Permit Vault

March 11, 2025

VIA STEERS

To: Texas Commission on Environmental Quality

RE: SM Energy Company
CN600512628
Guitar North West Wellpad
RN-TBD
Permit by Rule (PBR) Registration Application

SM Energy Company (SM) operates the Guitar North West Wellpad (site) located in Howard County. This is a new oil and gas site.

The purpose of this application is to authorize equipment and operations at the Guitar North Middle Wellpad, which consists of nine (9) gas-fired microturbines (EPNs: MT-1 through MT-9) used to generate electricity for the site, fugitive components (EPN: FUG), and miscellaneous planned maintenance, startup, and shutdown activities (EPN: MSS). The site does not have access to reliable electric grid power.

Based on the information in this application and information submitted through STEERS, this facility meets the requirements of the Texas Commission on Environmental Quality's (TCEQ) Permits by Rule (PBR) 106.352(l), 106.512, and 106.359.

If you have any questions relating to this submittal or wish to discuss the information provided in this application, please do not hesitate to contact me via email at Kara Miracle at (432) 934-7741 or kmiracle@sm-energy.com.

Regards,

Kara Miracle - SM Energy

Attachments

Oil & Gas Permit-by-Rule (PBR) Application

Guitar North West Wellpad

(RN - TBD)
Howard County, Texas

SM Energy Company

(CN600512628)

March 2025

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SITE OVERVIEW

SM Energy Company (CN600512628) has prepared this Oil & Gas Permit-by-Rule (PBR) Application to request air emissions authorization for operations at Guitar North West Wellpad (RN - TBD) in Howard County, Texas.

Upon authorization, the Site will include the following emission sources:

Equipment / Process	Site Count
Gas-fired Internal Combustion Engines	0
Fired Heater Treaters, Heaters, Reboilers	0
Candlestick Flares	0
Enclosed Vapor Combustors / Oxidizers	0
Vapor Recovery Units (VRUs)	0
Oil / Condensate Tanks	0
Produced Water/ Oily Water Tanks	0
Loading Units	0
Glycol Dehydrators	0
Fugitive Emissions	1
Gas-fired Turbines	9
Diesel-fired IC Engines	0
Open Top Tanks	0
Amine Units	0
Miscellaneous Tanks	0
Planned Maintenance, Start-up, Shutdown Activities	1 (or More)
Miscellaneous Venting and Flaring	0

A detailed process description, area map, emissions calculations, federal and state regulatory applicability, and agency forms are included as part of this package.

The purpose of this application is to authorize equipment and operations at the Guitar North West Wellpad, which is a new oil and gas site.

PROCESS DESCRIPTION
AREA MAP

PROCESS DESCRIPTION

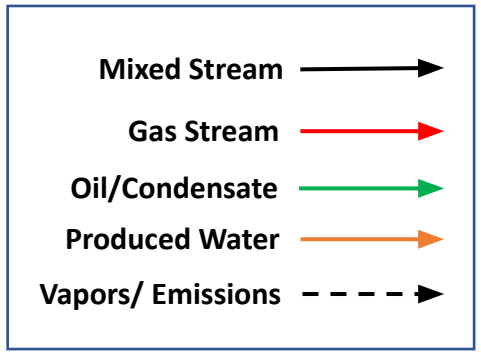
The Guitar North West Wellpad is an oil and natural gas production facility in Howard County, Texas.

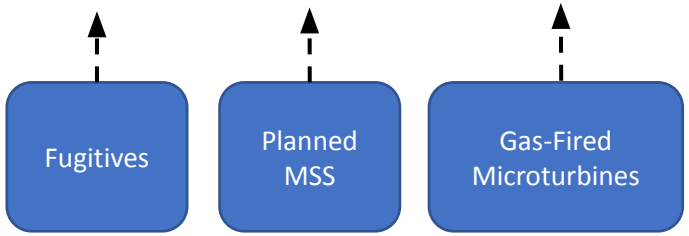
Separation - Production from the wells on the pad flow to a nearby battery for separation.

Microturbine Generators - The site does not currently have access to reliable electrical grid power; therefore, fourteen gas-fired microturbines (EPNs: MT-1 through MT-9) will be used to generate electricity required for the oil well artificial lift at the site.

Fugitive Components - Fugitive natural gas and light liquid emissions (EPN: FUG) occur from potential leaks from flanges, valves, and piping connections. Fugitive emissions for this site were calculated using typical SM Energy Company facility component counts and emission factors in EPA 4531, R-95-017 and TCEQ's "Air Permit Technical Guidance for Chemical Source Equipment Leak Fugitives".

