Trinity Consultants
555 N Carancahua St, Ste 820, Corpus Christi, TX 78401 / P 361.883.1668 / F 361.883.1620 / **trinityconsultants.com**

January 16, 2025

Texas Commission on Environmental Quality
Rule Registrations Section, Air Permits Division (APD) - MC163
12100 Park 35 Circle, Building F, First Floor
Austin, TX, 78753

Submitted electronically via STEERS

Re: EGU Standard Permit
Fort Worth Power Core LLC
Williamson County Power Plant
Jonah, Williamson County
Customer Reference Number: CN606278281
Regulated Entity Number: TBD

Dear Mr. Bowers:

On behalf of Fort Worth Power Core LLC (FWPC), Trinity Consultants (Trinity) is hereby submitting the enclosed registration for an Air Quality Standard Permit for Electric Generating Units for the Williamson County Power Plant in Williamson County, Texas.

A completed PI-1S Form is enclosed. The registration fee of $900 will be paid online and the application is submitted electronically through the TCEQ's STEERS e-permit system.

If you have any questions or require additional information, please feel free to contact me at 512-965-5556.

Sincerely,
Trinity Consultants

Connor McNally
Manager of Consulting Services-Corpus Christi

ELECTRIC GENERATING UNIT (EGU) STANDARD PERMIT REGISTRATION

Williamson County Power Plant

Fort Worth Power Core, LLC

Prepared By:

TRINITY CONSULTANTS
555 N. Carancahua St, Ste 820
Corpus Christi, Texas 78401

January 2025

Shanon J DiSorbo

January 16, 2025

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1. INTRODUCTION

1.1 Introduction

Fort Worth Power Core, LLC (FWPC) has acquired property in Jonah, Williamson County, Texas, and plans to construct and operate an electric generating power plant to generate power for sale. FWPC is submitting this Air Quality Standard Permit for Electric Generating Units permit registration, to authorize the construction of the proposed electrical generating facility.

1.2 Project Description

The purpose of this standard permit registration is to authorize the installation and operation of two combined cycle power generating blocks, Power Blocks 1 and 2. Each block will contain three gas-fired combustion turbine generators (CTGs) and one heat recovery steam generator (HRSG).

Facilities and emissions authorized with this permit registration include turbine combustion, turbine startup and shutdown, turbine and generator vent and hydraulic oil, and fugitive equipment emissions. Additional ancillary emissions sources anticipated may also include emergency generators, fire water pump engines, waste oil and wastewater separation and transfer facilities, cooling towers, and diesel and SCR reagent storage tanks. Ancillary equipment and emissions sources listed qualify for authorization via 30 TAC §106.263, §106.371, §106.472, §106.511 and §106.532, and will be authorized separate of this registration.

Table 1-1 at the end of this Section presents a summary of the project sources and emission rates. As outlined in Table 1-1 the project emissions are below the major source thresholds for all pollutants; therefore, PSD permitting requirements do not apply.

1.3 Registration Organization

The enclosed Standard Permit registration is organized into the following sections:

Section 1	Contains background information about the planned project.
Section 2	Describes the administrative forms and fee payment included with this submittal.
Section 3	Contains an area map and a plot plan.
Section 4	Contains a general process description and process flow diagram.
Section 5	Describes the emission calculation methods used for the project.
Section 6	Addresses Federal New Source Review applicability.
Section 7	Addresses the applicability and general conditions for an EGU Standard Permit as specified in 30 TAC § 116.610, § 116.615, and Air Quality Standard Permit for Electric Generating Units (Effective Date: May 16, 2007).
Appendix A	Contains emissions calculation details.
Appendix B	Contains a copy of the Electric Generating Unit Standard Permit.

Table 1-1
NNSR/PSD Applicability Analysis Summary
Forth Worth Power Core, LLC

EPN	FIN	Facility Description	Authorization	Table(1)	VOC			NO_x			CO			SO_2		
					Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy
BLOCK-1	CTG-1 thru CTG-3	Turbines 1-3	EGU Non-rule standard permit	A-1	-	19.79	19.79	-	41.4	41.4	-	25.19	25.19	-	15.97	15.97
BLOCK-2	CTG-4 thru CTG-6	Turbines 4-6	EGU Non-rule standard permit	A-1	-	19.79	19.79	-	41.4	41.4	-	25.19	25.19	-	15.97	15.97
MSS	MSS	Turbine Start up and Shutdown Emissions	EGU Non-rule standard permit	A-2	-	3.92	3.92	-	6.70	6.70	-	18.1	18.1	-	-	-
CT-VT-1 through CT-VT-6	CT-VT-1 through CT-VT-6	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 1 through Turbine 6	EGU Non-rule standard permit	A-3	-	0.976	0.976	-	-	-	-	-	-	-	-	-
GT-VT-1 through GT-VT-6	GT-VT-1 through GT-VT-6	Generator Turbine Lube and Hydraulic Oil Vent, Turbine 1 through Turbine 6	EGU Non-rule standard permit	A-3	-	0.976	0.976	-	-	-	-	-	-	-	-	-
FUG	FUG	Fugitive Piping Components	EGU Non-rule standard permit	A-4	-	11.2	11.2	-	-	-	-	-	-	-	-	-
CT-1	CT-1	Cooling Tower for Turbine 1	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
CT-2	CT-2	Cooling Tower for Turbine 2	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
CT-3	CT-3	Cooling Tower for Turbine 3	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
CT-4	CT-4	Cooling Tower for Turbine 4	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
CT-5	CT-5	Cooling Tower for Turbine 5	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
CT-6	CT-6	Cooling Tower for Turbine 6	PBR 106.371	A-5	-	0.276	0.276	-	-	-	-	-	-	-	-	-
ENG-1	ENG-1	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.111	0.111	-	1.40	1.40	-	0.301	0.301	-	0.092	0.092
ENG-2	ENG-2	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.111	0.111	-	1.40	1.40	-	0.301	0.301	-	0.092	0.092
ENG-3	ENG-3	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.111	0.111	-	1.40	1.40	-	0.301	0.301	-	0.092	0.092
FWP-1	FWP-1	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.049	0.049	-	0.620	0.620	-	0.134	0.134	-	0.041	0.041
FWP-2	FWP-2	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.049	0.049	-	0.620	0.620	-	0.134	0.134	-	0.041	0.041
FWP-3	FWP-3	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.049	0.049	-	0.620	0.620	-	0.134	0.134	-	0.041	0.041
OWS-1 through OWS-6	OWS-1 through OWS-6	Oil Water Separators	PBR 106.532	A-8	-	0.600	0.600	-	-	-	-	-	-	-	-	-
TK-1 through TK-5	TK-1 through TK-5	Diesel/Waste Oil Storage Tanks	PBR 106.472	A-9	-	0.409	0.409	-	-	-	-	-	-	-	-	-
LOAD-1	LOAD-1	Vacuum Truck and Frac Tank Loading Emissions	PBR 106.472	A-9	-	0.102	0.102	-	-	-	-	-	-	-	-	-
LOAD-2	LOAD-2	Truck Loading Emissions	PBR 106.472	A-10	-	0.014	0.014	-	-	-	-	-	-	-	-	-
Project Increase (tpy)							***59.9***			***95.5***			***69.7***			***32.3***
Major Source Threshold (tpy)							***100***			***100***			***100***			***100***
Site Existing Major Source(Yes/No)							***No***			***No***			***No***			***No***
Netting Threshold (tons)							***40***			***40***			***100***			***40***
Netting Required (Yes/No)							***No***			***No***			***No***			***No***
Contemporaneous Period Change (tons)							***NA***			***NA***			***NA***			***NA***
Significant Modification Threshold (tons)							***40***			***40***			***100***			***40***
Federal Review Required (Yes/No)							***No***			***No***			***No***			***No***

Notes:
1) Emissions contributions from facilities and operations authorized under PBR are a design estimate used and should not be considered enforceable. The emissions and facilities authorized under PBR may change based on final design, however project related emissions will not exceed PSD major source thresholds.

2) Project emissions increases documented in this table are for federal applicability purposes only. Please refer to Table 1a for a summary of allowable emission rates being authorized for MAERT compilation purposes.

Table 1-1
NNSR/PSD Applicability Analysis Summary
Forth Worth Power Core, LLC

EPN	FIN	Facility Description	Authorization	Table(1)	PM			PM_{10}			$PM_{2.5}$			H_2SO_4		
					Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy	Baseline tpy	Proposed tpy	Project Increase tpy
BLOCK-1	CTG-1 thru CTG-3	Turbines 1-3	EGU Non-rule standard permit	A-1	-	38.3	38.3	-	38.3	38.3	-	38.3	38.3	-	1.11	1.11
BLOCK-2	CTG-4 thru CTG-6	Turbines 4-6	EGU Non-rule standard permit	A-1	-	38.3	38.3	-	38.3	38.3	-	38.3	38.3	-	1.11	1.11
MSS	MSS	Turbine Start up and Shutdown Emissions	EGU Non-rule standard permit	A-2	-	0.94	0.94	-	0.94	0.94	-	0.940	0.940	-	-	-
CT-VT-1 through CT-VT-6	CT-VT-1 through CT-VT-6	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 1 through Turbine 6	EGU Non-rule standard permit	A-3	-	-	-	-	-	-	-	-	-	-	-	-
GT-VT-1 through GT-VT-6	GT-VT-1 through GT-VT-6	Generator Turbine Lube and Hydraulic Oil Vent, Turbine 1 through Turbine 6	EGU Non-rule standard permit	A-3	-	-	-	-	-	-	-	-	-	-	-	-
FUG	FUG	Fugitive Piping Components	EGU Non-rule standard permit	A-4	-	-	-	-	-	-	-	-	-	-	-	-
CT-1	CT-1	Cooling Tower for Turbine 1	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
CT-2	CT-2	Cooling Tower for Turbine 2	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
CT-3	CT-3	Cooling Tower for Turbine 3	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
CT-4	CT-4	Cooling Tower for Turbine 4	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
CT-5	CT-5	Cooling Tower for Turbine 5	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
CT-6	CT-6	Cooling Tower for Turbine 6	PBR 106.371	A-5	-	0.066	0.066	-	0.025	0.025	-	1.3E-04	1.3E-04	-	-	-
ENG-1	ENG-1	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.099	0.099	-	0.099	0.099	-	0.099	0.099	-	-	-
ENG-2	ENG-2	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.099	0.099	-	0.099	0.099	-	0.099	0.099	-	-	-
ENG-3	ENG-3	Emergency Electrical Generator Engine	PBR 106.511	A-6	-	0.099	0.099	-	0.099	0.099	-	0.099	0.099	-	-	-
FWP-1	FWP-1	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.044	0.044	-	0.044	0.044	-	0.044	0.044	-	-	-
FWP-2	FWP-2	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.044	0.044	-	0.044	0.044	-	0.044	0.044	-	-	-
FWP-3	FWP-3	Emergency Firewater Pump Engine	PBR 106.511	A-7	-	0.044	0.044	-	0.044	0.044	-	0.044	0.044	-	-	-
OWS-1 through OWS-6	OWS-1 through OWS-6	Oil Water Separators	PBR 106.532	A-8	-	-	-	-	-	-	-	-	-	-	-	-
TK-1 through TK-5	TK-1 through TK-5	Diesel/Waste Oil Storage Tanks	PBR 106.472	A-9	-	-	-	-	-	-	-	-	-	-	-	-
LOAD-1	LOAD-1	Vacuum Truck and Frac Tank Loading Emissions	PBR 106.472	A-9	-	-	-	-	-	-	-	-	-	-	-	-
LOAD-2	LOAD-2	Truck Loading Emissions	PBR 106.472	A-10	-	-	-	-	-	-	-	-	-	-	-	-
Project Increase (tpy)							***78.4***			***78.2***			***78.0***			***2.22***
Major Source Threshold (tpy)							***100***			***100***			***100***			***NA***
Site Existing Major Source(Yes/No)							***No***			***No***			***No***			***No***
Netting Threshold (tons)							***25***			***15***			***10***			***NA***
Netting Required (Yes/No)							***No***			***No***			***No***			***No***
Contemporaneous Period Change (tons)							***NA***			***NA***			***NA***			***NA***
Significant Modification Threshold (tons)							***25***			***15***			***10***			***NA***
Federal Review Required (Yes/No)							***No***			***No***			***No***			***No***

Notes:
1) Emissions contributions from facilities and operations authorized under PBR are a design estimate used and should not be considered enforceable. The emissions and facilities authorized under PBR may change based on final design, however project related emissions will not exceed PSD major source thresholds.

