, TX 77210-4324		

3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership
	relationship): Enterprise Field Services LLC and Enterprise Products Operating LLC. Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be
4	permitted wholly or in part.): Enterprise Product Partners L.P.
a	Address of Parent Company: 1100 Louisiana St., Houston, TX 77002
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: N/A
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: Colorado, 5.6 km; Southern Ute Indian Reservation, 5.6 km; Navajo Nation Reservation, 33 km; Ute Mountain Reservation, 34 km Jicarilla Apache Nation Reservation, 64 km.

Section 1-I – Submittal Requirements

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

Hard Copy Submittal Requirements:

- One hard copy original signed and notarized application package printed double sided 'head-to-toe' <u>2-hole punched</u> as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use numbered tab separators in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.
- 2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard copy for Department use. This copy does not need to be 2-hole punched, but must be double sided. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.
- 3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically on compact disk(s) (CD). For permit application submittals, two CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal.
- 4) If air dispersion modeling is required by the application type, include the NMED Modeling Waiver OR one additional electronic copy of the air dispersion modeling including the input and output files. The dispersion modeling <u>summary report</u> <u>only</u> should be submitted as hard copy(ies) unless otherwise indicated by the Bureau. The complete dispersion modeling study, including all input/output files, should be submitted electronically as part of the electronic submittal.
- 5) If subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
 - a. one additional CD copy for US EPA,
 - b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

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

- 1) All required electronic documents shall be submitted in duplicate (2 separate CDs). A single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format with the number of additional hard copies corresponding to the number of CD copies required. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 3 electronic files (2 MSWord docs: Universal Application section 1 and Universal Application section 3-19) and 1 Excel file of the tables (Universal Application section 2) on the CD(s). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the core permit number (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the section # (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the header information throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision # (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. The footer information should not be modified by the applicant.

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Table 2-A: Regulated Emission Sources

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

					Manufact-	Requested	Date of Manufacture ²	Controlled by Unit #			RICE Ignition	
Unit Number ¹	Source Description	Make	Model #	Serial #	Capacity ³ (Specify Units)	Capacity ³ (Specify Units)	Date of Construction/ Reconstruction ²	Emissions vented to Stack #	fication Code (SCC)	For Each Piece of Equipment, Check One	Type (CI, SI, 4SLB, 4SRB, 2SLB) ⁴	Replacing Unit No.
1	Compressor Engine	Superior	16SGTC	322809	2650 hn	2476 hp	12/31/1997	N/A	20200254	x Existing (unchanged)	4SI B	
1	Compressor Engine	Superior	105010	522007	2050 np	2470 np	(unknown)	1	20200234	□ To Be Modified □ To be Replaced	TOLD	
2	Compressor Engine	Superior	16SCTC	318120	2650 hp	2476 hp	4/1/1996	N/A	20200254	x Existing (unchanged)	451 B	
2	Compressor Engine	Superior	105010	516129	2030 np	2470 np	(unknown)	2	20200234	□ To Be Modified □ To be Replaced	43LD	
2	а р.:	a .	1.000000	214600	0.000	0.17.61	4/1/1996	N/A	20200254	x Existing (unchanged) \Box To be Removed		
3	Compressor Engine	Superior	ISSGIC	314689	2650 hp	2476 hp	(unknown)	3	20200254	\Box New/Additional \Box Replacement Unit	4SLB	
	Startup Shutdown and						N/A	N/A		x Existing (unchanged)		
SSM	Maintenance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	□ New/Additional □ Replacement Uni	N/A	
							N/A	N/A		x Existing (unchanged)		
MALF	Malfunctions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31000299	□ New/Additional □ Replacement Uni	N/A	
							10/2	10/21		\Box Fo be Modified \Box To be Replaced		
										□ New/Additional □ Replacement Uni		
										□ To Be Modified □ To be Replaced		-
										 Existing (unchanged) Fo be Removed New/Additional Replacement Unit 		
										□ To Be Modified □ To be Replaced		
										□ Existing (unchanged) □ To be Removed		
										□ To Be Modified □ To be Replaced		
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										□ Existing (unchanged) □ To be Removed		
										□ New/Additional □ Replacement Uni		
										Existing (unchanged) To be Removed		
									1	New/Additional Replacement Uni Replacement Uni		

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

² Specify dates required to determine regulatory applicability.

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

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

Table 2-B: Insignificant Activities1 (20.2.70 NMAC)OR **Exempted Equipment** (20.2.72 NMAC)

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

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	Max Capacity List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) /F		For Each Piece of Equipment, Check Onc
	-		Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
FUC	Engitus Emissions	NI/A	N/A	N/A	20.2.72.202.B.5	N/A	☑ Existing (unchanged) □ To be Removed
FUG	Fugitve Emissions	IN/A	N/A	N/A	IA List Item #1A	N/A	□ To Be Modified □ To be Replaced
DIGT		27/4	N/A	N/A	20.2.72.202.B.6	N/A	\square Existing (unchanged) \square To be Removed
INST	Instrament Gas Dryer	N/A	N/A	N/A	IA List Item 2	N/A	□ New/Additional □ Replacement Unit □ To Be Modified □ To be Replaced
			Unknown	210	20.2.72.202.B.7	1996	□ Existing (unchanged) □ To be Removed
1101	Proudced Water Tank	Pesco, Inc	T-1432	bbls	IA List Item #1.a	pre-1996	☑ New/Additional □ Replacement Unit □ To Be Modified □ To be Replaced
			Unkown	100	20.2.72.202.B.8	1996	□ Existing (unchanged) □ To be Removed
T102	Used Lube Oil Tank	Pesco, Inc	T-1426	bbls	IA List Item #1.a	pre-1996	 ✓ New/Additional □ To Be Modified □ To be Replaced
			Unkown	100	20.2.72.202.B.9	1996	□ Existing (unchanged) □ To be Removed
T104	New Oil Tank	Pesco, Inc	T-1428	bbls	IA List Item #1.a	pre-1996	■ New/Additional ■ Replacement Unit
			Unkown	100	20.2.72.202.B.10	1996	□ Existing (unchanged) □ To be Removed
T105	Glycol Tank	Pesco, Inc	T-1430	bbls	IA List Item #1.a	pre-1996	■ New/Additional ■ Replacement Unit
							□ Existing (unchanged) □ To be Removed
							New/Additional Replacement Unit To be Replaced
							Existing (unchanged) To be Removed
							■ New/Additional ■ Replacement Unit
							\Box I to be Replaced
							New/Additional Replacement Unit
							□ To Be Modified □ To be Replaced
							Existing (dicinalized) Replacement Unit
							□ To Be Modified □ To be Replaced
							Existing (unchanged) I to be Removed New/Additional Replacement Unit
							□ To Be Modified □ To be Replaced
							Existing (unchanged) To be Removed New/Additional Replacement Unit
							□ To Be Modified □ To be Replaced
							□ Existing (unchanged) □ To be Removed
							□ To Be Modified □ To be Replaced

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s) ¹	Efficiency (% Control by Weight)	Method used to Estimate Efficiency		
There is no equipment at this facility that functions as a control								

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

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

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

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

TI	N	Ox	C	0	VO	DC	S	Ox	TS	SP^2	PM	(10^2)	PM	2.5^2	Н	$_2S$	Le	ead
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr										
Totals																		

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

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Table 2-E: Requested Allowable Emissions

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

Unit No.	N	Ox	C	0	V	DC	S	Ox	TS	SP ¹	PN	/110	PM	12.5	H	$_{2}S$	Le	ad
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr								
1	8.76	38.38	14.14	61.93	3.51	15.35	0.28	1.21	-	-	0.19	0.82	0.19	0.82	-	-	-	-
2	8.76	38.38	14.14	61.93	3.51	15.35	0.28	1.21	-	-	0.19	0.82	0.19	0.82	-	-	-	-
3	8.76	38.38	14.14	61.93	3.51	15.35	0.28	1.21	-	-	0.19	0.82	0.19	0.82	-	-	-	-
Totals	26.29	115.15	42.41	185.78	10.52	46.06	0.84	3.63	-	-	0.56	2.47	0.56	2.47	-	-	-	-

¹TSP Emission standard was repealed on November 30, 2018.