Planned Maintenance, Start-Up, and Shutdown (MSS) Activities - Emissions from miscellaneous planned MSS activities are also included in this application (EPN: MSS). MSS emissions are being claimed, not certified, and are included in this application only for completeness.





Process Flow Diagram

Company Name: SM Energy Company
Site Name: Guitar North West Wellpad
County: Howard
Date Prepared: 3-11-2025

AREA MAP

Radius: 0.25 Miles
Lat: 32.2945 | Long: -101.6444

Oil & Gas Permit-by-Rule (PBR) Application
Texas Commission on Environmental Quality
Table 1(a) Emission Point Summary
Air Contaminant Data

Date	3/11/2025
Regulated Entity No.	RNTBD
Site/Area Name	Guitar North West Wellpad
Customer Reference No.	CN600512628
Permit No.	

EPN	FIN	Name	Air Contaminant	Emission Rates	
				lb/hr	TPY
FUG	FUG	Sitewide Fugitives	Total VOC	0.0003	0.0012
			Benzene		
			Formaldehyde		
			H2S	<0.0001	<0.0001
			SO2		
			NOX		
			CO		
			PM10		
			PM2.5		
MSS	Multiple - Consolidated	Planned Maintenance, Startup, and Shutdown Activities (not incl. those itemized separately, if any)	Total VOC	0.0425	0.1862
			Benzene		
			Formaldehyde		
			H2S		
			SO2		
			NOX		
			CO		
			PM10		
			PM2.5		
MT-1 - MT-9	MT-1 - MT-9	Micro Turbines 1-9	Total VOC	0.2273	0.9954
			Benzene	0.0002	0.0011
			Formaldehyde	0.0146	0.0638
			H2S		
			SO2	0.0698	0.3056
			NOX	1.0635	4.6582
			CO	2.1270	9.3164
			PM10	0.1354	0.5932
			PM2.5	0.1354	0.5932

EMISSIONS CALCULATIONS

SM Energy Company
Guitar North West Wellpad

Consolidated Site Emissions Summary

Description	EPN	FIN	NOx (tpy)	PM10 (tpy)	PM2.5 (tpy)	SO2 (tpy)	CO (tpy)	Benzene (tpy)	H2S (tpy)	VOC (tpy)
Sitewide Fugitives	FUG	FUG	-	-	-	-	-	-	<0.0001	0.0012
Planned Maintenance, Start-up, and Shut-down Activities (not incl. those itemized separately, if any)	MSS	Multiple - Consolidated	-	-	-	-	-	-	-	0.1862
Micro Turbines 1-9	MT-1 - MT-9	MT-1 - MT-9	4.6582	0.5932	0.5932	0.3056	9.3164	1.1E-03		0.9954
		Total	**4.66**	**0.59**	**0.59**	**0.31**	**9.32**	**<0.01**	**<0.01**	**1.18**

Description	EPN	FIN	NOx (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (lb/hr)
Sitewide Fugitives	FUG	FUG	-	-	-	-	-	-	<0.0001	0.0003
Planned Maintenance, Start-up, and Shut-down Activities (not incl. those itemized separately, if any)	MSS	Multiple - Consolidated	-	-	-	-	-	-	-	0.0425
Micro Turbines 1-9	MT-1 - MT-9	MT-1 - MT-9	1.0635	0.1354	0.1354	0.0698	2.1270	2.5E-04		0.2273
		Total	**1.06**	**0.14**	**0.14**	**0.07**	**2.13**	**<0.01**	**<0.01**	**0.27**

SM Energy Company
Guitar North West Wellpad

Site-Wide Non-Barnett Shale Emissions Summary

EPN	FIN	Name/ Identifier	Air Contaminant	Emission Rates	
				lb/hr	TPY
FUG	FUG	Sitewide Fugitives	Total VOC	0.0003	0.0012
			Benzene	0.0000	0.0000
			Formaldehyde		
			H2S	0.0000	0.0000
			SO2		
			NOX		
			CO		
			PM10		
			PM2.5		
MSS	Multiple - Consolidated	Planned Maintenance, Start-up, and Shut-down Activities (not incl. those itemized separately, if any)	Total VOC	0.0425	0.1862
			Benzene	0.0000	0.0000
			Formaldehyde	0.0000	0.0000
			H2S	0.0000	0.0000
			SO2	0.0000	0.0000
			NOX	0.0000	0.0000
			CO	0.0000	0.0000
			PM10	0.0000	0.0000
			PM2.5	0.0000	0.0000
MT-1 - MT-9	MT-1 - MT-9	Micro Turbines 1-9	Total VOC	0.2273	0.9954
			Benzene	0.0002	0.0011
			Formaldehyde	0.0146	0.0638
			H2S		
			SO2	0.0698	0.3056
			NOX	1.0635	4.6582
			CO	2.1270	9.3164
			PM10	0.1354	0.5932
			PM2.5	0.1354	0.5932
Site Total Emission Rates			**Air Contaminant**	**lb/hr**	**TPY**
			Total VOC	0.27	1.18
			Benzene	0.00	0.00
			H2S	0.00	0.00
			SO2	0.07	0.31
			NOX	1.06	4.66
			CO	2.13	9.32
			PM10	0.14	0.59
			PM2.5	0.14	0.59
			Total HAPs	0.01	0.06