2) Project emissions increases documented in this table are for federal applicability purposes only. Please refer to Table 1a for a summary of allowable emission rates being authorized for MAERT compilation purposes.

2. ADMINISTRATIVE FORMS

The following TCEQ forms and tables are included with this submittal in Appendix B:

- Core Data Form
- PI-1S, Registration of Air Standard Permit

In accordance with 30 TAC § 116.614, there is a flat fee of $900 to register a standard permit. This fee has been paid online.

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 606278281		RN TBD

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* | *If new Customer, enter previous Customer below:*

Fort Worth Power Core LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (*if applicable*)
32094460238	0805493020		

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:

☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:						
	425 Houston Street					
	Suite 400					
	City	Fort Worth	State	TX	Zip	76102

16. Country Mailing Information (*if outside USA*)	17. E-Mail Address (*if applicable*)
	Rhett.bennett@blackmtn.com

18. Telephone Number	19. Extension or Code	20. Fax Number (*if applicable*)
817-698-9901		

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted here may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc., LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Williamson County Power Plant

23. Street Address of Regulated Entity: *(No PO Boxes)*						
	City		**State**		**Zip**	
24. County						

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	In Jonah, TX, from the intx of Old Hwy 29 and TX-29 E, turn right heading east on TX-29 E. Go for 2.4 mi then turn left onto Co Rd 192. Go for 2.8 mi and turn right onto Co Rd 124. Go for 0.5 mi and the site will be on your right.

26. Nearest City	**State**	**Nearest Zip Code**
Jonah	Texas	78626

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.667250°	**28. Longitude (W) In Decimal:**	-97.511861°

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	40	2.10	97	30	42.70

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4911		22111	

33. What is the Primary Business of this entity? *(Do no repeat the SIC or NAICS description.)*

Power Generation

34. Mailing Address:	425 Houston Street					
	Suite 400					
	City	Fort Worth	**State**	TX	**Zip**	76102
35. E-Mail Address:	Rhett.bennett@blackmtn.com					

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** (*if applicable*)
817-698-9901		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☒ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Connor McNally	41. Title:	Manager of Consulting Services

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 965-5556			connor.mcnally@trinityconsultants.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Fort Worth Power Core LLC	Job Title:	CEO	
Name (*In Print*):	Rhett Bennett		Phone:	817-698-9901
Signature:			Date:	

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

I. Registrant Information
A. Company or Other Legal Customer Name:
Fort Worth Power Core LLC
B. Company Official Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)_____
Name: Rhett Bennett
Title: CEO
Mailing Address: 425 Houston Street, Suite 400
City: Fort Worth
State: TX
ZIP Code: 76102
Telephone No.: 817-698-9901
Fax No.:
Email Address: Rhett.bennett@blackmtn.com
All permit correspondence will be sent via email.
C. Technical Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)_____
Name: Connor McNally
Title: Manager of Consulting Services
Company Name: Trinity Consultants
Mailing Address: 555 N Carancahua St, Suite 820
City: Corpus Christi
State: Texas
ZIP Code: 78401
Telephone No.: 512-965-5556
Fax No.:
Email Address: connor.mcnally@trinityconsultants.com
II. Facility and Site Information
A. Name and Type of Facility
Facility Name: Williamson County Power Plant
Type of Facility: ☒ Permanent ☐ Temporary

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

II. Facility and Site Information *(continued)*
For portable units, please provide the serial number of the equipment being authorized below.
Serial No(s):
B. Facility Location Information
Street Address:
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).
In Jonah, TX, from the intx of Old Hwy 29 and TX-29 E, turn right heading east on TX-29 E. Go for 2.4 mi then turn
left onto Co Rd 192. Go for 2.8 mi and turn right onto Co Rd 124. Go for 0.5 mi and the site will be on your right.
City: Jonah
County: Williamson
ZIP Code: 78626
C. Core Data Form (**required** for Standard Permits 6006, 6007, and 6013).
Is the Core Data Form (TCEQ Form 10400) attached? ☒ Yes ☐ No
Customer Reference Number (CN): CN606278281
Regulated Entity Number (RN): TBD
D. TCEQ Account Identification Number (if known):
E. Type of Action
☒ Initial Application ☐ Change to Registration ☐ Renewal ☐ Renewal Certification
For Change to Registration, Renewal, or Renewal Certification actions provide the following:
Registration Number: TBD
Expiration Date:
F. Standard Permit Claimed: 6005
G. Previous Standard Exemption or PBR Registration Number:
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR? ☐ Yes ☒ No
If "Yes," enter previous standard exemption number(s) and PBR registration number(s) and associated effective date in the spaces provided below.

II. Facility and Site Information *(continued)*
H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit? ☐ Yes ☒ No
If "Yes," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s) and Effective Date(s)
I. Other Air Preconstruction Permits
Are there any other air preconstruction permits at this site? ☐ Yes ☒ No
If "Yes," enter permit number(s) in the spaces provided below.
J. Affected Air Preconstruction Permits
Does the standard permit directly affect any permitted facility? ☐ Yes ☒ No
If "Yes," enter permit number(s) in the spaces provided below.
K. Federal Operating Permit (FOP) Requirements
Is this facility located at a site that is required to obtain a FOP pursuant to 30 TAC Chapter 122? ☐ Yes ☒ No ☐ To Be Determined
Check the requirements of 30 TAC Chapter 122 that will be triggered if this standard permit is approved (*check all that apply).*
☐ Initial Application for a FOP ☐ Significant Revision for a SOP ☐ Minor Revision for a SOP
☐ Operational Flexibility/Off Permit Notification for a SOP ☐ Revision for a GOP
☐ To be Determined ☒ None
Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *(check all that apply)*
☐ SOP ☐ GOP ☐ GOP application/revision (submitted or under APD review) ☒ N/A
☐ SOP application/revision (submitted or under APD review)

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

III.	**Fee Information** ***(go to www.tceq.texas.gov/epay to pay online)***
A.	Fee Amount: $900
B.	Voucher number from ePay:
IV.	**Public Notice** *(if applicable)*
A.	Responsible Person (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)_____
Name:	
Title:	
Company:	
Mailing Address:	
City:	
State:	
ZIP Code:	
Telephone No.:	
Fax No.:	
Email Address:	
B.	Technical Contact (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other):_____
Name:	
Title:	
Company:	
Mailing Address:	
City:	
State:	
ZIP Code:	
Telephone No.:	
Fax No.:	
Email Address:	
C.	Bilingual Notice
Is a bilingual program required by the Texas Education Code in the School District?	☐ Yes ☐ No
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?	☐ Yes ☐ No

IV.	**Public Notice *(continued)*** *(if applicable) (continued)*	
If "Yes," list which language(s) are required by the bilingual program below?		
D.	Small Business Classification and Alternate Public Notice	
Does this company (including parent companies and subsidiary companies) have fewer than 100 employees or less than $6 million in annual gross receipts?		☐ Yes ☐ No
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program?		☐ Yes ☐ No
Are the site emissions of any individual regulated air contaminant equal to or greater than 50 tpy?		☐ Yes ☐ No
Are the site emissions of all regulated air contaminant combined equal to or greater than 75 tpy?		☐ Yes ☐ No
V.	**Renewal Certification Option**	
A.	Does the permitted facility emit an air contaminant on the Air Pollutant Watch List, and is the permitted facility located in an area on the watch list?	☐ Yes ☐ No
B.	For facilities participating in the Houston/Galveston/Brazoria area (HGB) cap and trade program for highly reactive VOCs (HRVOCs), do the HRVOCs need to be speciated on the maximum allowable emission rates table (MAERT)?	☐ Yes ☐ No
C.	Does the company and/or site have an unsatisfactory compliance history?	☐ Yes ☐ No
D.	Are there any applications currently under review for this standard permit registration?	☐ Yes ☐ No
E.	Are scheduled maintenance, startup, or shutdown emissions required to be included in the standard permit registration at this time?	☐ Yes ☐ No
F.	Are any of the following actions being requested at the time of renewal:	☐ Yes ☐ No
1.	Are there any facilities that have been permanently shutdown that are proposed to be removed from the standard permit registration?	☐ Yes ☐ No
2.	Do changes need to be made to the standard permit registration in order to remain in compliance?	☐ Yes ☐ No
3.	Are sources or facilities that have always been present and represented, but never identified in the standard permit registration, proposed to be included with this renewal?	☐ Yes ☐ No
4.	Are there any changes to the current emission rates table being proposed?	☐ Yes ☐ No
*Note: If answers to all of the questions in Section V. Renewal Certification Option are "No," use the certification option and skip to Section VII. of this form. If the answers to any of the questions in Section V. Renewal Certification Option are "Yes," the certification option **cannot** be used.*		
*If notice is applicable and comments are received in response to the public notice, the application does not qualify for the renewal certification option.		

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

VI. Technical Information Including State and Federal Regulatory Requirements	
Place a check next to the appropriate box to indicate what you have included in your submittal. *Note: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the project*.	
A. Standard Permit requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)	
Did you demonstrate that the general requirements in 30 TAC Sections 116.610 and 116.615 are met?	☒ Yes ☐ No
Did you demonstrate that the individual requirements of the specific standard permit are met?	☒ Yes ☐ No
B. Confidential Information (All pages properly marked "CONFIDENTIAL").	☐ Yes ☒ No
C. Process Flow Diagram.	☒ Yes ☐ No
D. Process Description.	☒ Yes ☐ No
E. Maximum Emissions Data and Calculations.	☒ Yes ☐ No
F. Plot Plan.	☒ Yes ☐ No
G. Projected Start Of Construction Date, Start Of Operation Date, and Length of Time at Site:	☒ Yes ☐ No
Projected Start of Construction (provide date): 12/01/2025	
Projected Start of Operation (provide date): 06/01/2026	
Length of Time at the Site: Permanent	
VII. Delinquent Fees and Penalties	
This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ website at: www.tceq.texas.gov/agency/financial/fees/delin/index.html.	