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

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

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

Lu:4 No	N	Ox	C	0	VC)C	S	Ox	TS	SP^2	PM	I 10 ²	PM	2.5^{2}	Н	$_{2}S$	Le	ad
Unit No.	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
SSM	-	-	-	-	128.21	4.08	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	128.21	14.08	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

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

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

	Serving Unit	N	Ox	C	0	V)C	S	Ox	T	SP	PN	110	PM	[2.5	□ H ₂ S or	r 🗆 Lead
Stack No.	Number(s) from Table 2-A	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr										
	Totals:																

Table 2-H: Stack Exit Conditions

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

Stack	Serving Unit Number(s)	Orientation	Rain Caps	Height Above	Temp.	Flow	Rate	Moisture by	Velocity	Inside
Number	from Table 2-A	(H-Horizontal V=Vertical)	(Yes or No)	Ground (ft)	(F)	(acfs)	(dscfs)	Volume (%)	(ft/sec)	Diameter (ft)
1	1	V	No	40	780	308.0	94.6	12%	179	1.5
2	2	V	No	40	780	308.0	94.6	12%	179	1.5
3	3	V	No	40	780	308.0	94.6	12%	179	1.5

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

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

Stack No.	Unit No.(s)	Total	HAPs	Acetal ⊠ HAP o	dehyde or 🗆 TAP	Acr ☑ HAP (olein or 🛛 TAP	Formal ☑ HAP o	ldehyde or 🗆 TAP	Provide Name	Pollutnat Here r 🗆 TAP	Provide Name	Pollutnat Here or 🗆 TAP	Provide Name	Pollutnat e Here or 🛛 TAP	Provide Name	Pollutnat Here or 🗆 TAP	Provide Name	Pollutnat Here r □ TAP
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	1	1.70	6.77	0.16	0.69	0.10	0.42	0.99	4.35										
2	2	1.70	6.77	0.16	0.69	0.10	0.42	0.99	4.35										
3	3	1.70	6.77	0.16	0.69	0.10	0.42	0.99	4.35										
SSM	5	0.87	0.042	-	-	-	-	-	-										
Tot	als:	5.97	20.34	0.47	2.07	0.29	1.27	2.98	13.05	-	-	-	-	-	-	-	-	-	-

Table 2-J: Fuel

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

	Fuel Type (low sulfur Diesel,	Fuel Source: purchased commercial,		Speci	fy Units		
Unit No.	ultra low sulfur diesel, Natural Gas, Coal,)	gas, raw/field natural gas, residue (e.g. SRU tail gas) or other	Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
1	Natural Gas	pipeline quality natural gas	900 Btu/scf	18.82 MMBtu/hr	164,819 MMBtu/yr	5 gr S/100ft ³	N/A
2	Natural Gas	pipeline quality natural gas	900 Btu/scf	18.82 MMBtu/hr	164,819 MMBtu/yr	5 gr S/100ft ³	N/A
3	Natural Gas	pipeline quality natural gas	900 Btu/scf	18.82 MMBtu/hr	164,819 MMBtu/yr	5 gr S/100ft ³	N/A

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

					Vapor	Average Stora	age Conditions	Max Storag	e Conditions
Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Molecular Weight (lb/lb*mol)	Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
			N/A- The tanks located at this faci	lity are exem	pt/insignificant				

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-	Roof Type (refer to Table 2-	Cap	acity	Diameter (M)	Vapor Space	Co (from Ta	ble VI-C)	Paint Condition	Annual Throughput	Turn- overs
			LR below)	LR below)	(bbl)	(M ³)	()	(M)	Roof	Shell	VI-C)	(gal/yr)	(per year)
	•	-		The tank em	issions are expem	pt and are conside	red insignifigant a	activities					

Table 2-L 2.	Liquid Storage	Tank Data	Codes	Reference Ta	ahle
1 abic 2-112.	Liquiu Storage	Lank Data	Coucs	KULLUNCE I	inic

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

	Materi	al Processed		Μ	laterial Produced		
Description	Chemical Composition	Phase (Gas, Liquid, or Solid)	Quantity (specify units)	Description	Chemical Composition	Phase	Quantity (specify units)
Inlet Natrual Gas	Mixed Hydrocarbons	Gas	115 MMscf/day	Natural Gas	Mixed Hydrocarbon	Gas	115 MMscf/day

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
				N/A					

Table 2-O: Parametric Emissions Measurement Equipment

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

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
			N/A					

Table 2-P: Greenhouse Gas Emissions

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

		CO ₂ ton/yr	N2O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²						Total GHG Mass Basis ton/yr ⁴	Total CO₂e ton/yr ⁵
Unit No.	GWPs ¹	1	298	25	22,800	footnote 3							
1	mass GHG	9632.78	0.018	0.18								9633	
1	CO ₂ e	9632.78	5.364	4.50									9643
2	mass GHG	9632.78	0.018	0.18								9633	
2	CO ₂ e	9632.78	5.364	4.50									9643
2	mass GHG	9632.78	0.018	0.18								9633	
3	CO ₂ e	9632.78	5.364	4.50									9643
FUC	mass GHG	6.13	-	9.40								16	
rug	CO ₂ e	6.13	-	235.00									241
INCT	mass GHG	1.81	-	2.77								5	
11151	CO ₂ e	1.81	-	69.25									71
CCM	mass GHG	298.51	-	457.74								756	
221AI	CO ₂ e	298.51	-	11443.50									11742
	mass GHG												
	CO ₂ e												
	mass GHG												
	CO ₂ e												1
	mass GHG												
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	CO ₂ e												
	mass GHG												
	CO2e												
	mass GHG											29675	
Total	COre			Ì	l .		l .	Ì		1	Ì		40982

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

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

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

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

⁵ CO₂e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Application Summary

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

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

Enterprise Field Services LLC owns and Enterprise Products Operating LLC (Enterprise) operates a natural gas compressor station, known as the Cedar Hill Compressor Station (Cedar Hill). Cedar Hill is located in Township 32N, Range 9W, Section 29, approximately 2.2 miles northwest of Cedar Hill, New Mexico in San Juan County.

The purpose of this application is to renew Permit No. P173-R3. The most recent permit update was completed on April 6, 2015. The only change that has occurred at the facility since that time was the addition of four storage tanks that were identified via an audit. The storage tanks are considered exempt activities in accordance with NMAC 20.2.72.202.B.5 and are also insignificant activities under List Item # 1A.with NMAC 20.2.72.202.B.5.

This site is currently operating under Title V Permit No. P173-R3 and NSR Permit No. 1710M3R2.

Process Flow Sheet

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

A process flow diagram for Cedar Hill is included on the following page.



Plot Plan Drawn To Scale

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

A plot plan for Cedar Hill is included on the following page.



All Calculations

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

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

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

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

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

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

Significant Figures:

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

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

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

- (1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;
- (2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**
- (3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
- (4) The final result of the calculation shall be expressed in the units of the standard.

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

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

Emission Calculation Details:

A summary of criteria pollutant emissions for the Cedar Hill Compressor Station is included in Section 6, Table 6 1a. A summary of the site's hazardous air pollutant (HAP) emissions is provided in Section 6, Table 6-1b. A summary of the site's green house gas (GHG) emissions is provided in Section 6, Table 6-2. Note that the emissions represented in this application remained unchanged from the current authorized Title V permit.

Compressor Engines (3) - Superior 16SGTC, Unit IDs 1 -3

The engines in this application are existing sources and the operation of the engines is not being changed with this application. NOx, CO, and VOC emission factors are from vendor data. PM, SO2, and HAP emissions are based on AP-42 emission factors. The SO2 factor has been adjusted to match pipeline specifications for sulfur content. Vendor fuel consumption data is used in conjunction with AP-42 factors. Nameplate horsepower is conservatively used to estimate emissions. Engine emission summary details are provided in Tables 6-3a and 6-3b.

GHG emissions are included for the engines on Table 6-3a. Emission factors for GHG emissions from natural gas combustion are taken from 40 CFR 98, Tables C-1 and C-2. Table 6-2 includes a summary of all GHG emissions.

Fugitives, Unit ID FUG

Fugitive component emissions are based on component counts and gas sample analysis results for the Cedar Hill facility. The fugitive emission calculation details are provided in Table 6-4. A copy of the gas analysis and the basis for the fugitive emission factors (AP-42) are provided in Section 7. Fugitive component emissions meet the requirements of exemption 20.2.72.202 B.5.

Instrument Gas Dryer, Unit ID INST

This site includes an instrument gas dryer (INST). Estimated INST emissions are shown on Table 6-5. The gas analysis is provided in Section 7. Instrument gas dryer emissions meet the requirements of exemption 20.2.72.202.B.5.

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

This site is expected to experience blowdowns, planned maintenance and unscheduled emergency shutdowns, and compressor engine startup. SSM event volumes and frequencies are based on historical event data and process knowledge. Estimated SSM emissions are shown on Table 6-6. The gas analysis is provided in Section 7.

Malfunction Emissions, Unit ID MALF

This site is expected to experience malfunction emissions from various units. Accordingly, 10 tons per year of malfunction emissions have been added to the NSR permit pursuant to the NMED IMPLEMENTATION GUIDANCE FOR PERMITTING SSM EMISSIONS AND EXCESS EMISSIONS (dated June 7, 2012).