SM Energy Company
Guitar North West Wellpad

Gas Stream 1 - Fuel Gas

Gas Stream Analysis 1	
Analysis Identifier/Name	Fuel Gas
What site is the sample from?	Guitar North West Wellpad
Date of sample	9/23/2024
Where in the process was the sample taken?	Gas Spot
Explain how this sampled stream is representative of the similar stream at this site	Sample is Site-Specific.
Heating Value (btu/scf)	995.80
Molecular Weight of Total Gas Sample (lb/lb-mole)	17.02
Total Organic Weight %	93.45
Non-Methane, Non-Ethane VOC Weight %	0.10
Benzene Weight %	0.00
H2S ppmV	23.00
Propane Weight %	0.10
Is the Gas Stream Sweet or Sour?	**SWEET GAS**

Detailed Speciation is provided on the next page.

Notes

1. Detailed lab analysis/ simulation report included as an attachment to this permit application.
2. The fuel gas analysis is used for estimating emissions from gas fugitive components.

SM Energy Company
Guitar North West Wellpad

Gas Stream 1 - Fuel Gas

Data Input below is in:	Mole Percent

Gas Stream Analysis 1 - Fuel Gas					
Component	Mole %	Molecular Weight (grams/mole, lb/lb-mol)	grams per 100 moles of gas	Weight %	Comp. LHV (Btu/scf)
Water	0.0000	18.0152	0.0000	0.0000	0.0
helium	0.0000	4.0026	0.0000	0.0000	0.0
nitrogen	3.9799	28.0134	111.4905	6.5501	0.0
CO2	0.0000	44.0095	0.0000	0.0000	0.0
H2S	0.0023	34.0819	0.0784	0.0046	586.8
methane (C1)	92.4835	16.0425	1483.6628	87.1650	911.0
ethane (C2)	3.4968	30.0690	105.1454	6.1773	1631.0
propane (C3)	0.0398	44.0956	1.7550	0.1031	2353.0
butanes (C4)	0.0000	58.1222	0.0000	0.0000	3101.0
pentanes (C5)	0.0000	72.1488	0.0000	0.0000	3709.0
benzene	0.0000	78.1100	0.0000	0.0000	3591.0
other hexanes (C6)	0.0000	86.1800	0.0000	0.0000	4404.0
toluene	0.0000	92.1400	0.0000	0.0000	4273.5
other heptanes (C7)	0.0000	100.2000	0.0000	0.0000	5100.0
ethylbenzene	0.0000	106.1700	0.0000	0.0000	4970.5
xylenes (o, m, p)	0.0000	106.1700	0.0000	0.0000	4958.2
other octanes (C8)	0.0000	114.2300	0.0000	0.0000	5666.0
nonanes (C9)	0.0000	128.2600	0.0000	0.0000	6493.2
decanes plus (C10+)	0.0000	142.2800	0.0000	0.0000	7189.6
Totals:	**100.00**			**100.00**	

SM Energy Company
Guitar North West Wellpad
Gas-fired Turbine - MT-1 - MT-9

Turbine Data	
EPN	MT-1 - MT-9
FIN	MT-1 - MT-9
Name	Micro Turbines 1-9
Manufacturer	Capstone
Model Number	C200S
No. of Units of this Type	9
Basic Information	
Installation date:	--
Manufacture Date	On or after 2005-02-19
Horsepower:	268
Application	Electric Generation
Cycle	Simple Cycle
Fuel consumption (Btu/hp-hr):	8,507
Hours of operation per year:	8,760
SO2 Mass Balance calculation (for sour gas fuel only)	
Fuel H2S content (mol%)	2.30E-03
SO2 (lb/hr) from Mass Balance	8.89E-03
SO2 (tpy) from Mass Balance	3.89E-02