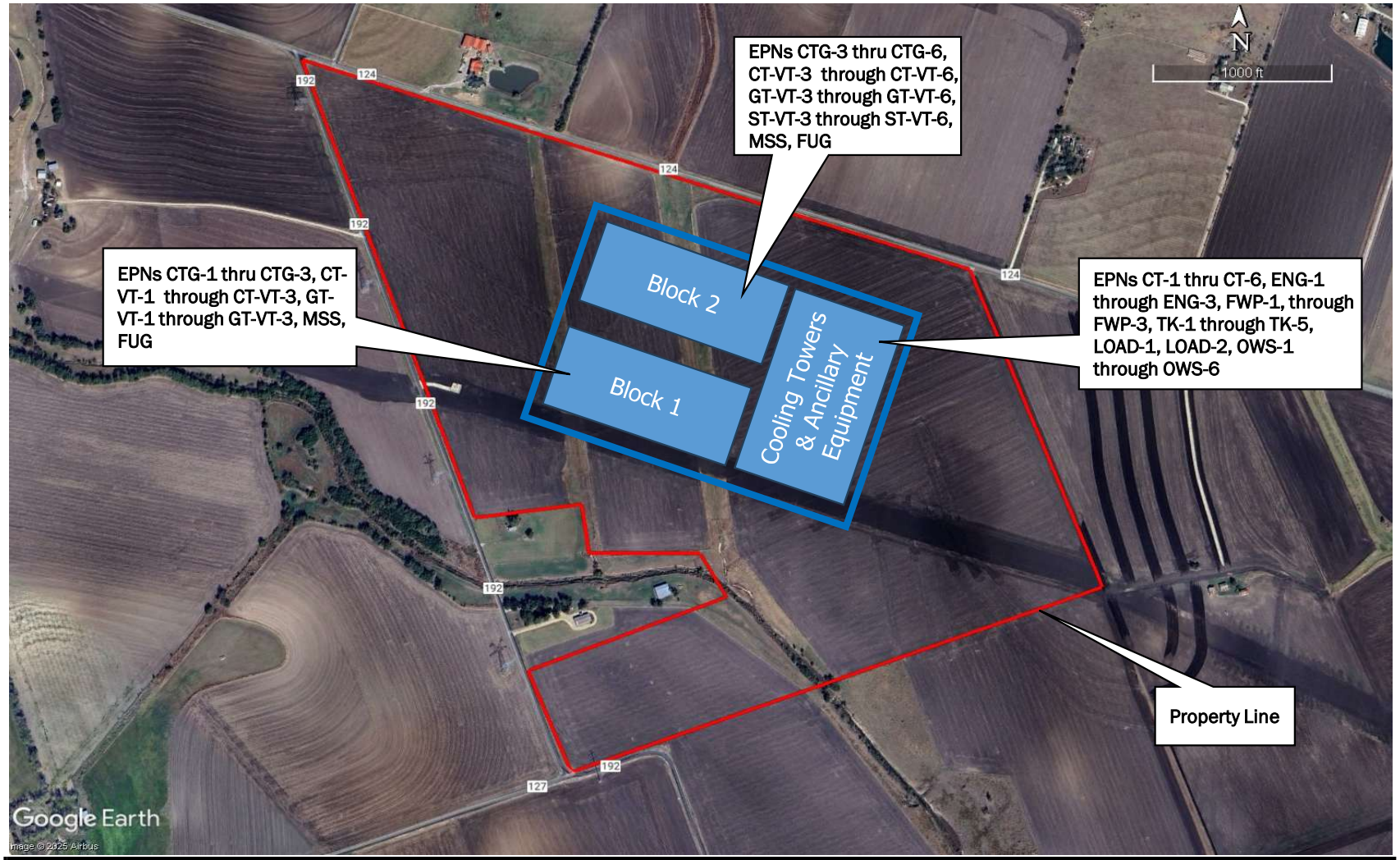
VIII. Signature Requirements
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA) the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.
Name (printed): Rhett Bennett
Signature (original signature required):
Date:
IX. Copies of the Registration
The PI-1S application must be submitted through ePermits. No additional copies need to be sent to the Regional Office or local Air Pollution Control Program(s). The link to ePermits can be found here: www3.tceq.texas.gov/steers/.

3. PROJECT LOCATION

The Williamson County Power Plant is located near Jonah, Williamson County, Texas. Driving directions to the site can be found in the Core Data Form and PI-1S above. An area map is shown in Figure 3-1. A plot plan is included in Figure 3-2.

Approximate locations of emission sources referenced in Figure 3-2 may change based on final project planning and should not be considered enforceable.

Coordinates: **30.665971°, -97.510583°**	**Fort Worth Power Core LLC**	**Figure 3-1** **Area Map**	Trinity Consultants
	Williamson County		



Approximate locations of emissions sources represented in this registration application may change based on final project planning details and should not be considered enforceable representations.	**Fort Worth Power Core LLC** Williamson County	**Figure 3-2** **Plot Plan**	Trinity Consultants

4. PROCESS DESCRIPTION

4.1 Combustion Turbines

The proposed facility will be a combined cycle power plant consisting of two blocks, blocks 1 and 2, each of which will contain three gas-fired combustion turbine generators (CTGs) and one heat recovery steam generator (HRSG). Each CTG will be nominally rated at 62 megawatts (MW) of electrical power. The three CTGs per block feed one steam turbine generator, which will produce up to roughly 223 MW of electric power.

The main function of the CTGs is to provide shaft power to drive an electric generator. Combustion air and natural gas is fed to each combustor producing a high-velocity combustion discharge that impinges on the turbine blades to rotate the turbine shaft. The hot exhaust gas exits the turbine and is routed to the HRSG for steam production. The mechanical energy produced by the CTG is used to drive the electric generator and to compress inlet air.

The turbine shaft speed is monitored and used to control the fuel flow to the turbine. In turn, the fuel flow defines the turbine operating conditions. The fuel-to-air ratio is controlled by the physical dimensions of the combustor. Therefore, as the fuel demand changes, the combustion air flow changes accordingly. Normal operation of the CTG is base load, but the turbines will be capable of operating at various loads. The CTG exhaust gases are vented to the atmosphere through the HRSG stack. Product of combustion emissions including nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM), and sulfur dioxide (SO2) are formed through fuel combustion.

The HRSGs use hot combustion gas exiting the CTGs to produce steam. The amount of steam generated is proportional to the CTG exhaust parameters. Emissions of NOx from the turbines will be reduced using selective catalytic reduction (SCR) controls on the HRSG stacks (EPNs BLOCK-1 and BLOCK-2). Oxidation catalyst may be used to reduced CO emissions. Ammonia (NH3) emissions may occur due to slip of excess ammonia from the SCR system.

The steam turbine generator (STG) will receive steam from either or all HRSGs. As the steam flows past the STG's blades, the steam expands and cools. The thermal energy from the steam is turned into mechanical energy in the rotating STG's blades. The turbine is connected to a generator, which in turn produces energy via a magnetic field that produces an electric current.

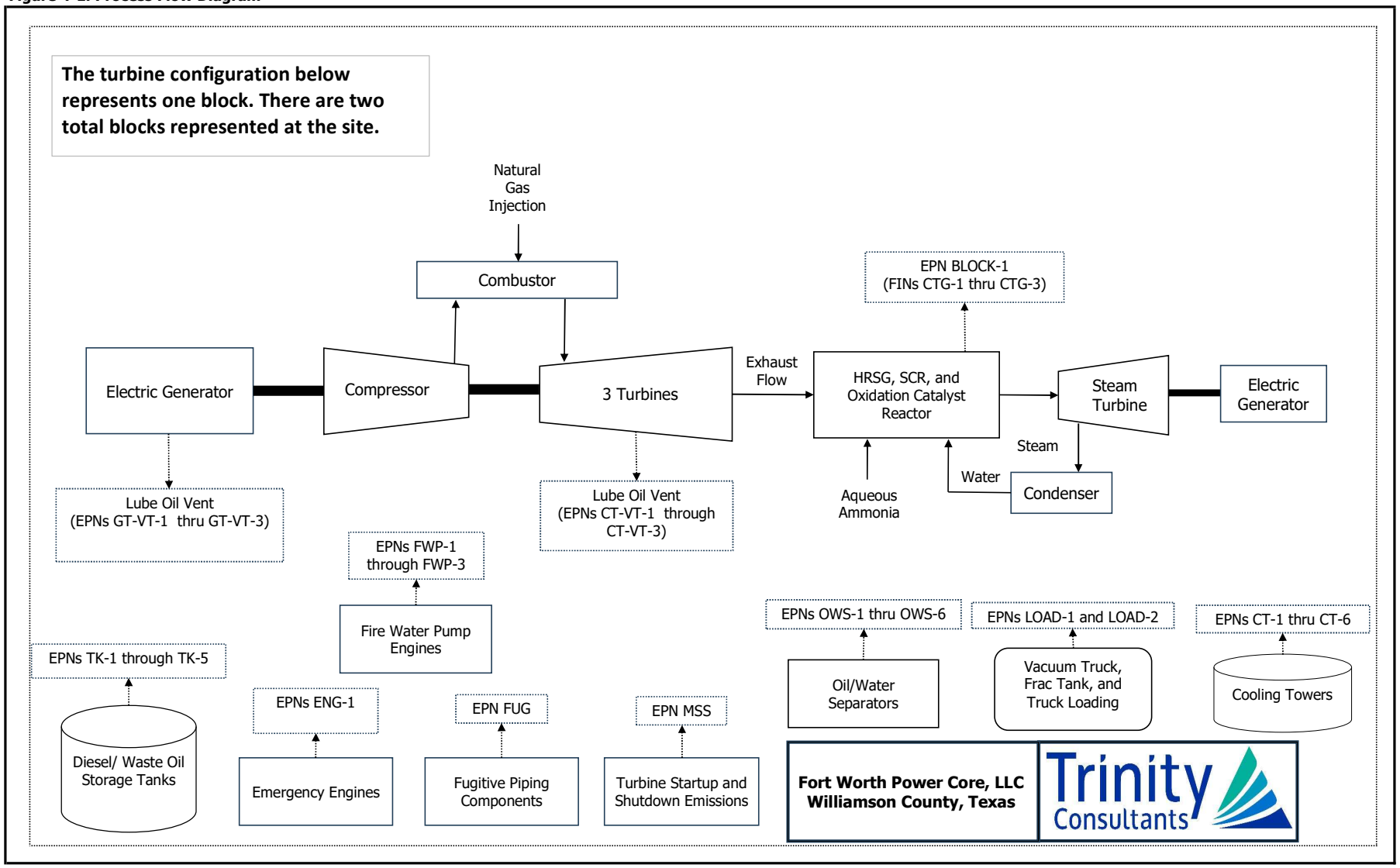
Gas turbines consume oil to lubricate and cool the compressor and turbine bearings. Lube oil continuously circulates throughout the gas turbine assembly, and a supply of lube oil is maintained in a reservoir within the assembly.

4.2 Ancillary Equipment

Ancillary equipment and emission sources at the site may include a diesel-fired generator and/or firewater pump fuel storage tanks, and cooling towers. Waste oil generated during normal operations may be collected and separated via an oil water separator. Waste oil will be periodically collected and may be disposed of offsite using frac tanks and vacuum trucks. Other inherently low emitting maintenance activities that could occur may include but are not limited to; turbine water washing, intake filter maintenance and disposal, SCR catalyst handling, and fugitive piping equipment maintenance and replacement. Emissions from miscellaneous ancillary equipment and inherently low emitting maintenance activities will be authorized separate of this registration via claims of Permit by Rule (PBR) including §106.263, §106.371, §106.472, §106.511 and §106.532.

A simplified process flow diagram is provided as Figure 4-1.