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO₂e emissions from your facility.

2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO₂e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 <u>Mandatory Greenhouse Gas Reporting</u>.

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

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

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

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

Sources for Calculating GHG Emissions:

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

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

Global Warming Potentials (GWP):

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

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

Metric to Short Ton Conversion:

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

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

Table 6-1aProject Emissions Summary* (Criteria Pollutants)Cedar Hill Compressor StationEnterprise Field Services, LLC

ID Emissions Source		Description	N	Ox	С	0	V	oc	F	M	SO2		Included in Facility-wide Potential
	Source		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
1	Engine	Superior 16SGTC	8.76	38.38	14.14	61.93	3.51	15.35	0.19	0.82	0.28	1.20	Yes
2	Engine	Superior 16SGTC	8.76	38.38	14.14	61.93	3.51	15.35	0.19	0.82	0.28	1.20	Yes
3	Engine	Superior 16SGTC	8.76	38.38	14.14	61.93	3.51	15.35	0.19	0.82	0.28	1.20	Yes
FUG	Fugitives	Fugitive Emissions	-	-	-	-	0.02	0.08	-	-	-	-	IA List Item #1.a
INST	INST	Instrument Gas Dryer	-	-	-	-	0.01*	0.02	-	-	-	-	IA List Item #1.a
SSM	SSM	Startup, Shutdown, & Maintenance	-	-	-	-	128.21	4.08	-	-	-	-	Yes
MALF	Malfunctions	Malfunctions	-	-	-	-	-	10.00	-	-	-	-	Yes
-		Facility-wide Potential Emissions	26.29	115.15	42.41	185.78	138.72	60.14	0.56	2.47	0.83	3.61	

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

Table 6-1b Project Emissions Summary* (HAP Emissions) Cedar Hill Compressor Station Enterprise Field Services, LLC

EDN	Emissions Source	Acetal	dehyde	Acr	olein	Ben	zene	Formal	dehyde	Meth	nanol	n-He	exane	Tolu	iene	Total	HAPS	Included in Facility-wide Potential
EFN	Emissions Source	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	Emission Total?
1	Engine	0.16	0.69	0.10	0.42	0.066	0.29	0.99	4.35	0.047	0.21	0.061	0.27	0.068	0.30	1.70	6.77	Yes
2	Engine	0.16	0.69	0.10	0.42	0.066	0.29	0.99	4.35	0.047	0.21	0.061	0.27	0.068	0.30	1.70	6.77	Yes
3	Engine	0.16	0.69	0.10	0.42	0.066	0.29	0.99	4.35	0.047	0.21	0.061	0.27	0.068	0.30	1.70	6.77	Yes
FUG	Fugitives	-	-	-	-	0.01*	0.01*	-	-	-	-	0.01*	0.01*	0.01*	0.01*	0.03	0.03	IA List Item #1.a
INST	INST	-	-	-	-	0.01*	0.01*	-	-	-	-	0.01*	0.01*	0.01*	0.01*	0.03	0.03	IA List Item #1.a
SSM	SSM	-	-	-	-	0.088	0.01*	-	-	-	-	0.68	0.022	0.10	0.01*	0.87	0.042	Yes
MALF	Malfunctions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
Potential Emissions		0.47	2 07	0.29	1 27	0.28	0.87	2 98	13.05	0 14	0.62	0.86	0.82	0 31	0.91	5 97	20 34	

NOTE: Not all speciated HAPS are shown on the above table; however, the total HAP emissions from each source is the total of all HAP pollutants from the source. Per form instructions, only HAPs emitted in excees of 1 tpy are reported on the UA2 form.

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

Table 6-2Project Emissions Summary (GHG Emissions)Cedar Hill Compressor StationEnterprise Field Services, LLC

	Emission	Description	C	02	Nž	20	CH4	
U	Source	Description	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	Engine	Superior 16SGTC	2,199.27	9,632.78	0.004	0.018	0.04	0.18
2	Engine	Superior 16SGTC	2,199.27	9,632.78	0.004	0.018	0.04	0.18
3	Engine	Superior 16SGTC	2,199.27	9,632.78	0.004	0.018	0.04	0.18
FUG	Fugitives	Fugitive Emissions	1.40	6.13			2.15	9.40
INST	INST	Instrument Gas Dryer	0.41	1.81			0.63	2.77
SSM	SSM	Startup, Shutdown, & Maintenance	9,370.96	298.51			14,369.38	457.74
MALF	Malfunctions	Malfunctions						
		Total	15,970.57	29,204.80	0.012	0.055	14,372.28	470.45
		CO2 Equivalent	15,970.57	29,204.80	3.86	16.24	301,817.86	11,761.35

Total mass GHG	29,675.31 T/yr
Total CO2 Equivalent	40,982.39 T/yr

Table 6-3a Compressor Engine Emissions (IDs 1, 2, 3) - Criteria Pollutants Cedar Hill Compressor Station Enterprise Field Services, LLC

Source No.	1	2	3
Manufacterer	Superior	Superior	Superior
Engine Model	16SGTC	16SGTC	16SGTC
Control Device	(none)	(none)	(none)
Fuel Consumption	7,100 Btu/hp-hr	7,100 Btu/hp-hr	7,100 Btu/hp-hr
Heat Content	1,020 BTU/scf	1,020 BTU/scf	1,020 BTU/scf
Nameplate Horse Power	2,650 HP	2,650 HP	2,650 HP
Derated Horse Power	2,476 HP	2,476 HP	2,476 HP
Annual Operating Hours	8,760 hours	8,760 hours	8,760 hours
NOx Factor	1.50 g/hp-hr	1.50 g/hp-hr	1.50 g/hp-hr
CO Factor	2.42 g/hp-hr	2.42 g/hp-hr	2.42 g/hp-hr
NMNEHC (VOC) Factor	0.60 g/hp-hr	0.60 g/hp-hr	0.60 g/hp-hr
PM10 Factor	9.99E-03 lb/MMBtu	9.99E-03 lb/MMBtu	9.99E-03 lb/MMBtu
SO2 Factor	5.88E-04 lb/MMBtu	5.88E-04 lb/MMBtu	5.88E-04 lb/MMBtu
Fuel Sulfur Content	5.0 grain/100scf	5.0 grain/100scf	5.0 grain/100scf
Fuel Sulfur Content	7.16E-03 lb S/Mscf	7.16E-03 lb S/Mscf	7.16E-03 lb S/Mscf
CO2 Factor	53.02 kg/MMBtu	53.02 kg/MMBtu	53.02 kg/MMBtu
N2O Factor	0.0001 kg/MMBtu	0.0001 kg/MMBtu	0.0001 kg/MMBtu
CH4 Factor	0.001 kg/MMBtu	0.001 kg/MMBtu	0.001 kg/MMBtu

Source No		1		2	3		
Pollutant	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
NOx	8.76	38.38	8.76	38.38	8.76	38.38	
CO	14.14	61.93	14.14	61.93	14.14	61.93	
VOC	3.51	15.35	3.51	15.35	3.51	15.35	
PM10	0.19	0.82	0.19	0.82	0.19	0.82	
SO2	0.28	1.20	0.28	1.20	0.28	1.20	
CO2	2199.27	9632.78	2199.27	9632.78	2199.27	9632.78	
N20	0.0041	0.018	0.0041	0.018	0.0041	0.018	
CH4	0.041	0.18	0.041	0.18	0.041	0.18	

Site Elevation (ft) = 6,190 ft

Engine Derated Horsepower = 2650 hp - [2650 hp x (6190 ft - 4000 ft) / 1000 ft x 3%]= 2,476 hp

Notes

1) Emission Factors for NOx, CO, and VOC are from the vendor, See section 7.

2) PM10 and SO2 factors are from AP-42, Table 3.2-2, August, 2000.

3) Fuel sulfur content is conservatively assumed to be 5.00 grains of sulfur per 100 scf.

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

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

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

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

8) Fuel Consumption figure is from vendor.

9) Derated horspower is calculated in accordance with NMED guidance (AQB02.07-01, dated December 21, 1998); however, nameplate horsepower is conservatively used above to calculate emissions.