Discharge Parameters		
Stack height (feet)		13.125
Stack diameter (feet)		0.75
Stack Temperature (°F)		535.00
Exit Velocity (fps)		101.34
Method of Emission Control		
Uncontrolled		No
Water/ Steam Injection		No
Oxidation Catalyst		No
Lean Premix Combustors		No
SCR Catalyst		No
Low-NOX Combustors		Yes
Fuel Data		
Representative Field Gas Sample		Fuel Gas
Heat Value (HHV) (Btu/scf)		996
Is Fuel Gas Stream Sour?		No
Constants Used for SO2 Mass Balance		
MW SO2 =	64.06	grams/mole
Ideal Gas Law	379.4	SCF/lb-mole

Summary of Emission Factors Used				
Pollutant	Emissions Factor Source	Pre-Control (Uncontrolled) EF (g/hp-hr)	Efficiency of Control, if Applicable (%)	Post-Control (Controlled) EF (g/hp-hr)
VOC	Manufacturer Post-Control	0.0400	0.0000	0.0400
NOx	Manufacturer Post-Control	0.3820	0.0000	0.2000
CO	Manufacturer Post-Control	0.4000	0.0000	0.4000
PM10	AP-42 Factor	0.0255	0.0000	0.0255
PM2.5	AP-42 Factor	0.0255	0.0000	0.0255
SO2	AP-42 Factor	0.0131	0.0000	0.0131
Formaldehyde	AP-42 Factor	0.0027	0.0000	0.0027
Benzene	AP-42 Factor	0.0000	0.0000	0.0000

Notes

1. Emission factors being used may be higher than manufacture's specifications to allow for flexibility in the field. VOC emission factor used is assumed to conservatively exclude formaldehyde. AP-42 Emission factors are from AP-42 Tables 3.1-1 and 3.2-1. Where pre-control data was unavailable, the Pre-Control EF was assumed to be higher of AP-42 and Post-Control EF. In the table below, formaldehyde emissions have been conservatively added to calculated VOCs to get total VOC emissions.

Turbine Pre-Control and Final Emissions Summary				
Pollutant	Pre-Control Emissions (lb/hr)	Pre-Control Emissions (tpy)	Final Emissions (lb/hr)	Final Emissions (tpy)
VOC	0.23	1.00	0.23	1.00
NOx	2.03	8.90	1.06	4.66
CO	2.13	9.32	2.13	9.32
PM10	0.14	0.59	0.14	0.59
PM2.5	0.14	0.59	0.14	0.59
SO2	6.98E-02	3.06E-01	6.98E-02	3.06E-01
Formaldehyde	1.46E-02	6.38E-02	1.46E-02	6.38E-02
Benzene	2.46E-04	1.08E-03	2.46E-04	1.08E-03

SM Energy Company
Guitar North West Wellpad

Fugitives Emissions - FUG

EPN	FUG
FIN	FUG
Name/ Identifier	Sitewide Fugitives

Emissions Summary						
Emissions from EPN: FUG	VOC (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (tpy)	Benzene (tpy)	H2S (tpy)
	0.0003	0.00E+00	1.12E-05	0.0012	0.00E+00	4.92E-05

Gas Components - Emissions Calculations

LDAR Program	None
VOC Weight %	0.1103
Benzene Weight %	0.00E+00
H2S Weight %	4.61E-03

Component	Component Count	Emission Factor (lb/hr of TOC per component)	Control Efficiency (%)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Valve	9	0.009920	0	0.0893	0.3910
Connector	0	0.000440	0	0.0000	0.0000
Flange	22	0.000860	0	0.0189	0.0829
Open-ended Line	0	0.004410	0	0.0000	0.0000
Pump Seal	0	0.005290	0	0.0000	0.0000
Other	7	0.019400	0	0.1358	0.5948

Components in Gas Service	VOC (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (tpy)	Benzene (tpy)	H2S (tpy)
	0.0003	0.0E+00	1.1E-05	0.0012	0.0E+00	4.9E-05

Notes:

1. Emission factors are for oil and gas production operations from Table 4 of TCEQ's Emissions Factors for Equipment Leak Fugitive Components (Addendum to RG-360A, January 2008).
2. Counts are estimates based on approximate component counts for the site.
3. VOC and Benzene Weight% used represent percentage of total organic compounds (TOC).