Figure 4-1. Process Flow Diagram



5. EMISSION CALCULATION METHODOLOGY

The following describes the calculation methodologies utilized to determine the emission rates from each facility type included in this application. Detailed emission calculations are provided in Appendix A.

5.1 Turbines

Routine emissions from engines are derived based on vendors provided pollutant concentration estimates under representative operating conditions. Annual emission limitations established in this permit application are based on a representative annual run time representations under worst-case operating conditions. Continuous emissions monitoring systems (CEMS) will be used to measure actual NOx emissions of the turbines. Annual emissions are calculated based on 5 turbines operating simultaneously at 8760 hours per year. FWPC will manage actual operations to emissions caps, such that the combined or "Site-wide operating hours" run time representations documented in the registration should not be considered enforceable.

Routine emissions of NOx, CO, CH_2O and VOC are calculated using concentration limits provided by the vendor. The concentration limits are given as parts per million by volume, dry (ppmvd), corrected to 15% oxygen (O_2). Short-term NOx emissions are calculated based on the applicable EGU standard permit emission limitation of 0.14 lb/MW-hr. Annual NOx emissions are estimated based on an annual average concentration of 2 ppmv and an annual run time. Short-term and annual CO emissions are calculated using a maximum concentration of 2 ppmv @ 15% O_2. CH_2O will have a short- and long-term emission factor of 0.3 ppmv, and VOC will have a short- and long-term emission factor of 1 ppmv. Selective catalytic reduction (SCR) controls will be used to reduce emissions of NOx and oxidation catalyst will be used to reduce emissions of VOC and CO. Emissions of ammonia slip are based on a stack concentration of 10 ppmvd at 15% oxygen. CH_2O site-wide annual emissions are less than 10 tpy limit for an individual HAP.

Emissions of PM, including particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns ($PM_{2.5}$), from the turbines are provided by the vendor in lbs/hr.

SO_2 emissions are also calculated using the emission factor from Table 1.4-2 of AP-42. The AP-42 factor is adjusted following footnote (d) of Table 1.4-2 to reflect a natural gas sulfur fuel content of 1 grain (gr) per 100 standard cubic feet (scf) on an hourly and annual basis. Formation of sulfuric acid (H_2SO_4) is anticipated to be negligible but is conservatively quantified, assuming 50% conversion of SO_2 to SO_3 and 100% conversion of SO_3 to sulfuric acid mist.

Higher concentrations of NOx and CO may be generated during periods of maintenance, startup, and shutdown (MSS) on the turbines. MSS emissions are estimated using data provided by the vendor. Annual MSS emissions are calculated based on MSS operation of 2 turbines per block at 100 hours per year per turbine. The MSS hours and emission factors are for calculation purposes only and should not be considered enforceable.

5.2 Turbine Oil Mist

Each turbine will be equipped with two lube oil reservoirs to provide lubrication oil to generator and turbine bearings. Each lube oil reservoir compartment will contain one vent where lube oil mist will be emitted (EPNs: CT-VT-1 through CT-VT-6, and GT-VT-1 through GT-VT-6). VOC emissions from lube oil vents are conservatively calculated based on the approximate annual make up volume of oil and a 30

percent loss fraction.

5.3 Equipment Leak Fugitives

The fugitive emissions from piping components and ancillary equipment are estimated using methods outlined in the TCEQ's Air Permit Technical Guidance for Chemical Sources: Fugitive Guidance, June 2018, which are based on US EPA's Protocol for Equipment Leak Emission Estimates, November 1995. Total emission rates are obtained by multiplying the number of fugitive components of a particular type by the appropriate emission factor.

6. FEDERAL NEW SOURCE REVIEW

Federal Prevention of Significant Deterioration (PSD) and/or Nonattainment New Source Review (NNSR) permitting requirements apply to construction of a new major stationary source or modification of an existing major source that results in a significant net increase in emissions of a regulated air pollutant. The proposed facility will be a new source located in Williamson County, which is designated as attainment or unclassifiable for all criteria pollutants (i.e., principal pollutants with a National Ambient Air Quality Standard (NAAQS)). Therefore, NNSR permitting requirements are not applicable to the proposed project.

The proposed facility will be a PSD "named" stationary source and will therefore have a major source threshold of 100 tons per year (tpy) of any regulated pollutant. As shown below, the proposed project increases for all PSD program pollutants are less than the PSD major source threshold; therefore, the project is not subject to PSD permitting requirements. PSD review is not required for greenhouse gas (GHG) emissions because the project does not trigger PSD review for any other pollutants.

Table 6-1. PSD Applicability Summary

Pollutant	Project Increase (tpy)	Major Threshold (tpy)	Federal Review Required (Yes/No)
NOx	95.5	100	No
CO	69.7	100	No
VOC	59.9	100	No
CH_2O	8.1	10	No
PM	78.4	100	No
PM_{10}	78.2	100	No
$PM_{2.5}$	78.0	100	No
SO_2	32.3	100	No
H_2SO_4	2.22	NA	No
NH_3	159.7	NA	No

Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.;	Area Name:	Customer Reference No.:
January 2025	TBD	TBD	Fort Worth Power Core LLC	CN606278281

EPN(s)	FIN(s)	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate (lb/hr)	Air Contaminant Emission Rate (tpy)
BLOCK-1	CTG-1 thru CTG-3	Turbines 1-3	VOC	5.42	--
			VOC (SUSD)	58.80	
			NOx	23.13	--
			NOx (SUSD)	100.50	
			CO	6.90	--
			CO (SUSD)	270.90	
			$PM/PM_{10}/PM_{2.5}$	10.50	--
			$PM/PM_{10}/PM_{2.5}$ (SUSD)	14.10	
			CH_2O	1.11	--
			SO_2	4.37	--
			H_2SO_4	0.30	--
			NH_3	21.33	--
BLOCK-2	CTG-4 thru CTG-6	Turbines 4-6	VOC	5.42	--
			VOC (SUSD)	58.80	
			NOx	23.13	--
			NOx (SUSD)	100.50	
			CO	6.90	--
			CO (SUSD)	270.90	
			$PM/PM_{10}/PM_{2.5}$	10.50	--
			$PM/PM_{10}/PM_{2.5}$ (SUSD)	14.10	
			CH_2O	1.11	--
			SO_2	4.37	--
			H_2SO_4	0.30	--
			NH3	21.33	--
Turbine CAP	CTG-1 thru CTG-6	BLOCK-1 and BLOCK-2 Annual Emissions Cap (Routine and MSS)	VOC	--	43.50
			VOC (SUSD)	--	
			NOx	--	89.46
			NOx (SUSD)	--	
			CO	--	68.44
			CO (SUSD)	--	
			$PM/PM_{10}/PM_{2.5}$	--	77.59
			PM/PM10/PM2.5 (SUSD)	--	
			CH_2O	--	8.10
			SO_2	--	31.94
			H_2SO_4	--	2.22
			NH_3	--	155.72
CT-VT-1 through CT-VT-6	CT-VT-1 through CT-VT-6	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 1 through Turbine 6	VOC	0.22	0.98
GT-VT-1 through GT-VT-6	GT-VT-1 through GT-VT-6	Generator Turbine Lube and Hydraulic Oil Vent, Turbine 1 through Turbine 6	VOC	0.22	0.98
FUG	FUG	Fugitive Piping Components	VOC	2.55	11.18
			NH_3	0.90	3.94

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

EPN = Emission Point
FIN = Facility Identification Number

7. RULE APPLICABILITY ANALYSIS

This section addresses the applicability and general conditions of a Standard Permit.

7.1 30 Texas Administrative Code (TAC) 116 Subchapter F

7.1.1 30 TAC 116.610 (Applicability)

(a) Under the Texas Clean Air Act, §382.051, a project that meets the requirements for a standard permit listed in this subchapter or issued by the commission is hereby entitled to the standard permit, provided the following conditions listed in this section are met. For the purposes of this subchapter, project means the construction or modification of a facility or a group of facilities submitted under the same registration.

(1) Any project that results in a net increase in emissions of air contaminants from the project other than water, nitrogen, ethane, hydrogen, oxygen, or greenhouse gases (GHGs) as defined in §101.1 of this title (relating to Definitions), or those for which a national ambient air quality standard has been established must meet the emission limitations of §106.261 of this title (relating to Facilities (Emission Limitations)), unless otherwise specified by a particular standard permit.

The AQSPEGU (3)(A) states that "units which meet the conditions of this standard permit do not have to meet 30 TAC §116.610(a)(1), Applicability". This project will meet all the conditions of the AQSPEGU; therefore, a compliance demonstration with 30 TAC §106.261 is not required or included as part of this registration.

(2) Construction or operation of the project must be commenced prior to the effective date of a revision to this subchapter under which the project would no longer meet the requirements for a standard permit.

The project will meet the requirements of the standard permit in effect at the time of the construction or operation.

(3) The proposed project must comply with the applicable provisions of the Federal Clean Air Act (FCAA), §111 (concerning New Source Performance Standards) as listed under 40 Code of Federal Regulations (CFR) Part 60, promulgated by the United States Environmental Protection Agency (EPA).

The turbines will comply with applicable requirements of New Source Performance Standards (NSPS) as listed in 40 CFR Part 60 Subpart KKKK (Standards of Performance for Stationary Combustion Turbines).

The turbines are proposed fire natural gas with a maximum heating value >50 MMBtu and ≤ 850 MMBtu. The turbines will comply with the following Subpart KKKK emissions limits summarized below.

- ***NOx: 25 ppmvd @ 15% O2***
- ***SO2: < 20 grains of sulfur per 100 standard cubic feet, or <0.06 lb SO2/MMBtu***

Turbines proposed in this permit registration utilize SCR to reduce NOx emissions. FWPC will install calibrate and maintain a continuous emissions monitoring system to monitor NOx emissions. FWPC will comply with the fuel sulfur requirements using valid purchase contract, tariff or transportation contract under §60.4365(a).

FWPC will comply with all excess emissions and monitor downtime reporting requirements outlined under §60.7(c).

FWPC will comply with all other applicable provisions of 40 CFR Part 60.

(4) The proposed project must comply with the applicable provisions of FCAA, §112 (concerning Hazardous Air Pollutants) as listed under 40 CFR Part 61, promulgated by the EPA.

The proposed sources will not be subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subparts as listed in 40 CFR Part 61.

(5) The proposed project must comply with the applicable maximum achievable control technology standards as listed under 40 CFR Part 63, promulgated by the EPA under FCAA, §112 or as listed under Chapter 113, Subchapter C of this title (relating to National Emissions Standards for Hazardous Air Pollutants for Source Categories (FCAA, §112, 40 CFR Part 63)).

The FWPC facility will be an area source of HAP emissions and therefore not subject to requirements under NESHAPS for Source Categories as listed in 40 CFR Part 63 (aka MACT) Subpart YYYY (National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines).

(6) If subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program) the proposed facility, group of facilities, or account must obtain allocations to operate.

Williamson County is not regulated under the Mass Emissions Cap and Trade (MECT) program.

(b) Any project that constitutes a new major stationary source or major modification as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions) because of emissions of air contaminants other than greenhouse gases is subject to the requirements of §116.110 of this title (relating to Applicability) rather than this subchapter. Notwithstanding any provision in any specific standard permit to the contrary, any project that constitutes a new major stationary source or major modification which is subject to Subchapter B, Division 6 of this chapter (relating to Prevention of Significant Deterioration Review) due solely to emissions of greenhouse gases may use a standard permit under this chapter for air contaminants that are not greenhouse gases.