Table 6-3b Compressor Engine Emissions (IDs 1, 2, 3) - HAPs Cedar Hill Compressor Station Enterprise Field Services, LLC

		1	2	2	3				
	Compressor	Description:	16S	GTC	16S	GTC	16S0	GTC	
	Comp	pressor Type:	4S	LB	4S	LB	4S	LB	
4	nnual Operating H	ours (hrs/yr):	8,7	60	8,7	60	8,7	60	
	Fuel Consumption	n (Btu/hp-hr):	7,1	00	7,1	00	7,100		
Nameplate	e Compressor Hors	sepower (hp):	2,6	650	2,6	50	2,650		
Annual A	ggregate Heat Inpu	t (MMBtu/yr):	164	,819	164	,819	164,819		
Hourly Ag	ggregate Heat Inpu	t (MMBtu/hr):	18	.82	18	.82	18.	.82	
Pollutant	Emission Factor Ib/MMBtu	Factor Source	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	
1,1,2,2-Tetrachloroethane	4.00E-05	AP-42	7.53E-04	3.30E-03	7.53E-04	3.30E-03	7.53E-04	3.30E-03	
1,1,2-Trichloroethane	3.18E-05	AP-42	5.98E-04	2.62E-03	5.98E-04	2.62E-03	5.98E-04	2.62E-03	
1,3-Butadiene	2.67E-04	AP-42	5.02E-03	2.20E-02	5.02E-03	2.20E-02	5.02E-03	2.20E-02	
1,3-Dichloropropene	2.64E-05	AP-42	4.97E-04	2.18E-03	4.97E-04	2.18E-03	4.97E-04	2.18E-03	
2,2,4-Trimethylpentane	2.50E-04	AP-42	4.70E-03	2.06E-02	4.70E-03	2.06E-02	4.70E-03	2.06E-02	
2-Methylnaphthalene	3.32E-05	AP-42	6.25E-04	2.74E-03	6.25E-04	2.74E-03	6.25E-04	2.74E-03	
Acenaphthylene	5.53E-06	AP-42	1.04E-04	4.56E-04	1.04E-04	4.56E-04	1.04E-04	4.56E-04	
Acetaldehyde	8.36E-03	AP-42	1.57E-01	6.89E-01	1.57E-01	6.89E-01	1.57E-01	6.89E-01	
Acrolein	5.14E-03	AP-42	9.67E-02	4.24E-01	9.67E-02	4.24E-01	9.67E-02	4.24E-01	
Benzene	3.49E-03	EPROD	6.57E-02	2.88E-01	6.57E-02	2.88E-01	6.57E-02	2.88E-01	
Biphenyl	2.12E-04	AP-42	3.99E-03	1.75E-02	3.99E-03	1.75E-02	3.99E-03	1.75E-02	
Carbon Tetrachloride	3.67E-05	AP-42	6.91E-04	3.02E-03	6.91E-04	3.02E-03	6.91E-04	3.02E-03	
Chlorobenzene	3.04E-05	AP-42	5.72E-04	2.51E-03	5.72E-04	2.51E-03	5.72E-04	2.51E-03	
Chloroform	2.85E-05	AP-42	5.36E-04	2.35E-03	5.36E-04	2.35E-03	5.36E-04	2.35E-03	
Ethylbenzene	3.97E-05	AP-42	7.47E-04	3.27E-03	7.47E-04	3.27E-03	7.47E-04	3.27E-03	
Ethylene Dibromide	4.43E-05	AP-42	8.34E-04	3.65E-03	8.34E-04	3.65E-03	8.34E-04	3.65E-03	
Formaldehyde	5.28E-02	AP-42	9.93E-01	4.35E+00	9.93E-01	4.35E+00	9.93E-01	4.35E+00	
Methanol	2.50E-03	AP-42	4.70E-02	2.06E-01	4.70E-02	2.06E-01	4.70E-02	2.06E-01	
Methylene Chloride	2.00E-05	AP-42	3.76E-04	1.65E-03	3.76E-04	1.65E-03	3.76E-04	1.65E-03	
n-Hexane	3.22E-03	EPROD	6.06E-02	2.65E-01	6.06E-02	2.65E-01	6.06E-02	2.65E-01	
Naphthalene	7.44E-05	AP-42	1.40E-03	6.13E-03	1.40E-03	6.13E-03	1.40E-03	6.13E-03	
PAH	2.69E-05	AP-42	5.06E-04	2.22E-03	5.06E-04	2.22E-03	5.06E-04	2.22E-03	
Phenanthrene	1.04E-05	AP-42	1.96E-04	8.57E-04	1.96E-04	8.57E-04	1.96E-04	8.57E-04	
Phenol	2.40E-05	AP-42	4.52E-04	1.98E-03	4.52E-04	1.98E-03	4.52E-04	1.98E-03	
Styrene	2.36E-05	AP-42	4.44E-04	1.94E-03	4.44E-04	1.94E-03	4.44E-04	1.94E-03	
Toluene	3.63E-03	EPROD	6.83E-02	2.99E-01	6.83E-02	2.99E-01	6.83E-02	2.99E-01	
Vinyl Chloride	1.49E-05	AP-42	2.80E-04	1.23E-03	2.80E-04	1.23E-03	2.80E-04	1.23E-03	
Xylene	Xylene 1.84E-04 AP-42			1.52E-02	3.46E-03	1.52E-02	3.46E-03	1.52E-02	
	Total HAPS		1.52	6.64	1.52	6.64	1.52	6.64	

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

Sample Calculations for Formaldehyde

0.0528 lb	18.82 MMBtu	- 0.99 lb/br	
MMBtu	hr	= 0.33 10/11	
0.00322 lb	164819 MMBtu	ton	- 1 35 tov
MMBtu	yr	2000 lbs	= 4 .00 tpy
Table 6-4 Equipment Leak Fugitives, ID FUG Cedar Hill Compressor Station Enterprise Field Services, LLC

Component Type	Service	Oil & Gas Production Operations Fugitive Emission Factors ⁽¹⁾ , Ib/hr/component	Component Count	Total Loss (lb/hr)			
	Gas/Vapor	0.00992	257	2.55			
Valves	Light Liquid	0.0055	0	0.00			
	Heavy Liquid	0.00002	0	0.00			
	Gas/Vapor	0.00086	120	0.10			
Flanges	Light Liquid	0.000243	0	0.00			
	Heavy Liquid	0.0000086	0	0.00			
	Gas/Vapor	0.00441	14	0.06			
Open Ended Lines	Light Liquid	0.00309	0	0.00			
	Heavy Liquid	0.000309	0	0.00			
	Gas/Vapor	0.00044	737	0.32			
Connectors	Light Liquid	0.000463	0	0.00			
	Heavy Liquid	0.0000165	0	0.00			
	Gas/Vapor	0.0194	30	0.58			
Other ⁽²⁾	Light Liquid	0.0165	0	0.00			
	Heavy Liquid	0.0000683	0	0.00			
	3.62						
	3.62						
	0.00						
	Heavy Liquid Emissions (Ib/hr):						

Sample Calculations:

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

Speciated Emissions Based on Inlet Gas Analysis⁽³⁾

Compound	Dry Mole %	MW	lb/mol	Dry Weight %	lb/hr	tons/year
CO ₂	18.9522	44.01	8.3409	38.6633	1.39987	6.13142
Methane	79.7222	16.04	12.7898	59.2861	2.14655	9.40188
Ethane	1.0917	30.07	0.3283	1.5217	0.05510	0.24132
Propane	0.1760	44.10	0.0776	0.3598	0.01303	0.0571
i-butane	0.0254	58.12	0.0148	0.0684	0.00248	0.0109
n-butane	0.0188	58.12	0.0109	0.0507	0.00183	0.0080
i-pentane	0.0052	72.15	0.0038	0.0174	0.00063	0.0028
n-pentane	0.0030	72.15	0.0022	0.0100	0.00036	0.0016
Cyclopentane	0.0002	70.10	0.0001	0.0006	0.00002	0.0001
n-Hexane	0.0007	86.18	0.0006	0.0028	0.00010	0.0004
Cyclohexane	0.0005	84.16	0.0004	0.0020	0.00007	0.0003
Other Hexanes	0.0021	86.18	0.0018	0.0084	0.00030	0.0013
Heptanes	0.0010	100.21	0.0010	0.0046	0.00017	0.0007
Methylcyclohexane	0.0004	98.19	0.0004	0.0018	0.00007	0.0003
Benzene	0.0001	78.11	0.0001	0.0004	0.00001	0.0001
Toluene	0.0001	92.14	0.0001	0.0004	0.00002	0.0001
non-HAP VOC	0.0004	86.10	0.0003	0.0016	0.00006	0.0003
Total:	100.00		21.57	100.00		
			VOC Total:	0.53%	0.019	0.084
			HAPs Total:	0.0036%	1.30E-04	5.69E-04

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

(2) For Oil and Gas Production Operations, "Other" includes diaphragms, dump arms, hatches, instruments, meters, polished rods, and vents.
(3) See attached gas analysis in Section 7.