SM Energy Company
Guitar North West Wellpad

Fugitives Emissions - FUG

Light Liquid Components - Emissions Calculations

LDAR Program	No Components in this service
VOC Weight %	0.0000
Benzene Weight %	1.00E-02
H2S Weight %	0.00E+00

Component	Component Count	Emission Factor (lb/hr of TOC per component)	Control Efficiency (%)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Valve	0	0.005500	0	0.0000	0.0000
Connector	0	0.000463	0	0.0000	0.0000
Flange	0	0.000243	0	0.0000	0.0000
Open-ended Line	0	0.003090	0	0.0000	0.0000
Pump Seal	0	0.028660	0	0.0000	0.0000
Other	0	0.016500	0	0.0000	0.0000

Components in Light Liquid Service	VOC (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (tpy)	Benzene (tpy)	H2S (tpy)
	0.0000	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00

Heavy Liquid Components - Emissions Calculations

LDAR Program	No Components in this service
VOC Weight %	
Benzene Weight %	
H2S Weight %	

Component	Component Count	Emission Factor (lb/hr of TOC per component)	Control Efficiency (%)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Valve	0	0.0000185	0	0.0000	0.0000
Connector	0	0.0000165	0	0.0000	0.0000
Flange	0	0.00000086	0	0.0000	0.0000
Open-ended Line	0	0.0003090	0	0.0000	0.0000
Pump Seal	0	0.0011300	0	0.0000	0.0000
Other	0	0.0000683	0	0.0000	0.0000

Components in Heavy Liquid Service	VOC (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (tpy)	Benzene (tpy)	H2S (tpy)
	0.0000	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00

SM Energy Company
Guitar North West Wellpad

Fugitives Emissions - FUG

Water/Oil Components - Emissions Calculations

LDAR Program	No Components in this service
VOC Weight %	
Benzene Weight %	
H2S Weight %	

Component	Component Count	Emission Factor (lb/hr of TOC per component)	Control Efficiency (%)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Valve	0	0.000216	0	0.0000	0.0000
Connector	0	0.000243	0	0.0000	0.0000
Flange	0	0.00000617	0	0.0000	0.0000
Open-ended Line	0	0.000600	0	0.0000	0.0000
Pump Seal	0	0.0000529	0	0.0000	0.0000
Other	0	0.030900	0	0.0000	0.0000

Components in Water/Oil Service	VOC (lb/hr)	Benzene (lb/hr)	H2S (lb/hr)	VOC (tpy)	Benzene (tpy)	H2S (tpy)
	0.0000	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00

Notes:

1. Emission factors are for oil and gas production operations from Table 4 of TCEQ's Emissions Factors for Equipment Leak Fugitive Components (Addendum to RG-360A, January 2008).
2. Counts are estimates based on approximate component counts for the site.
3. VOC Weight% is assumed as 100% for components in water service. For components in light liquid service, VOC and Benzene Weight% used represent percentage of total organic compounds (TOC).

SM Energy Company
Guitar North West Wellpad

MSS emissions - TCEQ Default MSS Activities

Activity	Description / comments	Default parameters		Equation used		Input parameters		Annual emissions (tpy)
(b)(1) Engine Oil changes / Filter changes The emissions associated with an engine oil/filter change occur during the draining of the used engine oil into oil pan or container.	-Oil is drained into a 4 ft x 4 ft open pan. -Input parameters based on manufacturer specifications of engine oil SAE 10W (a). -Used a 1380 hp Caterpillar G3516B LE engine (b) as basis for calculation. In order to account for emissions from larger horse power engines, the emissions are doubled. An average engine uses 112 gallons of motor oil and manufacturer recommends changing oil every 1000 hrs. We used 10 changes of oil per year as a conservative estimate. -Emission estimates for 1380 hp engine are being doubled to be conservative and to accommodate engines with higher hp.	Temperature (°F)	212	Loading loss LL (lb/1000 gal)	0.0093	Number of engines	0	0.0000
		Vapor pressure (psia)	0.001					
		Saturation factor	1	Loading loss per activity (lb/activity)	0.0010			
		Molecular weight (lb/lbmol)	500					
		Motor oil (gal/activity)	112					
		U wind speed (m/s)	3.52	Evaporation Loss (lb/activity)	1.0272			
		Vapor pressure Pv (Pa)	10					
		Molecular weight (lb/lbmol)	500					
		Surface Area Ap (m2) (4ft * 4ft)	1.48					
		Evaporation time t (hrs)	10					
		Number of activities per year (Number of oil changes per engine per year)	10	Total (lb/yr/engine)	20.5650			
		Factor used to account for larger horsepower engines	2					
(b)(1) & (b)(4) Changing Engine Rod Packings Emissions from changing of the rod would be from clingage of lubricant in the casing.	-Engine has been isolated and blow down occurs prior to changing rod packing. The emissions associated with the blow down [106.359 (b) (8)] need to be accounted for in the oil and gas emission calculation spreadsheet. -Emissions from clingage are the evaporation of the lubricant adhered to the rod packing casing. -Casing volume for calculations is based on field observation of casing for a 1380hp G3516B LE engine(b). -Input parameters based on material specifications for AP 101(c) grease.	Temperature (°F)	104	Clingage loss (lb/activity)	0.0001	Number of engines	0	0.0000
		Vapor pressure (psia)	0.001					
		Molecular weight (lb/lb-mole)	500					
		VV Casing volume (ft3) (1ft * 3ft)	2.355					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year (Number of rod packing changes per year per engine)	10	Total (lb/yr/engine)	0.0012			
(b)(3) Changing wet and dry seals Emissions from changing seals would be from clingage of lubricant in the casing.	-Emissions from clingage are the evaporation of the lubricant adhered to the rod packing casing. -Casing volume for calculations is based on field observation of casing for a 1380 hp Caterpillar G3516B LE engine (b). -Input parameters based on material specifications for AP 101(c) grease.	Temperature (°F)	104	Clingage loss (lb/activity)	0.0001	Number of engines	0	0.0000
		Vapor pressure of material stored (psia)	0.001					
		Molecular weight (lb/lb-mole)	500					
		VV Casing volume (ft3) (1ft * 3ft)	2.355					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year (Number of seal changes per year)	2	Total (lb/yr/engine)	0.0002			