As documented in Section 6, the proposed project does not constitute a new major source or major modification.

(c) Persons may not circumvent by artificial limitations the requirements of §116.110 of this title.

FWPC will not circumvent by artificial limitations the requirements of §116.110.

(d) Any project involving a proposed affected source (as defined in §116.15(1) of this title (relating to Section 112(g) Definitions)) shall comply with all applicable requirements under Subchapter E of this chapter (relating to Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources (FCAA, §112(g), 40 CFR Part 63)). Affected sources subject to Subchapter E of this chapter may use a standard permit under this subchapter only if the terms and conditions of the specific standard permit meet the requirements of Subchapter E of this chapter.

The Williamson County Power Plant is not an affected source subject to the requirements of FCAA 112(g).

7.1.2 30 TAC 116.615 (General Conditions)

The following general conditions are applicable to holders of standard permits but will not necessarily be specifically stated within the standard permit document.

(1) Protection of public health and welfare. The emissions from the facility, including dockside vessel emissions, must comply with all applicable rules and regulations of the commission adopted under Texas Health and Safety Code, Chapter 382, and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public.

All emissions related to this project will comply with all applicable rules and regulations, including protection of health and property of the public.

(2) Standard permit representations. All representations with regard to construction plans, operating procedures, pollution control methods, and maximum emission rates in any registration for a standard permit become conditions upon which the facility or changes thereto, must be constructed and operated. It is unlawful for any person to vary from such representations if the change will affect that person's right to claim a standard permit under this section. Any change in condition such that a person is no longer eligible to claim a standard permit under this section requires proper authorization under §116.110 of this title (relating to Applicability). Any changes in representations are subject to the following requirements:

(A) For the addition of a new facility, the owner or operator shall submit a new registration incorporating existing facilities with a fee, in accordance with §116.611 and §116.614 of this title, (relating to Registration to use a Standard Permit and Standard Permit Fees) prior to commencing construction. If the applicable standard permit requires public notice, construction of the new facility or facilities may not commence until the new registration has been issued by the executive director.

(B) For any change in the method of control of emissions, a change in the character of the emissions, or an increase in the discharge of the various emissions, the owner or operator shall submit written notification to the executive director describing the change(s), along with the designated fee, no later than 30 days after the change.

(C) For any other change to the representations, the owner or operator shall submit written notification to the executive director describing the change(s) no later than 30 days after the change.

(D) Any facility registered under a standard permit which contains conditions or procedures for addressing changes to the registered facility which differ from subparagraphs (A) - (C) of this paragraph shall comply with the applicable requirements of the standard permit in place of subparagraphs (A) - (C) of this paragraph.

FWPC will operate the proposed electric generating units as represented in this application and will notify the TCEQ within 30 days of any change in the method of control of emissions, a change in the character of the emissions, or an increase in the discharge of the various emissions as compared to the representations in this registration.

(3) Standard permit in lieu of permit amendment. All changes authorized by standard permit to a facility previously permitted under §116.110 of this title shall be administratively incorporated into that facility's permit at such time as the permit is amended or renewed.

This is an initial authorization for the Williamson County Power Plant; there is no existing authorization under 30 TAC 116.

(4) Construction progress. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office not later than 15

working days after occurrence of the event, except where a different time period is specified for a particular standard permit.

FWPC will comply with this provision.

(5) Start-up notification.

(A) The appropriate air program regional office of the commission and any other air pollution control agency having jurisdiction shall be notified prior to the commencement of operations of the facilities authorized by a standard permit in such a manner that a representative of the executive director may be present.

(B) For phased construction, which may involve a series of units commencing operations at different times, the owner or operator of the facility shall provide separate notification for the commencement of operations for each unit.

(C) Prior to beginning operations of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting, Remediation, and Registration, the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

(D) A particular standard permit may modify start-up notification requirements.

FWPC will comply with this provision.

(6) Sampling requirements. If sampling of stacks or process vents is required, the standard permit holder shall contact the commission's appropriate regional office and any other air pollution control agency having jurisdiction prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The standard permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant.

FWPC will contact the Office of Air Quality if sampling is required, in order to obtain the proper data forms and procedures before sampling is performed.

(7) Equivalency of methods. The standard permit holder shall demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the standard permit. Alternative methods must be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the standard permit.

FWPC will comply with this provision.

(8) Recordkeeping. A copy of the standard permit along with information and data sufficient to demonstrate applicability of and compliance with the standard permit shall be maintained in a file at the plant site and made available at the request of representatives of the executive director, the United States Environmental Protection Agency, or any air pollution control agency having jurisdiction. For facilities that normally operate unattended, this information shall be maintained at the nearest staffed location within Texas specified by the standard permit holder in the standard permit registration. This information must include, but is not limited to, production records and operating hours. Additional recordkeeping requirements may be specified in the conditions of the standard permit. Information and data sufficient to demonstrate applicability of and compliance with the standard permit must be retained for at least two years following the date that the information or data is obtained. The copy of the standard permit must be maintained as a permanent record.

FWPC will maintain a copy of the standard permit with any other data and information required by the TCEQ to demonstrate compliance with the conditions of the standard permit at the Williamson County Power Plant or FWPC's administrative offices for at least two years after the data is obtained. This information will be provided upon request to representatives of the TCEQ and any federal or local air pollution control program having jurisdiction.

(9) Maintenance of emission control. The facilities covered by the standard permit may not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. Notification for emissions events and scheduled maintenance shall be made in accordance with §101.201 and §101.211 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; and Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements).

The electric generating units will be maintained in good working order and operated properly during normal operations. TCEQ will be notified of any emissions events and scheduled maintenance consistent with the requirements of §101.201 and §101.211.

(10) Compliance with rules. Registration of a standard permit by a standard permit applicant constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the claiming of the standard permit. If more than one state or federal rule or regulation or permit condition are applicable, the most stringent limit or condition shall govern. Acceptance includes consent to the entrance of commission employees and designated representatives of any air pollution control agency having jurisdiction into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the standard permit.

As discussed in this Section and in Section 7.2, the project sources will comply with all applicable rules and regulations of the TCEQ and with all conditions of this standard permit.

(11) Distance limitations, setbacks, and buffer zones. Notwithstanding any requirement in any standard permit, if a standard permit for a facility requires a distance, setback, or buffer from other property or structures as a condition of the permit, the determination of whether the distance, setback, or buffer is satisfied shall be made on the basis of conditions existing at the earlier of:

(A) the date new construction, expansion, or modification of a facility begins; or

(B) the date any application or notice of intent is first filed with the commission to obtain approval for the construction or operation of the facility.

The standard permit claimed does not include a distance, setback, or buffer requirement.

7.2 Air Quality Standard Permit for Electric Generating Units

(Effective Date: May 16, 2007)

This standard permit authorizes electric generating units that generate electricity for use by the owner or operator and/or generate electricity to be sold to the electric grid, and that meet all of the conditions listed below.

7.2.1 (1) Applicability

(A) This standard permit may be used to authorize electric generating units installed or modified after the effective date of this standard permit and that meet the requirements of this standard permit.

This Standard Permit is being used to authorize an electric generating unit after the effective date of the standard permit. The project meets the requirements of the Standard Permit as described in this document.

(B) This standard permit may not be used to authorize boilers. Boilers may be authorized under the Air Quality Standard Permit for Boilers; 30 TAC § 106.183, Boilers, Heaters, and Other Combustion Devices; or a permit issued under the requirements of 30 TAC Chapter 116.

No boilers are proposed to be authorized as part of this registration.

7.2.2 (2) Definitions

(A) East Texas Region - All counties traversed by or east of Interstate Highway 35 or Interstate Highway 37, including Bosque, Coryell, Hood, Parker, Somervell and Wise Counties.

(B) Installed - a generating unit is installed on the site when it begins generating electricity.

(C) West Texas Region - Includes all of the state not contained in the East Texas Region.

(D) Renewable fuel - fuel produced or derived from animal or plant products, byproducts or wastes, or other renewable biomass sources, excluding fossil fuels. Renewable fuels may include, but are not limited to, ethanol, biodiesel, and biogas fuels.

The above definitions have been acknowledged and applied in this document.

7.2.3 (3) Administrative Requirements

(A) Electric generating units shall be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard Permit, using a current Form PI-1S. Units that meet the conditions of this standard permit do not have to meet 30 TAC § 116.610(a)(1), Applicability.

This application, including Form PI-1S, is being submitted to register the proposed electric generating unit under the Standard Permit. Compliance with the requirements of § 116.611 is detailed in Section 7.1.1.

(B) Registration applications shall comply with 30 TAC § 116.614, Standard Permit Fees, for any single unit or multiple units at a site with a total generating capacity of 1 megawatt (MW) or greater. The fee for units or multiple units with a total generating capacity of less than 1 MW at a site shall be $100.00. The fee shall be waived for units or multiple units with a total generating capacity of less than 1 MW at a site that have certified nitrogen oxides (NOx) emissions that are less than 10 percent of the standards required by this standard permit.

This application is being submitted with the standard $900 fee per § 116.614. The project does not qualify for a reduced fee based on the proposed generating capacity.

(C) No owner or operator of an electric generating unit shall begin construction and/or operation without first obtaining written approval from the executive director.

FWPC acknowledges that construction and operation may not begin prior to receiving written approval from TCEQ.

(D) Records shall be maintained and provided upon request to the Texas Commission on Environmental Quality (TCEQ) for the following:

(i) Hours of operation of the unit;

(ii) Maintenance records, maintenance schedules, and/or testing reports for the unit to document re-certification of emission rates as required by subsection (4)(G) below; and

(iii) Records to document compliance with the fuel sulfur limits in subsection (4)(C).

FWPC will maintain records necessary to demonstrate compliance with the Standard Permit, including the specific records identified above.

(E) Electric generators powered by gas turbines must meet the applicable conditions, including testing and performance standards, of Title 40 Code of Federal Regulations (CFR) Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and applicable requirements of 40 CFR Part 60 Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

FWPC will comply with the requirements of 40 CFR 60 (NSPS) Subpart KKKK. Per §60.4305(b), turbines regulated under Subpart KKKK are exempt from the requirements of Subpart GG.

(F) Compliance with this standard permit does not exempt the owner or operator from complying with any applicable requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds, or 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles.

Williamson County is not subject to the requirements of Chapter 117, including Subchapters D or E. Facilities included in this application are not subject to requirements of 30 TAC Chapter 114 for motor vehicles.

7.2.4 (4) General Requirements

(A) Emissions of NOx from the electric generating units shall be certified by the manufacturer or by the owner or operator in pounds of pollutant per megawatt hour (lb/MWh). This certification must be displayed on the name plate of the unit or on a label attached to the unit. Test results from U.S. Environmental Protection Agency (EPA) reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director used to verify this certification shall be provided upon request to the TCEQ. The unit must operate on the same fuel(s) for which the unit was certified.

FWPC will comply with this provision.

(B) Electric generating units that use combined heat and power (CHP) may take credit for the heat recovered from the exhaust of the combustion unit to meet the emission standards in subsections (4)(D), (4)(E), and (4)(F). Credit shall be at the rate of one MWh for each 3.4 million British Thermal Units of heat recovered. The following requirements must be met to take credit for CHP for units not sold and certified as an integrated package by the manufacturer:

(i) The owner or operator must provide as part of the application documentation of the heat recovered, electric output, efficiency of the generator alone, efficiency of the generator including CHP, and the use for the non-electric output, and

(ii) The heat recovered must equal at least 20 percent of the total energy output of the CHP unit.