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

Table 6-5Instrument Gas Dryer, ID INSTCedar Hill Compressor StationEnterprise Field Services, LLC

Source Description	Volume Per Event (MCF)	Events per hour	Events per year	Hourly Volume (MCF)	Annual Volume (MMCF)	Material Vented	Standard scf/Ibmol	Total Ibmol/hr	Total Ibmol/yr
Instrument Gas Dryer	0.019	1	8760	0.02	0.16	Nat. Gas	379.482	0.05	432.83

Speciated Emissions Based on Inlet Gas Analysis⁽¹⁾

Compound	Dry Basis Mole %	MW	lb/lb-mol	lb/hr	tons/yr
CO ₂	18.9522	44.01	8.3409	4.12E-01	1.81E+00
Methane	79.7222	16.04	12.7898	6.32E-01	2.77E+00
Ethane	1.0917	30.07	0.3283	1.62E-02	7.10E-02
Propane	0.1760	44.10	0.0776	3.83E-03	1.68E-02
i-butane	0.0254	58.12	0.0148	7.29E-04	3.20E-03
n-butane	0.0188	58.12	0.0109	5.40E-04	2.36E-03
i-pentane	0.0052	72.15	0.0038	1.85E-04	8.12E-04
n-pentane	0.0030	72.15	0.0022	1.07E-04	4.68E-04
Cyclopentane	0.0002	72.15	0.0001	7.13E-06	3.12E-05
n-Hexane	0.0007	86.2	0.0006	2.98E-05	1.31E-04
Cyclohexane	0.0005	86.2	0.0004	2.13E-05	9.33E-05
Other Hexanes	0.0021	86.2	0.0018	8.94E-05	3.92E-04
Heptanes	0.0010	100.2	0.0010	4.95E-05	2.17E-04
Methylcyclohexane	0.0004	98.2	0.0004	1.94E-05	8.50E-05
Benzene	0.0001	78.1	0.0001	3.86E-06	1.69E-05
Toluene	0.0001	92.1	0.0001	4.55E-06	1.99E-05
non-HAP VOC	0.0004	86.10	0.0003	1.70E-05	7.45E-05
Total:	100.00	Avg. MW =	21.57		
			VOC Total:	0.0056	0.025
			HAP Total:	3.82E-05	1.67E-04

(1) See attached gas analysis in Section 7.

Table 6-6Startup, Shutdown, & Maintenance (SSM) Emissions, ID SSMEmissions from Scheduled/Routine & Predictable EventsCedar Hill Compressor StationEnterprise Field Services, LLC

Event Description	Volume Per Event (MCF)	Events per hour	Events per year	Hourly Volume (MCF)	Annual Volume (MMCF)	Material Vented	Standard scf/lbmol	Total Ibmol/hr	Total Ibmol/yr
Blowdowns	2.66	6	3000	15.94	7.97	Nat. Gas	379.482	42.01	21,004.95
Planned and anticipated maintenance and shut down activities	67.05	6	192	402.31	12.87	Nat. Gas	379.482	1,060.15	33,924.64
Compressor Engine Startup	1.35	6	4680	8.10	6.32	Nat. Gas	379.482	21.34	16,649.01

Speciated Emissions Based on Inlet Gas Analysis⁽¹⁾

Compound	Dry Basis Mole %	MW	lb/lb-mol	lb/hr	tons/yr
CO ₂	18.9522	44.01	8.3409	9370.9592	298.5137
Methane	79.7222	16.04	12.7898	14369.3760	457.7392
Ethane	1.0917	30.07	0.3283	368.8160	11.7487
Propane	0.1760	44.10	0.0776	87.1956	2.7776
i-butane	0.0254	58.12	0.0148	16.5868	0.5284
n-butane	0.0188	58.12	0.0109	12.2768	0.3911
i-pentane	0.0052	72.15	0.0038	4.2152	0.1343
n-pentane	0.0030	72.15	0.0022	2.4318	0.0775
Cyclopentane	0.0002	72.15	0.0001	0.1621	0.0052
n-Hexane	0.0007	86.2	0.0006	0.6777	0.0216
Cyclohexane	0.0005	86.2	0.0004	0.4841	0.0154
Other Hexanes	0.0021	86.2	0.0018	2.0332	0.0648
Heptanes	0.0010	100.2	0.0010	1.1257	0.0359
Methylcyclohexane	0.0004	98.2	0.0004	0.4413	0.0141
Benzene	0.0001	78.1	0.0001	0.0878	0.0028
Toluene	0.0001	92.1	0.0001	0.1035	0.0033
non-HAP VOC	0.0004	86.10	0.0003	0.3869	0.0123
Total:	100.00	Avg. MW =	21.57		
			VOC Total:	128.21	4.08
			HAP Total:	0.87	0.028

(1) See attached gas analysis in Section 7.

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

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

Compressor Engines (3) – Superior 16SGTB, Unit IDs 1 - 3

- Engine Specification Sheet
- Ap-42 HAP emission based on AP-42 5th ed. (July 2000)

Fugitives, Unit ID FUG

- Emission Factors were taken from EPA's "Protocol for Equipment Leak Emission Estimates" RPA-453/R-95-017, 11/1995, Table 2-4
- Site Specific Gas Analysis: "Cedar hill 10-28.run"

Instrument Gas Dryer, Unit ID INST

• Site Specific Gas Analysis: "Cedar Hill 10-28.run"

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

• Site Specific Gas Analysis: "Cedar Hill 10-28.run"



October 18, 1994



Cooper Energy Services

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Line.

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

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

Dear Rick:

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

16SGTB engine rating: Buel consumption:	2650 HP 6 900 RPM 7050 BTU/HP-HR	•.
Emissions:	No. 1.5 grs/HP-HR CO 1.8 grs/HP-HR - XMHC 0.4 grs/HP-HR	-> .see Alfred-

The above is based on typical fuel gas as follows:

Nitrogen	0.171
Carbon Dioxide	12.55
Methane	86.70%
Ethane	0.58%

Yours very truly,

K. 4 Kard Thilman Senior Salesman

KT/mwh

12GTLB, 12SGTB, 16GTLB VD 165GTB GAS ENGINES

erformance Data (full load):

	6011		Fuel Consumption (BTU/BHP-HR)		*Emissions (Tons/Year)		
Models	KE M		BSFC ·	NOx	00	**NMHC	7
6GTLB	900	825 (615)	7150	15.9	27.9	6.0	7
•	750	688 (513)	7050	13.3	19,9	5.0	
:	600	550 (410)	7400	21.2	18.1	4.0	
8GTLB	900	1100 (820)	7100	21.2	31.9	8.0	1
	750	917 (684)	7000	21.2	26.6	6.6	
	600	733 (547)	7400	21.2	24.8	7.1	
8SGTB	1000	1500 (1119)	7170	21.7	53.6	13.0	7
	900		7100	19.5	39.1	: 117	
	- 750	1125 (839)	7070	19.5	32.6	9.8	
	600	900 (671)	7260	36.5	28.7	9.6	
12GTLB	900	1650 (1230)	7350	23.9	25.5	9.6	
	750	1375 (1025)	7300	19.9	21.2	8.0	
	600	1100 (820)	7820	. 42.5	14.9	6.4	
12SGTB	900	2000 (1491)	7150	29.0	30.9	11.6	
•	750	1667 (1243)	7150	29.0	25.7	9.7	
• .	600	1333 (994)	7700	90.1	19.3	7.7	
ISGIL	900	2200 (1641)	7350	31.9	34.0	127	7
	750	1833 (1367)	7300	26.5	28.3	10.6	
· ·	600	1467 (1094)	7880	56.6	21.2	8.5	
IASGTB	900	2650 (1976)	7100	38.4	40.9	15.3	74
	750	2208 (1647)	7150	: 32.0	34.1	12.8	
	600	1767 (1318)	7680	102.3	23.9	10.2	

full load & speed (gm/bhp-hr) NOx 1.5, CO 1.6, NMHC 0.60 n invirocoroon

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ed above, mode offs between NO, and vil be evon BSFC d on a specific case basis.

ions are based on pipeline quality gas – i.e., LHV = 900 BTU/H \pm 15% and CH. It greater man 90%. NWHC/THC less man 12%, NMEHC less than 5%.

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824.67 x 10 of Cyis.)

Conditions: Tower rating applied without interruption or load cycling for continuous full load operation, permitting 10% overload for tower maximum in any 12 hour period.

a & ASPC

tictings are based on pipeline quality gas. Ferformance may vary depending on fuel composition.