SM Energy Company
Guitar North West Wellpad

MSS emissions - TCEQ Default MSS Activities

Activity	Description / comments	Default parameters		Equation used		Input parameters		Annual emissions (tpy)
(b)(2) Glycol dehydration unit Emissions associated with replacement of glycol solution used in dehydration unit. There are two vessels in a dehydration unit: contactor and regenerator.	-Calculations based on physical properties of mono ethylene glycol (MEG)(d) because of its low molecular weight and high vapor pressure which gives the most conservative emissions estimate. -Typically the glycol solution used in dehydration unit is not entirely replaced but it is conservatively assumed that the glycol solution is drained once per year for vessel maintenance. -Per field experience, 4000 gal of glycol solution is used in a large dehydration unit.	Temperature (°F)	68	Loading loss LL (lb/1000 gal)	0.0015	Number of Dehy units	0	0.0000
		Vapor pressure (psia)	0.001					
		Saturation factor	1	Loading loss per activity (lb/activity)	0.0059			
		Molecular weight (lb/lbmol)	62.07					
		Glycol solution (gal/activity)	4,000					
		Temperature (°F)	68	Clingage loss (lb/activity)	0.0155			
		Vapor pressure (psia)	0.001					
		Molecular weight (lb/lb-mole)	62.07					
		VV Vessel volume (ft3) (5 ft radii * 30 ft height)	2,355					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year	1	Total (lb/yr/unit)	0.0213			
(b)(2) Amine unit Emissions associated with replacement of solution used in the amine unit. There are two vessels in an amine unit: Contactor and regenerator.	-Calculations based on physical properties of mono ethanol amine (MEA)(e) because of its low molecular weight and high vapor pressure which gives the most conservative emissions estimate. -Typically the solution used in amine unit is not entirely replaced but it is conservatively assumed that the amine solution is drained once per year for vessel maintenance. -Per field experience, 4000 gal of solution is used in a large amine unit.	Temperature (°F)	68	Loading loss LL (lb/1000 gal)	0.0058	Number of Amine units	0	0.0000
		Vapor pressure (psia)	0.004					
		Saturation factor	1	Loading loss per activity (lb/activity)	0.0231			
		Molecular weight (lb/lbmol)	61.08					
		Amine solution (gal/activity)	4,000					
		Temperature (°F)	68	Clingage loss (lb/activity)	0.0609			
		Vapor pressure (psia)	0.004					
		Molecular weight (lb/lb-mole)	61.08					
		VV Vessel volume (ft3) (5 ft radii * 30 ft height)	2,355					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year	1	Total (lb/yr/unit)	0.0840			
(b)(2) Heater Treater	-Calculations based on condensate (RVP 10) because it has higher vapor pressure than crude oil (RVP 5) and results in a more conservative emission estimate. -Emission estimates are based on a large site that typically has 4 heater treaters.	Temperature (°F)	100	Clingage loss (lb/activity)	8.6913	Number of Heater Treaters / Separators	0	0.0000
		Vapor pressure (psia)	10.5					
		Molecular weight (lb/lb-mole)	66					
		VV Vessel volume (ft3) (2ft radii * 10 ft height)	125.6					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year	1	Total (lb/yr/unit)	8.6913			