This application is not seeking to take credit for CHP to meet the emission standard in Subsection (4)(E).

(C) Fuels combusted in these electric generating units are limited to:

(i) Natural gas containing no more than ten grains total sulfur per 100 dry standard cubic feet;

(ii) Landfill gas, digester gas, stranded oilfield gas, or gaseous renewable fuel containing no more than 30 grains total sulfur per 100 dry standard cubic feet; or

(iii) Liquid fuels (including liquid renewable fuel) not containing waste oils or solvents and containing less than 0.05 percent by weight sulfur.

The proposed project involves the use of natural gas fuel meeting item (i).

(D) Except as provided in subsections (4)(F) and (4)(H), NOx emissions for units 10 MW or less shall meet the following limitations based upon the date the unit is installed and the region in which it operates:

East Texas Region:

(i) Units installed prior to January 1, 2005 and

a. operating more than 300 hours per year - 0.47 lb/MWh;

b. operating 300 hours or less per year - 1.65 lb/MWh;

(ii) Units installed on or after January 1, 2005 and

a. operating more than 300 hours per year, with a capacity greater than 250 kilowatts (kW) - 0.14 lb/MWh;

b. operating 300 hours or less per year - 0.47 lb/MWh; or

c. any unit with a capacity of 250 kW or less - 0.47 lb/MWh.

West Texas Region:

(i) Units operating more than 300 hours per year - 3.11 lb/MWh;

(ii) Units operating 300 hours or less per year - 21 lb/MWh. Units certified to comply with applicable Tier 1, 2, or 3 emission standards in 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines, are deemed to satisfy this emission limit.

The proposed units are greater than 10MW; therefore, this section does not apply.

(E) Except as provided in subsections (4)(F) and (4)(H), NOx emissions for units greater than 10 MW shall meet the following limitations:

(i) Units operating more than 300 hours per year - 0.14 lb/MWh;

(ii) Units operating 300 hours or less per year - 0.38 lb/MWh.

Turbines in this permit registration are greater than 10 MW and will operate more than 300 hours per year. Therefore, the NOx emission standard of 0.14 lb/MWh applies. SCR will be used to meet the applicable NOx limitation referenced in this section.

(F) Electric generating units firing any gaseous or liquid fuel that is at least 75 percent landfill gas, digester gas, stranded oil field gas, or renewable fuel content by volume, shall meet a NOx emission limit of 1.90 lb/MWh. Units in West Texas with a capacity of 10 MW or less that fire at least 75 percent landfill gas, digester gas, stranded oilfield gases, or gaseous or liquid renewable fuel by volume, must comply with the applicable West Texas NOx limit in subsection (4)(D).

The proposed units will not fire gaseous or liquid fuel containing landfill gas, digester gas, stranded oil field gas, or renewable fuel; therefore, this provision is not applicable.

(G) To ensure continuing compliance with the emissions limitations, the owner or operator shall re-certify a unit every 16,000 hours of operation, but no less frequently than every three years. Re-certification may be accomplished by following a maintenance schedule that the manufacturer certifies will ensure continued compliance with the required NOx standard or by third party testing of the unit using appropriate EPA reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director to demonstrate that the unit still meets the required emission standards. After re-certification, the unit must operate on the same fuel(s) for which the unit was re-certified.

FWPC will comply with this provision. Compliance with the NOx emission standards will be demonstrated through the use of a continuous emissions monitoring system (CEMS). The CEMS will undergo initial certification followed by quarterly and annual quality assurance tests.

(H) The NOx emission limits in subsections (4)(D)-(4)(F) are subject to the following exceptions:

(i) The hourly NOx emission limits do not apply at times when the ambient air temperature at the location of the unit is less than 0 degrees Fahrenheit.

(ii) At times when a unit is operating at less than 80% of rated load, an alternative NOx emission standard for that unit may be determined by multiplying the applicable emission standard in subsections (4)(D)-(4)(F) by the rated load of the EGU (in MW), to produce an allowable hourly mass NOx emission rate. In order to use this alternative standard, an owner or operator must maintain records that demonstrate compliance with the alternative emission standard, and make such records available to the TCEQ or any local air pollution control agency with jurisdiction upon request.

If use of this alternate standard is required, records will be maintained to demonstrate the mass emissions limitation referenced in this paragraph will not be exceeded. Any records maintained will be made available to TCEQ upon request.

APPENDIX A. EMISSION CALCULATIONS

Table A-1
Turbine Emissions
Forth Worth Power Core, LLC

Notes:

Turbine parameters and pollutant concentrations are a design estimate for emissions estimation purposes and should not be considered enforeable. Fort Worth Power Core will comply with the mass emission limits established in this registration.

Case #: 4

Turbine Parameter		
Ambient temperature	F	80
Ambient relative humidity	%	60

Annual Turbine Parameters		
Estimated Gas Turbine Performance	**Unit**	
Model		Siemens SGT-800
Fuel		Natural Gas
Load	%	100%
Site-Wide Annual Operating Hours (6 turbines)	Hrs/yr	43800
Nominal Net CT power output (1 turbine)	kW	55079
Nominal Net CT power output (1 turbine)	MW	55.1
Nominal Net CT power output (6 turbines)	kW	330474
Nominal Net CT power output (6 turbines)	MW	330
HHV/LHV	Ratio	1.10
Nominal Net heat rate	BTU/kWh (LHV)	8,593
Adjusted net heat rate	BTU/kWh (HHV)	9,452
Heat consumption per turbine	MMBtu (LHV)	473.3
Heat consumption per turbine	MMBtu/hr (HHV)	520.6
Max exhaust flow wet	lb/hr	1,030,680
Max exhaust flow wet	lbmol/hr	36114
Max exhaust flow dry	lbmol/hr	32694
Exhaust %O2, dry	% dry	13.5
Max exhaust flow dry @ 15% O2	lbmol/hr	41076
Exhaust temperature	F	1,090

Combustion Exhaust Analysis		
Nitrogen	%Vol	73.60
Oxygen	%Vol	12.21
Carbon Dioxide	%Vol	3.84
Water	%Vol	9.47
Argon	%Vol	0.88
	Total:	**100**
	MW:	**28.5**

Notes:
Exhaust gas flow lb/hr based on vendor estimates
Molar flow rate of exhaust gas (lbmol/hr)=exhaust gas flow (lb/hr)/molecular weight (lb/lbmol)
HHV is calculated by adding a 10% Margin to LLV for measurement error, off-design conditions and degradation.

Table A-1
Turbine Emissions
Forth Worth Power Core, LLC

Emission Factors		
Pollutant	**Unit**	**Value**
NOx (Short-Term)	lb/MW-hr	0.14
NOx (Long-Term)	ppmvd@ 15% O2	2.00
CO	ppmvd@ 15% O2	2.00
VOC	ppmvd@ 15% O2	1.00
CH_2O	ppmvd@ 15% O2	0.30
$PM/PM_{10}/PM_{2.5}$	lbs/hr	3.50
NH_3	ppmvd@ 15% O2	10.00
H_2SO_4	% sulfur converted	5%
SO_2	grains/100 scf	1.00

Combined Emissions		
Pollutant	**Unit**	**Total Emission Rates**
NOx (hourly)	lb/hr	46.27
NOx (annual)	tpy	82.76
CO (hourly)	lb/hr	13.80
CO (annual)	tpy	50.38
VOC (hourly)	lb/hr	10.84
VOC (annual)	tpy	39.58
CH_2O (hourly)	lb/hr	2.22
CH_2O(annual)	tpy	8.10
$PM/PM_{10}/PM_{2.5}$ (hourly)	lb/hr	21.00
$PM/PM_{10}/PM_{2.5}$ (annual)	tpy	76.65
NH_3 (hourly)	lb/hr	42.66
NH_3 (annual)	tpy	155.72
H_2SO_4 (hourly)	lb/hr	0.61
H_2SO_4 (annual)	tpy	2.22
SO_2 (hourly)	lb/hr	8.75
SO_2 (annual)	tpy	31.94

Example emission calculations

NOx Short Term: 0.14 (lb/MW-hr) * 55.1 (MW) = 7.71 lb/hr.
CO Short Term: 2 (ppm@ 15% O2) / 1000000* 41076 (lbmol/hr) *28 (lb/lbmol)= 2.3 lb/hr.
VOC Short Term: 1 (ppm@ 15% O2) / 1000000* 41076 (lbmol/hr) *44 (lb/lbmol)= 1.81 lb/hr.
CH2O Short Term: 0.3 (ppm@ 15% O2) / 1000000* 41076 (lbmol/hr) *30 (lb/lbmol)= 0.37 lb/hr.
PM/PM10/PM2.5: 3.5 lbs/hr, worst case based on vendor provided estimates.
NH3 Short Term: 10 (ppm@ 15% O2) / 1000000* 41076 (lbmol/hr) *17 (lb/lbmol)= 0.37 lb/hr.
Annual emissions: Short-term Per Turbine (lb/hr) * 43800 (hours/year)/ 2000 (lb/ton) = tpy

Table A-2
SUSD Turbine Emissions
Fort Worth Power Core, LLC

Mode	Time (min)	Total Pounds Per Event					SC Stack Exhaust (A)		CC Stack Exhaust (B)		Total Tons Per Year				
		NOx	CO	VOC	PM	Fuel Use	acfm	°F	acfm	°F	NOx	CO	VOC	PM	Fuel Use
'Cold' Startup Emissions (GT Ignition to MEL @ 100% GT Load, Steady-State)	40	18.0	68.9	8.8	1.3	11572	549694	977	243487	185	0.90	3.45	0.44	0.07	579
'Cold' Startup Emissions (GT Ignition to End of Hour)	60	19.3	69.5	9.3	2.1	19641	603280	1001	268088	195	0.97	3.48	0.47	0.11	982
'Non-Cold' Startup Emissions (GT Ignition to MEL @ 100% GT Load, Steady-State)	30	9.1	32.0	6.1	0.9	7537	496107	952	218886	176	0.46	1.60	0.31	0.05	377
'Non-Cold' Startup Emissions (GT Ignition to End of Hour)	60	11.1	32.9	6.8	2.1	19641	603280	1001	268088	195	0.56	1.65	0.34	0.11	982
Shutdown Emissions (100% Load to Fuel Cut Off)	29	12.1	19.8	9.6	1.3	2585	433830	921	196529	172	0.61	0.99	0.48	0.07	129
Shutdown Emissions (Beginning of Hour @ 100% Load to Fuel Cut Off)	60	14.2	20.8	10.3	2.6	5632	577678	989	259326	194	0.71	1.04	0.52	0.13	282
Worst Case Total Emissions (C)		***33.5***	***90.3***	***19.6***	***4.7***	***25273***	***1180958***	***995***	***527414***	***195***	***1.68***	***4.52***	***0.98***	***0.24***	***1264***
Combined Worst Case Total Emissions (D)		***201.0***	***541.8***	***117.6***	***28.2***	***151638***	***7085748***	***995***	***3164484***	***195***	***6.70***	***18.1***	***3.92***	***0.94***	***5055***

(A) Simple Cycle Operation - time-weighted average values over the designated time period

(B) Combined Cycle Operation - time-weighted average values over the designated time period

(C) Worst Case Total Emissions are "'Cold' Startup Emissions (GT Ignition to End of Hour)" plus "Shutdown Emissions (Beginning of Hour @ 100% Load to Fuel Cut Off)" per pollutant

(D) Combined Worst Case Total Emissions are based on "Worst Case Total Emissions" all turbines running per block for short term emissions, and 2 turbines operating and 1 on standby for annual emissions.