Consult Superior for ratings above 4000' elevation or 100°F.

and equipment, specifications and data are subject to change without nonce. 2.54

SUPERIO

Cooper Cameron Corporation Cooper Energy Services 1401 Shenoan Avenue Springfield. OH 45505 Telephone: (513) 327-4200 Fax: (513) 327-4487

10-281 314 9/95

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COOPER Energy services

FIQU:

Cc: Burlington E. sions Subject: BurlingtonEmissions.doc Attachment: 7/5/00 4:17 PM Date:

Mr. Hasely,

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In response to your fax concerning the emissions levels of several Superior engines, we are providing you with a curve based on analytical predictions for these units. The curves were generated based on hypothetical fuel analyses that you provided and "normal running conditions" which

includes 100% load at 900 rpm, standard fuel header orifice size, and a standard turbo. Keeping this in mind, these numbers should be looked at as guide to emissions output rather than guarantees.

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

US.

Thank You,

David Swan

F.L: Gol/Man A.r

112





June 13, 2000

By Fax: 937-327-4486

Mr. Steve Hay Cooper Energy Services 1401 Sheridan Av. Springfield, OH 45505

Re: Manufacturer Emission Rates

Dear Mr. Hay:

Burlington Resources (BR) is requesting manufacturer guaranteed emission rates (grams per horsepower-hour) for several Superior engines at various fuel gas compositions. One conventional fuel gas composition and five coal seam fuel gas compositions at various carbon dioxide levels are provided.

The specific engines that we are requesting this information are:

Superior 16SGTB

Superior 16SGTC

Superior 8SGTB

Emission rates for nitrogen oxide (NOx), carbon monoxide (CO), and volatile organic hydrocarbons (VOC - non-methane, non-ethane hydrocarbons) are requested. This information is required to ensure proper permitting of our engines.

Please fax the requested information to my attention at (505) 599-4005. If you have any questions or need additional information, please contact me at (505) 326-9841.

Sincerely yours,

Ed Hasely Environmental Representative

Attachments: Six Fuel Gas Compositions

Cc: Larry Anderson

File Gob Man A. Permit

JEL GAS COMPOSITIONS

•	Conv.	2% CO2	10% CO2	15% CO2	20% CO2	25% CO2
CO2	1.440	2.000	10.000	15.000	20.000	25.000
N2	0.190	0.028	0.020	0.020	0.023	0.021
C1	84.390	97.452	8 9.4 70	84.519	79.553	74.581
C2	7.850	0.440	0.421	0.382	0.358	0.336
C3	3.410	0.055	0.060	0.050	0.045	0.042
I-C4	0.640	0.007	0.010	0.010	0.006	0.006
n-C4	0.890	0.009	0.010	0.010	0.007	0.006
-C5	0.360	0.002	0.002	0.002	0.002	0.002
n-C5	0.260	0.002	0.002	0.002	0.002	0.002
C 6 +	0.570	0.005	0.005	0.005	0.004	0.004 -
lotal	100.000	100.000	100.000	100.000	100.000	100.000

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

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

	Emission Factor (lb/MMBtu) ^b	Emission Factor
Pollutant	(fuel input)	Rating
Acenaphthylene	5.53 E-06	С
Acetaldehyde ^{K,I}	8.36 E-03	А
Acrolein ^{k,l}	5.14 E-03	А
Benzene ^k	4.40 E-04	А
Benzo(b)fluoranthene ^k	1.66 E-07	D
Benzo(e)pyrene ^k	4.15 E-07	D
Benzo(g,h,i)perylenek	4.14 E-07	D
Biphenyl ^k	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	С
Carbon Tetrachloride ^k	<3.67 E-05	Е
Chlorobenzene ^k	<3.04 E-05	Е
Chloroethane	1.87 E-06	D
Chloroform ^k	<2.85 E-05	Е
Chrysene ^k	6.93 E-07	С
Cyclopentane	2.27 E-04	С
Ethane	1.05 E-01	С
Ethylbenzene ^k	3.97 E-05	В
Ethylene Dibromide ^k	<4.43 E-05	E
Fluoranthene ^k	1.11 E-06	С
Fluorene ^k	5.67 E-06	С
Formaldehyde ^{k,1}	5.28 E-02	А
Methanol ^k	2.50 E-03	В
Methylcyclohexane	1.23 E-03	С
Methylene Chloride ^k	2.00 E-05	С
n-Hexane ^k	1.11 E-03	С
n-Nonane	1.10 E-04	С

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

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

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

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

(lb/MMBtu) to (lb/hp-hr) use the following equation:

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

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

^d Based on 99.5% conversion of the fuel carbon to CO_2 . CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2 , C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10⁶ scf. and

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

- ^e Based on 100% conversion of fuel sulfur to SO_2 . Assumes sulfur content in natural gas of $2,000 \text{ gr}/10^6 \text{scf.}$
- Emission factor for TOC is based on measured emission levels from 22 source tests.
- ^g Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.31 lb/MMBtu vs. 1.25 lb/MMBtu, respectively.
- $^{\rm h}$ VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.
- Considered $\leq 1 \ \mu m$ in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).
- ^j PM Condensable = PM Condensable Inorganic + PM-Condensable Organic
- Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.
- For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.

United States Environmental Protection Agency Office of Air Quality Planning and Standards Research Triangle Park NC 27711

EPA-453/R-95-017 November 1995

Air



Protocol for Equipment Leak Emission Estimates



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

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

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

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

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

Map(s)

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

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

A site map for the Cedar hill Compressor Station is included on the following page.



Proof of Public Notice

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

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

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

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

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

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

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

Written Description of the Routine Operations of the Facility

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

The Cedar Hill Compressor Station receives material by pipeline, compresses it using three compressor engines, and then sends it back out by pipeline.

Source Determination

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

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

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

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

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

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

 \boxtimes Yes \Box No

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

🖾 Yes 🗆 🗆 No

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

 \boxtimes Yes \Box No

C. Make a determination:

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

Section 12.A PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the <u>EPA New Source Review Workshop Manual</u> to determine if the revision is subject to PSD review.

- A. This facility is:
 - \Box a minor PSD source before and after this modification (if so, delete C and D below).
 - $\hfill\square$ a major PSD source before this modification. This modification will make this a PSD minor source.
 - □ an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
 - □ an existing PSD Major Source that has had a major modification requiring a BACT analysis
 - $\hfill\square$ a new PSD Major Source after this modification.
- B. This facility [is or is not] one of the listed 20.2.74.501 Table I PSD Source Categories. The "project" emissions for this modification are [significant or not significant]. [Discuss why.] The "project" emissions listed below [do or do not] only result from changes described in this permit application, thus no emissions from other [revisions or modifications, past or future] to this facility. Also, specifically discuss whether this project results in "de-bottlenecking", or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:
 - a. NOx: XX.X TPY
 - b. CO: XX.X TPY
 - c. VOC: XX.X TPY
 - d. SOx: XX.X TPY
 - e. TSP (PM): XX.X TPY
 - f. PM10: XX.X TPY
 - g. PM2.5: XX.X TPY
 - h. Fluorides: XX.X TPY
 - i. Lead: XX.X TPY
 - j. Sulfur compounds (listed in Table 2): XX.X TPY
 - k. GHG: XX.X TPY
- C. Netting [is required, and analysis is attached to this document.] OR [is not required (project is not significant)] OR [Applicant is submitting a PSD Major Modification and chooses not to net.]
- D. **BACT** is [not required for this modification, as this application is a minor modification.] OR [required, as this application is a major modification. List pollutants subject to BACT review and provide a full top down BACT determination.]
- E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.

Determination of State & Federal Air Quality Regulations

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

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

Required Information for Specific Equipment:

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

Required Information for Regulations that Apply to the Entire Facility:

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

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

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

Regulatory Citations for Emission Standards:

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

Federally Enforceable Conditions:

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

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

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

Table for STATE REGULATIONS:

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	No	Facility	20.2.3 NMAC is a SIP regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility will meet maximum allowable concentrations under this regulation. Title V applications are exempt under 20.2.3.9 NMAC
20.2.7 NMAC	Excess Emissions	Yes	Facility	This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emission per 20.2.7.110 NMAC
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	No	Facility	This facility does not have new or existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. This regulation does not apply.
20.2.34 NMAC	Oil Burning Equipment: NO ₂	No	Facility	This facility does not have oil-burning equipment with a heat input of greater than 1,000,000 million British Thermal Units per year per unit. This regulation does not apply.
20.2.35 NMAC	Natural Gas Processing Plant – Sulfur	No	Facility	This facility is not a natural gas processing plant. This regulation does not apply.
20.2.37 and 20.2.36 NMAC	Petroleum Processing Facilities and Petroleum Refineries	No	Facility	This facility is not a petroleum processing facility. This regulation does not apply.
20.2.38 NMAC	Hydrocarbon Storage Facility	No	Facility	This facility is not a hydrocarbon storage facility. This regulation does not apply.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	No	Facility	This facility is not a sulfur recovering plant; therefore, this regulation does not apply.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	Units: 1, 2, & 3	This regulation establishes controls on smoke and visible emissions from certain sources. Compressor engines are subject to this regulation.
20.2.70 NMAC	Operating Permits	Yes	Facility	This regulation establishes requirements for obtaining an operating permit. The facility is a major source for criteria pollutants and HAPs. This facility is a major for CO, NOX, and HAPs so this facility is subject to this regulation. This facility is a major for CO, NO _X , and HAPs so this facility is subject to this regulation.
20.2.71 NMAC	Operating Permit Fees	Yes	Facility	Yes, this facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	Yes	Facility	If subject, this would normally apply to the entire facility. This regulation establishes the requirements for obtaining a construction permit. The facility is a stationary source that has potential emission rates greater than 10 pounds per hour and 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Air Quality Standard. The NSR permit number is 1710M3R2. This regulation applies.