SM Energy Company
Guitar North West Wellpad

MSS emissions - TCEQ Default MSS Activities

Activity	Description / comments	Default parameters		Equation used		Input parameters		Annual emissions (tpy)
(b)(2) Aerosol Lubricants	-45-50% VOC by weight volatilizes. -Material specification per Lubricant MSDS (f). -VOC evaporation is based off standard engineering judgment. -Standard Industrial Size Cans (oz.) 16			Pounds of emissions per can (lb/can)	0.5000	Number of 16 oz cans used	100	0.0250
(b)(3) Piping Components	-Calculations based on condensate (RVP 10) because it has higher vapor pressure than crude oil (RVP 5) and results in a more conservative emission estimate. -100 foot long pipe sections conservatively assumed for emission calculations.	Temperature (°F)	100	Clingage loss (lb/activity)	5.4321	Number of 100 ft in length of pipes	10	0.0272
		Vapor pressure (psia)	10.5					
		Molecular weight (lb/lb-mole)	66					
		VV Vessel volume (ft3) (0.5 ft radii * 100 ft height)	78.50					
		Ideal gas constant (psia-ft3/lb-mol-°R)	10.73					
		Number of activities per year	1	Total (lb/yr)	5.4321			
(b)(2) Calibration	-Per Monitoring Division's Laboratory and Quality Assurance Section - One cylinder of pentane or other calibration gas used per year and a typical cylinder contains 100 lbs.	Pounds of pentane in one cylinder (lb)	100	Pounds of pentane in one cylinder (lb/cylinder)	100.00	Number of cylinders	1	0.0500
(b)(6) Safety factor to account for MSS activities with the same character and quantity of emissions as those listed in paragraphs (b) (1) - (5) of §106.359.							3	0.0840

Notes

1. Emissions calculations based on TCEQ's 2014 Oil and Gas Emissions Spreadsheet.

	lb/hr	TPY
Total VOC emissions	**0.04**	**0.19**

NAAQS COMPLIANCE

SM Energy Company
Guitar North West Wellpad

Screen3 Modeling - 1-Hour and Annual NO2

Inputs and Assumptions	
County	Howard
Ambient Temperature	293
Receptor Height	0
Urban/Rural	Rural
Building Downwash	No
Full Meteorology	Yes
Automated Distance Array	Yes
Terrain Height Above Stack Base	0

Modeled Results - 1-Hour NO2	
Modeled NO2 1-Hour Concentration (µg/m3)	8.58
Background NO2 1-Hour Concentration (µg/m3)	70.00
Total NO2 1-Hour Concentration (µg/m3)	78.58
NO2 Hourly NAAQS (µg/m3)	188
Does Site Meet 1-Hour NO2 NAAQS?	**Pass**

Modeled Results - Annual NO2	
Modeled NO2 Annual Concentration (µg/m3)	0.69
Background NO2 Annual Concentration (µg/m3)	20.00
Total NO2 Annual Concentration (µg/m3)	20.69
NO2 Annual NAAQS (µg/m3)	100
Does Site Meet Annual NO2 NAAQS?	**Pass**

NO2 Screen3 Modeling - Point Sources

EPN	FIN	Source Name	NOx emissions rate for each EPN (lb/hr)	Stack Height (m)	Stack Inside Diameter (m)	Stack Velocity (m/s)	Stack Temp. (K)	Distance at GLCMAX (m)	NOX GLCMAX (1 hr avg) (µg/m3)	NOX GLCMAX (annual avg) (µg/m3)	NO2 / NOX Ratio	1-hour NO2 Concentration (µg/m3)	Annual NO2 Concentration (µg/m3)
MT-1 - MT-9	MT-1 - MT-9	Micro Turbines 1-9	1.1E+00	4.00	0.23	30.89	552.59	67	32.27	2.58	0.25	8.5799	0.6864

Notes

1. SCREEN3 modeling was used to estimate GLC Max and Distance at GLC Max. An emission rate of 0.126 g/s (1 lb/hr) was used for the runs per TCEQ guidance. MSS combustion emissions will not occur simultaneously with emissions from normal operations; therefore, they are not reflected in this analysis. SCREEN3 output reports are included as part of this application.