General Notes

1.) All data is ESTIMATED, NOT guaranteed and is for ONE unit.

2.) Assuming 100 Startup and Shutdown events per year

Table A-3
Lube Oil Vents
Fort Worth Power Core, LLC

EPN	Description	Approximate Make Up Oil Addition	Evaporive Loss Fraction	Approximate Density	Emissions*	
		gal/year	fraction	lb/gal	lb/hr	tpy
CT-VT-1	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 1	130	0.3	8.34	0.037	0.163
CT-VT-2	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 2	130	0.3	8.34	0.037	0.163
CT-VT-3	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 3	130	0.3	8.34	0.037	0.163
CT-VT-4	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 4	130	0.3	8.34	0.037	0.163
CT-VT-5	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 5	130	0.3	8.34	0.037	0.163
CT-VT-6	Combustion Turbine Lube Oil and Hydaulic Oil Vent, Turbine 6	130	0.3	8.34	0.037	0.163
GT-VT-1	Generator Lube Oil Vent, Turbine 1	130	0.3	8.34	0.037	0.163
GT-VT-2	Generator Lube Oil Vent, Turbine 2	130	0.3	8.34	0.037	0.163
GT-VT-3	Generator Lube Oil Vent, Turbine 3	130	0.3	8.34	0.037	0.163
GT-VT-4	Generator Lube Oil Vent, Turbine 4	130	0.3	8.34	0.037	0.163
GT-VT-5	Generator Lube Oil Vent, Turbine 5	130	0.3	8.34	0.037	0.163
GT-VT-6	Generator Lube Oil Vent, Turbine 6	130	0.3	8.34	0.037	0.163
				Total:	***0.446***	***1.95***

* Assuming 100% VOC emissions

Table A-4
Fugitive Emission Calculations
Fort Worth Power Core, LLC

Basis

- Component counts are a design estimate used to establish an emission limit.
- TCEQ emission factors for the category "SOCMI without ethylene" were applied.

- Emission Factors based on TCEQ's Air Permit Technical Guidance Package for Chemical Sources: Fugitive Guidance, June 2018.

		EPN >>	FUG	FUG	FUG
Value		Stream >>	Fugitives: Lube/Hydraulic Oil	Fugitives: Aqueous Ammonia	Fugitives: Natural Gas
Component Type	Stream Type	Emission Factor SOCMI without Ethylene	Number of Components	Number of Components	Number of Components
Valves	Gas/Vapor	0.0089	0.00	0.00	315.00
	Light Liquid	0.0035	0.00	675.00	0.00
	Heavy Liquid	0.0007	1,428.00	0.00	0.00
Pumps	Light Liquid	0.0386	0.00	4.00	0.00
	Heavy Liquid	0.0161	45.00	0.00	0.00
Flanges	Gas/Vapor	0.0029	0.00	0.00	1,181.00
	Light Liquid	0.0005	0.00	1,689.00	0.00
	Heavy Liquid	0.00007	3,248.00	0.00	0.00
Compressors	Gas/Vapor	0.5027	0.00	0.00	12.00
Relief Valves	Gas/Vapor	0.2293	0.00	6.00	12.00
Open Ends		0.004	0.00	0.00	0.00
Sample Con.		0.033	0.00	0.00	0.00
Other	Gas/Vapor	0	0.00	0.00	0.00
	Light Liquid	0	0.00	0.00	0.00
Process Drains		0.07	0.00	0.00	0.00
		Total Components	4,721.00	2,374.00	1,520.00
			Hourly Emissions (lb/hr)	Hourly Emissions (lb/hr)	Hourly Emissions (lb/hr)
Valves	Gas/Vapor		0.00	0.00	2.80
	Light Liquid		0.00	2.36	0.00
	Heavy Liquid		1.00	0.00	0.00
Pumps	Light Liquid		0.00	0.15	0.00
	Heavy Liquid		0.72	0.00	0.00
Flanges	Gas/Vapor		0.00	0.00	3.42
	Light Liquid		0.00	0.84	0.00
	Heavy Liquid		0.23	0.00	0.00
Compressors	Gas/Vapor		0.00	0.00	6.03
Relief Valves	Gas/Vapor		0.00	1.38	2.75
Open Ends			0.00	0.00	0.00
Sample Con.			0.00	0.00	0.00
Other	Gas/Vapor		0.00	0.00	0.00
	Lt/Hvy Liquid		0.00	0.00	0.00
Process Drains			0.00	0.00	0.00
			Hours 8,760	Hours 8,760	Hours 8,760
			Annual Emissions (tpy)	Annual Emissions (tpy)	Annual Emissions (tpy)
Valves	Gas/Vapor		0.00	0.00	12.28
	Light Liquid		0.00	10.35	0.00
	Heavy Liquid		4.38	0.00	0.00
Pumps	Light Liquid		0.00	0.68	0.00
	Heavy Liquid		3.17	0.00	0.00
Flanges	Gas/Vapor		0.00	0.00	15.00
	Light Liquid		0.00	3.70	0.00
	Heavy Liquid		1.00	0.00	0.00
Compressors	Gas/Vapor		0.00	0.00	26.42
Relief Valves	Gas/Vapor		0.00	6.03	12.05
Open Ends			0.00	0.00	0.00
Sample Con.			0.00	0.00	0.00
Other	Gas/Vapor		0.00	0.00	0.00
	Lt/Hvy Liquid		0.00	0.00	0.00
Process Drains			0.00	0.00	0.00
	Totals:	EPN >>	FUG	FUG	FUG
		Total loss lb/hr	1.95	4.74	15.01
		Total Loss tpy	8.55	20.75	65.75
		% Ammonia	0.00	0.19	0.00
		Ammonia lb/hr	0.00	0.90	0.00
		Ammonia tpy	0.00	3.94	0.00
		% VOC	1.00	0.00	0.04
		VOC lb/hr	1.95	0.00	0.60
		VOC tpy	8.55	0.00	2.63

Table A-5
Cooling Water Tower Emissions
Fort Worth Power Core, LLC

EPN: CT-1 thru CT-6 Emission Calculations

Parameter	Units	Value	Value (Worst Case - PM_{10})	
Circulation Rate	gpm	1,500	1,500	
Annual Operation	hr/yr	8,760	8,760	
Density of Water	lb/gal	8.34	8.34	
Drift Rate	%	0.0005%	0.0005%	
Liquid Drift	lb/hr	3.75	3.75	
Max TDS in circulating water	ppmw	2,250	4,000	
Avg TDS in circulating water	ppmw	2,250	4,000	
TDS for PM Speciation	ppmw	2,250	4,000	
% Mass of drift with PM_{10}	%	59.39%	38.33%	
% Mass of drift with $PM_{2.5}$	%	0.21%	0.20%	
Hourly VOC Emission Factor	lb/MMgal	0.7	0.7	
Annual VOC Emission Factor	lb/MMgal	0.7	0.7	
Cooling Water in VOC Service	wt%	100%	100%	*Theoretical Max:*
VOC Emission Rate	**lb/hr**	**0.063**	**0.001**	**0.063**
	tpy	**0.276**	**0.276**	**0.276**
PM Emission Rate	**lb/hr**	**0.008**	**0.015**	**0.015**
	tpy	**0.037**	**0.066**	**0.066**
PM_{10} Emission Rate	**lb/hr**	**0.005**	**0.006**	**0.006**
	tpy	**0.022**	**0.025**	**0.025**
$PM_{2.5}$ Emission Rate	**lb/hr**	**1.8E-05**	**3.0E-05**	**3.0E-05**
	tpy	**7.8E-05**	**1.3E-04**	**1.3E-04**

PM_{10} & $PM_{2.5}$ Particle Size Calculation

EPRI Droplet Diameter	ERPI % Mass Smaller	Solid Particle Diameter
10	0	1.008
20	0.196	2.015
30	0.226	3.023
40	0.514	4.030
50	1.816	5.038
60	5.702	6.045
70	21.348	7.053
90	49.812	9.068
110	70.509	11.083
130	82.023	13.098
150	88.012	15.113
180	91.032	18.135
210	92.468	21.158
240	94.091	24.180
270	94.689	27.203
300	96.288	30.226
350	97.011	35.263
400	98.34	40.301
450	99.071	45.338
500	99.071	50.376
600	100	60.451

PM_{10} & $PM_{2.5}$ Particle Size Calculation

EPRI Droplet Diameter	ERPI % Mass Smaller	Solid Particle Diameter
10	0	1.221
20	0.196	2.441
30	0.226	3.662
40	0.514	4.882
50	1.816	6.103
60	5.702	7.323
70	21.348	8.544
90	49.812	10.985
110	70.509	13.426
130	82.023	15.867
150	88.012	18.308
180	91.032	21.969
210	92.468	25.631
240	94.091	29.293
270	94.689	32.954
300	96.288	36.616
350	97.011	42.718
400	98.34	48.821
450	99.071	54.924
500	99.071	61.026
600	100	73.231

Notes:

1) Drift Rate from vendor guarantee
   Liquid Drift = 1500 gal/min * 60 min/hr * 0.000005 lb drift/lb water * 8.34 = 3.8 lb/hr
   Hourly Emissions = 4 lb/hr * 2,250 lb PM/1,000,000 lb liquid = 0.01 lb/hr
2) Hourly PM emission rates are based on the maximum TDS in the circulating water.
3) Annual PM emission rates are based on the average TDS in the circulating water.
4) VOC emission factor from AP-42 Table 5.1-2 for monitored cooling towers.
5) In accordance with TCEQ internal guidance, maximum PM10 emissions are based on a worst case TDS concentration and PM size distribution reflecting 4,000 ppmw TDS.