STATE BECH	Title	Applies? Enter Yes	Unit(s) or	JUSTIFICATION:
LATIONS CITATION	Tue	or No	Facility	(You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet all applicable reporting requirements under 20.2.73.300.B.1 NMAC.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	This facility is not PSD Major so this regulation does not apply.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This facility is subject to 20.2.72 NMAC and is in turn subject to 20.2.75 NMAC.
20.2.77 NMAC	New Source Performance	No	Units subject to 40 CFR 60	No sources at this site are subject to 40 CFR 60 requirements.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This regulation establishes state authority to implement emission standards for hazardous air pollutants subject to 40 CFR Part 61. This facility does not emit hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61, and is therefore not subject to this regulation.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	This regulation establishes the requirements for obtaining a non-attainment area permit. The facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights	No	Facility	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. No Requirements Per 40 CFR 63.6590(b)(3)(i)-(ii), currently no requirements for existing LB RICE > 500 hp at HAP major sources
20.2.82 NMAC	MACT Standards for source categories of HAPS	No	Units Subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. No Requirements Per 40 CFR 63.6590(b)(3)(i)-(ii), currently no requirements for existing LB RICE > 500 hp at HAP major sources

Example of a Table for Applicable FEDERAL REGULATIONS:

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This applies if you are subject to 20.2.70, 20.2.72, 20.2.74, and/or 20.2.79 NMAC. This facility is subject to 20.2.70.7.E.11; therefore, this facility is subject to this regulation
NSPS 40 CFR 60, Subpart A	General Provisions	No	Units subject to 40 CFR 60	No NSPS subpart applies to this site. The engines were reconstructed before 1997; therefore, the engines are not subject to this regulation.
NSPS 40 CFR60.40a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply because the facility does not operate any electric utility steam generating units.

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	No	N/A	This regulation establishes standards of performance for industrial-commercial- institutional steam generating units. This facility does not have steam generating units with heat input capacity greater than 100 MMBtu/hr. This regulation does not apply.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial- Commercial- Institutional Steam Generating Units	No	N/A	This regulation establishes standards of performance for small industrial- commercial-institutional steam generating units installed or modified after June 9, 1989, with a heat input capacity greater than or equal to 10 MMBtu/hr but less than 100 MMBtu/hr. This regulation does not apply.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	No	N/A	The facility does not have petroleum liquid storage vessels with a capacity of less than 1,589,873 liters (420,000) gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. This regulation does not apply.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No	N/A	This facility does not have vessels with a design capacity greater than or equal to 1,589.874 m ³ used for petroleum or condensate stored, possessed or treated prior to custody transfer. This regulation does not apply.
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	No	N/A	This site does not have any stationary gas turbines.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	No	N/A	This site is not an onshore gas plant
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing : SO ₂ Emissions	No	N/A	This facility does not perform onshore natural gas processing

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which construction, modification or reconstruction commenced after August 23, 2011 and before September 18, 2015	No	N/A	The sources addressed in this permit were existing and did not commence construction, modification or reconstruction after August 23, 2011. This regulation does not apply
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	No	N/A	The sources addressed in this permit were existing and did not commence construction, modification or reconstruction after September 18, 2015. This regulation does not apply.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	No	N/A	This regulation establishes standards of performance for Stationary Compression Ignition Internal Combustion Engines. There are no Stationary Compression Ignition Internal Combustion Engines at this facility.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	N/A	The engines at this site did not commence modification or reconstruction after June 12 2006. This regulation does not apply.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	N/A	This facility does not contain any electric generating units; therefore, this regulation does not apply.
NSPS 40 CFR 60 Subpart UUUU	Emissions Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units	No	N/A	This facility does not contain any electric generating units; therefore, this regulation does not apply

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
NSPS 40 CFR 60, Subparts WWW, XXX, Cc, and Cf	Standards of performance for Municipal Solid Waste (MSW) Landfills	No	N/A	This facility is not a landfill site; therefore, this regulation does not apply.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units Subject to 40 CFR 61	No units at this facility are subject to 40 CFR 61.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for Mercury	No	N/A	There are no mercury emission associated with this facility.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	No	N/A	The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart. VHAP service means a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VHAP. VHAP means a substance regulated under this subpart for which a standard for equipment leaks of the substance has been promulgated. Benzene is a VHAP (See 40 CFR 61 Subpart J). This site does not have any equipment in VHAP service (≥10% VHAP).
MACT 40 CFR 63, Subpart A	General Provisions	N/A	Units Subject to 40 CFR 63	This regulation defines general provisions for relevant standards that have been set under this part. No other NESHAP subparts apply to this site.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	N/A	No	This facility does not contain a TEG Dehydrator; therefore, this regulation does not apply.
MACT 40 CFR 63 Subpart HHH		N/A	No	Facility is not a natural gas transmission and storage facility that transports or store natural gas prior to entering the pipeline to a local distribution company or to final end user.
MACT 40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Industrial, Commercial, and Institutional Boilers & Process Heaters	N/A	No	This facility does not contain industrial, commercial and institutional boilers and process heaters; therefore, this regulation does not apply.
MACT 40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants Coal & Oil Fire Electric Utility Steam Generating Unit	N/A	No	This facility does not contain steam-generating units; therefore, this regulation does not apply.

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	N/A	No	Per 40 CFR 63.6590(b)(3)(ii), Unit IDs 1-3 are exempt from the requirements of Subparts A and ZZZZ because they are existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.
40 CFR 64	Compliance Assurance Monitoring	N/A	No	The facility does not include an emissions unit that is major and in and of itself; therefore, this regulation does not apply.
40 CFR 68	Chemical Accident Prevention	N/A	No	This facility does not have a threshold quantity of a regulated substance subject to this regulation; therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 72	Acid Rain	N/A	No	The site does not meet the applicability requirements of 40 CFR 72.6; therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	N/A	No	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This part does not apply because the facility is not the type covered by this regulation [40 CFR Part 73.2].
Title IV-Acid Rain 40 CFR 75	Continuous Emissions Monitoring	N/A	No	This facility does not produce commercial power; therefore, this regulation does not apply.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	N/A	No	This regulation establishes an acid rain nitrogen oxides emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO ₂ . This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No	N/A	This regulation establishes requirements for protection of the stratospheric ozone. The regulation is not applicable because the facility does not "service", "maintain" or "repair" class I or class II appliances nor "disposes" of the appliances [40 CFR Part 82.1(a)].

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

- □ NSR (20.2.72 NMAC), PSD (20.2.74 NMAC) & Nonattainment (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has developed an <u>Operational Plan to Mitigate Source Emissions</u> <u>During Malfunction, Startup, or Shutdown</u> defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- ☑ **Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

Enterprise maintains the required plans to mitigate emissions during routine or predicable SSM and malfunction events at the Cedar Hill Compressor Station.

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: https://www.env.nm.gov/aqb/permit/aqb_pol.html. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

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

There are no alternative operating scenarios included in this application.

Section 16 Air Dispersion Modeling

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

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

Check each box that applies:

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

A copy of the approved modeling wavier from the recent NSR Revision P173R2M1 is included in this section.

MEN	
	Approved: \sqrt{Yes} \Box No
	Date: April 10, 2012
ZIRONMENT DEPARTM	Approved by: Gi-Dong Kim
	THIN DEPART

Air Dispersion Modeling Waiver Request Form

This form must be completed and submitted with all air dispersion modeling waiver requests.

If a permit is required, modeling is normally required for all pollutants, including state air toxics. In some cases, the demonstration that ambient air quality standards and PSD increments will not be violated can be satisfied with a discussion of previous modeling. The purpose of this form is to document and streamline requests to limit the new modeling that is submitted with an application. A waiver may be requested by e-mailing the completed form to the modeling manager, <u>sufi.mustafa@state.nm.us</u>. Permitting staff must approve the total emission rates during the permitting process for this waiver to be valid.