Table A-6
Emergency Electrical Generator Engine
Fort Worth Power Core, LLC

HP 900
Fuel: Diesel

Hours operated per year: 100

Pollutant	Emission Factor lb/hp-hr	Source
VOC	0.00247	AP-42, Table 3.3-1
NOx	0.03100	AP-42, Table 3.3-1
CO	0.00668	AP-42, Table 3.3-1
PM	0.00220	AP-42, Table 3.3-1
SO_2	0.00205	AP-42, Table 3.3-1

			Emissions									
			NOx		CO		VOC		$PM/PM_{10}/PM_{2.5}$		SO_2	
EPN	HP	Operating Schedule (hr/yr)	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
ENG-1	900	100	27.9	1.40	6.01	0.301	2.22	0.111	1.98	0.099	1.85	0.092
ENG-2	900	100	27.9	1.40	6.01	0.301	2.22	0.111	1.98	0.099	1.85	0.092
ENG-3	900	100	27.9	1.40	6.01	0.301	2.22	0.111	1.98	0.099	1.85	0.092
		Total	***83.7***	***4.19***	***18.0***	***0.902***	***6.67***	***0.333***	***5.94***	***0.297***	***5.54***	***0.277***

Table A-7
Emergency Firewater Pump Engine
Fort Worth Power Core, LLC

HP 400
Fuel: Diesel

Hours operated per year: 100

Pollutant	Emission Factor lb/hp-hr	Source
VOC	0.00247	AP-42, Table 3.3-1
NOx	0.03100	AP-42, Table 3.3-1
CO	0.00668	AP-42, Table 3.3-1
PM	0.00220	AP-42, Table 3.3-1
SO_2	0.00205	AP-42, Table 3.3-1

			Emissions									
			NOx		CO		VOC		$PM/PM_{10}/PM_{2.5}$		SO_2	
EPN	HP	Operating Schedule (hr/yr)	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FWP-1	400	100	12.4	0.620	2.67	0.134	0.988	0.049	0.880	0.044	0.820	0.041
FWP-2	400	100	12.4	0.620	2.67	0.134	0.988	0.049	0.880	0.044	0.820	0.041
FWP-3	400	100	12.4	0.620	2.67	0.134	0.988	0.049	0.880	0.044	0.820	0.041
		Total	***37.2***	***1.86***	***8.0***	***0.401***	***2.96***	***0.148***	***2.64***	***0.132***	***2.46***	***0.123***

Table A-8
Oil Water Separator
Fort Worth Power Core, LLC

EPN	Time Period	Throughput gal	Emission Factor, lb VOC /1000 gal	Emissions	
OWS-1	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy
OWS-2	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy
OWS-3	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy
OWS-4	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy
OWS-5	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy
OWS-6	Hourly	3,000	0.2	0.60	lb/hr
	Annual	1,000,000		0.10	tpy

1) Emissions conservatively calculated using AP-42 Chapter 5, Table 5.1-3 (controlled) emissions factors. Hydrocarbon will primarily consist of low vapor pressure waste oil and lube oils.

Table A-9
Vacuum truck and Frack Tank Emissions
Fort Worth Power Core, LLC

Basis - Air Mover, Vacuum Mover, & Frac Tank (Control & No Control)

Emissions calculated based on loading loss equation (Equation 1, AP-42, Section 5.2)
Saturation factor assumed to be 1.45, splash loading.

																VACUUM TRUCK/ FRAC TANK EMISSIONS				
TRUCK TYPE AND LOAD METHOD	MATERIAL	Vapor MW	VP		LOADING LOSS		THROUGHPUT								CONTROL (%)	lb/hr		TPY	
Air Mover & Vacuum Mover	Low VP Waste Oils	130	0.02	psia	3.40	lb/1000bbl	1,000	bbl/hr	NA	trucks/hr	20,000	bbl/yr	NA	trucks/yr	0%	6.80	lb/hr	0.068	tpy
Frac Tank/ Tote	Low VP Waste Oils	130	0.02	psia	3.40	lb/1000bbl	1,000	bbl/hr	NA	trucks/hr	20,000	bbl/yr	NA	trucks/yr	0%	3.40	lb/hr	0.034	tpy
															Total Uncontrolled	***10.2***	***lb/hr***	***0.102***	***tpy***

Sample Equation for Air Mover/Vacuum Mover and Frac Tank/Tote- (lb/hr)

(12.46) (1.45) (0.02) (130) (42 gal/bbl) / (460 + 95) = 3.4 lb/Mbbl

Air Mover & Vacuum Mover: (3.4 lb/Mbbl) / (1000 bbl) X (1000 bbl/hr)*2= 6.80 lb/hr

Frac Tank: (3.4 lb/Mbbl) / (1000 bbl) X (1000 bbl/hr)= 3.40 lb/hr

Table A-10
Truck Loading Emissions
Fort Worth Power Core, LLC

Basis

Emissions calculated based on loading loss equation (Equation 1, AP-42, Section 5.2)

Saturation factor assumed to be 0.6, submerged loading.

Material	Control	Vapor MW	Max Temp	TVP	Loading Loss	Loading Rates		Control Efficiency	Emission Rates	
		lb/lbmol	°F	psia	lb/Kbbl	bbl/hr	bbl/yr	%	lb/hr	tpy
Lube Oil/Waste Oil/ Wastewater	No	130.00	95	0.0191	1.41	1,000	20,000	-	1.407	0.014

Sample Equation - Lube Oil lb/hr

Loading Loss: L = 12.46 * S * P * M/T

=12.46 * 0.6 * 0.0041 psia * 150 lb/lbmol * 42 gal/bbl / (100 + 459.67)

lb/Kbl = 1.41

lb/hr = 0.35 lb/1000 bbl * 1000 bbl/hr

lb/hr = 1.41

APPENDIX B. EGU STANDARD PERMIT

Air Quality Standard Permit for Electric Generating Units

Effective Date May 16, 2007

This standard permit authorizes electric generating units that generate electricity for use by the owner or operator and/or generate electricity to be sold to the electric grid, and that meet all of the conditions listed below.

(1) Applicability

(A) This standard permit may be used to authorize electric generating units installed or modified after the effective date of this standard permit and that meet the requirements of this standard permit.

(B) This standard permit may not be used to authorize boilers. Boilers may be authorized under the Air Quality Standard Permit for Boilers; 30 TAC § 106.183, Boilers, Heaters, and Other Combustion Devices; or a permit issued under the requirements of 30 TAC Chapter 116.

(2) Definitions

(A) East Texas Region - All counties traversed by or east of Interstate Highway 35 or Interstate Highway 37, including Bosque, Coryell, Hood, Parker, Somervell and Wise Counties.

(B) Installed - a generating unit is installed on the site when it begins generating electricity.

(C) West Texas Region - Includes all of the state not contained in the East Texas Region.

(D) Renewable fuel - fuel produced or derived from animal or plant products, byproducts or wastes, or other renewable biomass sources, excluding fossil fuels. Renewable fuels may include, but are not limited to, ethanol, biodiesel, and biogas fuels.

(3) Administrative Requirements

(A) Electric generating units shall be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard Permit, using a current Form PI-1S. Units that meet the conditions of this standard permit do not have to meet 30 TAC § 116.610(a)(1), Applicability.

(B) Registration applications shall comply with 30 TAC § 116.614, Standard Permit Fees, for any single unit or multiple units at a site with a total generating capacity of 1 megawatt (MW) or greater. The fee for units or multiple units with a total generating capacity of less than 1 MW at a site shall

be $100.00. The fee shall be waived for units or multiple units with a total generating capacity of less than 1 MW at a site that have certified nitrogen oxides (NO_x) emissions that are less than 10 percent of the standards required by this standard permit.

(C) No owner or operator of an electric generating unit shall begin construction and/or operation without first obtaining written approval from the executive director.

(D) Records shall be maintained and provided upon request to the Texas Commission on Environmental Quality (TCEQ) for the following:

(i) Hours of operation of the unit;

(ii) Maintenance records, maintenance schedules, and/or testing reports for the unit to document re-certification of emission rates as required by subsection (4)(G) below; and

(iii) Records to document compliance with the fuel sulfur limits in subsection (4)(C).

(E) Electric generators powered by gas turbines must meet the applicable conditions, including testing and performance standards, of Title 40 Code of Federal Regulations (CFR) Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and applicable requirements of 40 CFR Part 60 Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

(F) Compliance with this standard permit does not exempt the owner or operator from complying with any applicable requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds, or 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles.

(4) General Requirements

(A) Emissions of NO_x from the electric generating unit shall be certified by the manufacturer or by the owner or operator in pounds of pollutant per megawatt hour (lb/MWh). This certification must be displayed on the name plate of the unit or on a label attached to the unit. Test results from U.S. Environmental Protection Agency (EPA) reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director used to verify this certification shall be provided upon request to the TCEQ. The unit must operate on the same fuel(s) for which the unit was certified.

(B) Electric generating units that use combined heat and power (CHP) may take

credit for the heat recovered from the exhaust of the combustion unit to meet the emission standards in subsections (4)(D), (4)(E), and (4)(F). Credit shall be at the rate of one MWh for each 3.4 million British Thermal Units of heat recovered. The following requirements must be met to take credit for CHP for units not sold and certified as an integrated package by the manufacturer:

(i) The owner or operator must provide as part of the application documentation of the heat recovered, electric output, efficiency of the generator alone, efficiency of the generator including CHP, and the use for the non-electric output, and

(ii) The heat recovered must equal at least 20 percent of the total energy output of the CHP unit.

(C) Fuels combusted in these electric generating units are limited to:

(i) Natural gas containing no more than ten grains total sulfur per 100 dry standard cubic feet;

(ii) Landfill gas, digester gas, stranded oilfield gas, or gaseous renewable fuel containing no more than 30 grains total sulfur per 100 dry standard cubic feet; or

(iii) Liquid fuels (including liquid renewable fuel) not containing waste oils or solvents and containing less than 0.05 percent by weight sulfur.

(D) Except as provided in subsections (4)(F) and (4)(H), NO_x emissions for units 10 MW or less shall meet the following limitations based upon the date the unit is installed and the region in which it operates:

East Texas Region:

(i) Units installed prior to January 1, 2005 and

(a) operating more than 300 hours per year - 0.47 lb/MWh;

(b) operating 300 hours or less per year - 1.65 lb/MWh;

(ii) Units installed on or after January 1, 2005 and

(a) operating more than 300 hours per year, with a capacity greater than 250 kilowatts (kW) - 0.14 lb/MWh;

(b) operating 300 hours or less per year - 0.47 lb/MWh; or

(c) any unit with a capacity of 250 kW or less - 0.47 lb/MWh.

West Texas Region:

(i) Units operating more than 300 hours per year - 3.11 lb/MWh;

(ii) Units operating 300 hours or less per year - 21 lb/MWh. Units certified to comply with applicable Tier 1, 2, or 3 emission standards in 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines, are deemed to satisfy this emission limit.

(E) Except as provided in subsections (4)(F) and (4)(H), NO_x emissions for units greater than 10 MW shall meet the following limitations:

(i) Units operating more than 300 hours per year - 0.14 lb/MWh;

(ii) Units operating 300 hours or less per year - 0.38 lb/MWh.

(F) Electric generating units firing any gaseous or liquid fuel that is at least 75 percent landfill gas, digester gas, stranded oil field gas, or renewable fuel content by volume, shall meet a NO_x emission limit of 1.90 lb/MWh. Units in West Texas with a capacity of 10 MW or less that fire at least 75 percent landfill gas, digester gas, stranded oilfield gases, or gaseous or liquid renewable fuel by volume, must comply with the applicable West Texas NO_x limit in subsection (4)(D).

(G) To ensure continuing compliance with the emissions limitations, the owner or operator shall re-certify a unit every 16,000 hours of operation, but no less frequently than every three years. Re-certification may be accomplished by following a maintenance schedule that the manufacturer certifies will ensure continued compliance with the required NO_x standard or by third party testing of the unit using appropriate EPA reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director to demonstrate that the unit still meets the required emission standards. After re-certification, the unit must operate on the same fuel(s) for which the unit was re-certified.

(H) The NO_x emission limits in subsections (4)(D)-(4)(F) are subject to the following exceptions:

(i) The hourly NO_x emission limits do not apply at times when the ambient air temperature at the location of the unit is less than 0 degrees Fahrenheit.

(ii) At times when a unit is operating at less than 80% of rated load, an alternative NO_x emission standard for that unit may be determined by multiplying the applicable emission standard in subsections (4)(D)-(4)(F) by the rated load of the EGU (in MW), to produce an allowable hourly

mass NO_x emission rate. In order to use this alternative standard, an owner or operator must maintain records that demonstrate compliance with the alternative emission standard, and make such records available to the TCEQ or any local air pollution control agency with jurisdiction upon request.