Contact and facility information:

Contact name	Christopher Benton
E-mail Address:	crbenton@eprod.com
Phone	(713) 381-5437
Facility Name	Cedar Hill Compressor Station
Air Quality Permit Number(s)	1710M2R3
AI Number (if known)	

Section 1: Toxic air pollutants

The facility has no toxic air pollutants.

Section 2: Pollutants with very low emission rates

Table 2: List of Pollutants with very low emission rates (PTE)

Pollutant	Requested Allowable Emission Rate From Facility (pounds/hour)	Release Type (select "all from stacks" or "other")	Waiver Threshold (lb/hr)
SO2	0.90	All from stacks	1.0
TSP	0.60	All from stacks	1.0

SO2 and TSP emissions are not new to the facility and have previously been represented in permit applications; however, there are currently no emission limitations for those pollutants listed in the NSR permit. The only sources of SO2 and TSP emissions are three compressor engines and two reboilers (combustion sources). As part of this permit revision application, Enterprise is increasing the represented SO2 concentration to match the maximum allowable SO2 level allowed under their current gas contracts. It is very unlikely that the facility will actually combust fuel with the maximum allowed sulfur concentration; however, Enterprise has opted to represent their absolute worst-case emissions for permitting purposes.

Section 3: Pollutants that have previously been modeled at equal or higher emission rates

Table 3: List of previously modeled pollutants (facility-wide PTE)

Pollutant	Averaging period	Previously modeled emission rate (pounds/hour)	Proposed emission rate (pounds/hour)	Modeled minus proposed emissions (lb/hr)	Modeled percent of standard or increment

Question	Yes	No
Was modeling performed within the past four years? Date of modeling report March 30, 2006		
Was AERMOD used to model the facility?		
Did previous modeling predict concentrations less than 95% of each air quality standard and PSD increment?		
Were all averaging periods modeled that apply to the pollutants listed above?		
Were all applicable startup/shutdown/maintenance scenarios modeled?		
Did modeling include all sources within 1000 meters of the facility fence line that now exist?		
Did modeling include background concentrations at least as high as current background concentrations?		
If a source is changing or being replaced, is the following equation true for all pollutants for which the waiver		
is requested?		
EXISTING SOURCE REPLACMENT SOURCE		
$\frac{[(g) x (h1)] + [(v1)^2/2] + [(c) x (T1)]}{[(g) x (h2)] + [(v2)^2/2] + [(c) x (T2)]}$		
q1 q2		
Where		
$g = gravitational constant = 32.2 \text{ ft/sec}^2$		
h1 = existing stack height, feet		
v1 = exhaust velocity, existing source, feet per second		
c = specific heat of exhaust, 0.28 BTU/lb-degree F		
T1 = absolute temperature of exhaust, existing source = degree F + 460		
q1 = emission rate, existing source, lbs/hour		
h2 = replacement stack height, feet		
v2 = exhaust velocity, replacement source, feet per second		
T2 = absolute temperature of exhaust, replacement source = degree F + 460		
q2 = emission rate, replacement source, lbs/hour		
Are all replacement stacks either the same direction as the replaced stack or vertical?		

If you checked "no" for any of the questions, provide an explanation for why you think the previous modeling may still be valid anyway.

Section 4: Discussions of scaled emission rates and scaled concentrations

Release Height in Meters	Correction Factor
0 to 9.9	1
10 to 19.9	5
20 to 29.9	19
30 to 39.9	41
40 to 49.9	71
50 to 59.9	108
60 to 69.9	152
70 to 79.9	202
80 to 89.9	255
90 to 99.9	317
100 to 109.9	378
110 to 119.9	451
120 to 129.9	533
130 to 139.9	617
140 to 149.9	690
150 to 159.9	781
160 to 169.9	837
170 to 179.9	902
180 to 189.9	1002
190 to 199.9	1066
200 or greater	1161

Appendix 1: Stack Height Release Correction Factor (adapted from 20.2.72.502 NMAC)

Appendix 2. Very small emission rate modeling waiver requirements

Type of emissions	Modeling is waived if emissions of a pollutant for the entire facility (including haul roads) are below the amount:	
Point source	0.1 lb/hr of H_2S or reduced sulfur, 1.0 lb/hr for other pollutants	
Fugitive sources	ugitive sources $0.01 \text{ lb/hr of } H_2S$ or reduced sulfur, 0.1 lb/hr for other pollutants	

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

Unit No.	Test Description	Test Date
Unit 1	annual testing	7/26/2018
Unit 2	annual testing	10/24/2018
Unit 3	annual testing	10/29/2018
Unit 1	annual testing	7/17/2017
Unit 2	annual testing	7/18/2017
Unit 3	annual testing	7/19/2017
Unit 1	annual testing	5/19/2016
Unit 2	annual testing	7/18/2016
Unit 3	annual testing	9/29/2016
Unit 1	annual testing	8/11/2015
Unit 2	annual testing	8/18/2015
Unit 3	annual testing	11/10/2015
Unit 1	annual testing	4/4/2014
Unit 2	annual testing	4/4/2014
Unit 3	annual testing	4/30/2014
Unit 1	annual testing	3/12/2013
Unit 2	annual testing	3/12/2013
Unit 3	annual testing	3/13/2013
Unit 1	annual testing	3/15/2012
Unit 2	annual testing	3/15/2012
Unit 3	annual testing	3/14/2012
Unit 2	annual testing	3/14/2011
Unit 3	annual testing	3/15/2011
Unit 1	annual testing	3/14/2011
Unit 2	annual testing	3/15/2011
Unit 3	annual testing	3/14/2011
Unit 1	annual testing	11/29/2010
Unit 2	annual testing	11/29/2010
Unit 3	annual testing	11/29/2010

Compliance Test History Table
Section 19

Requirements for Title V Program

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

Who Must Use this Attachment:

* Any major source as defined in 20.2.70 NMAC.

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

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

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

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

After reasonable inquiry, Enterprise Field Services LLC (Enterprise) states that the facility does not meet the applicability requirements of 40 CFR 64.2. Specifically, no sources at the facility are controlled major sources of regulated pollutants. Enterprise will submit the necessary items should the facility or requirements change such that this regulation becomes applicable.

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

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

To the best of Enterprise Field Services LLC knowledge, Cedar Hill is in compliance with all applicable requirements. Furthermore, Cedar Hill will continue to comply with all applicable requirements and will comply in a timely manner with any new applicable requirements that may come in to effect during the permit term.

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

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

To the best of Enterprise Field Services LLC knowledge, Cedar Hill is in compliance with all applicable requirements. Furthermore, Cedar Hill will continue to comply with all applicable requirements and will comply in a timely manner with any new applicable requirements that may come in to effect during the permit term.

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

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

Condition A109.B of Operating Permit P147-R2 requires Enterprise Field Services LLC to submit compliance certification reports to the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) and to the EPA within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on August 1st of each year.

19.5 - Stratospheric Ozone and Climate Protection

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

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

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

This regulation establishes requirements for protection of the stratospheric ozone. Enterprise Field Services LLC hires a contractor to perform the service, maintenance, and repairs of appliances. These contractors will meet all of the applicable requirements.

19.6 - Compliance Plan and Schedule

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

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

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

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

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

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

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

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

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

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

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

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

To the best of Enterprise Field Services LLC knowledge, Cedar Hill is in compliance with all applicable requirements. Furthermore, Cedar Hill will continue to comply with all applicable requirements and will comply in a timely manner with new applicable requirements that may come in to effect during the permit term.

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

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

This site does not store more than a threshold quantity of any substances subject to 112(r).

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

Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B NMAC)?

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

Yes - Colorado, 5.6 km; Southern Ute Indian Reservation, 5.6km; Navajo Nation Reservation, 33km; Ute Mountain Reservation, 34 km; Jicarilla Apache Nation Reservation, 64km(note: all distances are approximate)

19.9 - Responsible Official

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

Graham W. Bacon Title: Executive Vice President Physical Address: P.O. Box 4324, Houston TX 77210 - 4324

Section 20

Other Relevant Information

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

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

No additional information is included in this section.

Section 22: Certification

Company Name: _____ Enterprise Field Services, LLC

I, <u>Ivan W. Zirbes</u> ,	, hereby certify that the information and data submitted in this application are true	
and as accurate as possible, to the best of my ki	nowledge and professional expert	tise and experience.
Signed this day of day of day of,,	2019 , upon my oath or affirm	ation, before a notary of the State of
Texas		
*Signature	_	Date
Ivan W. Zirbes Printed Name	_	Vice President Title
Scribed and sworn before me on this day	of March	. 2019
My authorization as a notary of the State of	Texas	expires on the
day ofMarch	, 2019 .	
Notary's Signature	_	Date
Brenda J. Mendez	-	
Notary's Printed Name		

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