TCEQ FORMS

Certification and Registration for Permits by Rule
Form PI-7-CERT
Page 1
Texas Commission on Environmental Quality

I. Registrant Information	
A. Company or Other Legal Customer Name:	SM Energy Company
Company Official Contact Information	[X] Mr. [ ] Mrs. [ ] Ms. [ ] Other:
Name:	Sean McGuire, REM
Title:	Environmental & Regulatory Director
Mailing Address:	6301 Holiday Hill Road, Bldg #1
City:	Midland
State:	TX
ZIP Code:	79707
Phone:	432-688-1703
Fax:	
Email Address:	smcguire@sm-energy.com
All PBR registration responses will be sent via e-mail.	
B. Technical Contact Information	[ ] Mr. [ ] Mrs. [X] Ms. [ ] Other:
Name:	Kara Miracle
Title:	Sr. Environmental Air Specialist
Company Name:	SM Energy
Mailing Address:	6301 Holiday Hill Road, Bldg #1
City:	Midland
State:	TX
ZIP Code:	79707
Phone:	432-934-7741
Fax:	
Email Address:	kmiracle@sm-energy.com

Certification and Registration for Permits by Rule
Form PI-7-CERT
Page 2
Texas Commission on Environmental Quality

II. Facility and Site Information	
A. Name and Type of Facility	
Facility Name: Guitar North West Wellpad	
Type of Facility	[X] Permanent [ ] Temporary
For portable units, please provide the serial number of the equipment being authorized below.	
Serial No:	
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).	
Head northeast on W 4th St toward S Gregg St. Turn left at the 1st cross street onto US-87 BUS N/S Gregg St for 1.2 mi. Turn left onto I-20 Frontage Rd for 0.1 mi. Slight right to stay on I-20 Frontage Rd for 0.6 mi. Slight right onto TX-176 W. After 8.7 mi, turn right. After 1.9 mi, turn right. Destination will be on the right.	
City: Big Spring	
County: Howard	
ZIP Code: 79720	
C. TCEQ Core Data Form	
Is the Core Data Form (TCEQ Form 10400) attached?	[X] Yes [ ] No
If "No," provide customer reference number (CN) and regulated entity number (RN) below.	
Customer Reference Number (CN): CN600512628	
Regulated Entity Number (RN): RNTBD	
D. TCEQ Account Identification Number (if known):	
E. Type of Action:	
[X] Initial Application [ ] Change to Registration	
For Change to Registration, provide the Registration Number:	
F. PBR number(s) claimed under 30 TAC Chapter 106	
(List all the individual rule number(s) that are being claimed.)	
106.352(l)	
106.512	
106.359	

II. Facility and Site Information (continued)		
G. Historical Standard Exemption or PBR		
Are you claiming a historical standard exemption or PBR?	☐ Yes	☒ No
If "Yes," enter rule number(s) and associated effective date in the spaces provided below.		
Rule Number:	Effective Date:	
Rule Number:	Effective Date:	
H. Previous Standard Exemption or PBR Registration Number		
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR?	☐ Yes	☒ No
If "Yes," enter previous standard exemption number(s) and PBR registration number(s) and associated effective date in the spaces provided below.		
Standard Exemption and PBR Registration Number:		
Effective Date:		
I. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit		
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit?	☐ Yes	☒ No
If "Yes," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.		
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s):		
Effective Date:		
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s):		
Effective Date:		
J. 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.		
K. Affected Air Preconstruction Permits		
Does the PBR being claimed directly affect any permitted facility?	☐ Yes	☒ No

II. Facility and Site Information (continued)			
If "YES," enter the permit number(s) in the spaces provided below.			
L. Federal Operating Permit (FOP) Requirements (30 TAC Chapter 122 Applicability)			
1. Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	☐ Yes	☒ No	☐ To be Determined
If the site currently has an existing FOP, enter the permit number			
Check the requirements of 30 TAC Chapter 122 that will be triggered if this certification is accepted. (check all that apply).			
☐ Initial Application for FOP	☐ Significant Revision for SOP	☐ Minor Revision for SOP	
☐ Operational Flexibility/Off Permit Notification for an SOP		☐ Revision for a GOP	
☐ To Be Determined	☒ None		
2. Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *(check all that apply)*			
☐ SOP	☐ GOP	☐ GOP application/revision (submitted or under APD review)	
☒ N/A	☐ SOP application/revision (submitted or under APD review)		
III. Fee Information See Section VII. for address to send fee or pay online: www.tceq.texas.gov/epay			
A. Fee Requirements			
Is a fee required per Title 30 TAC § 106.50?	☒ Yes	☐ No	
If "NO," specify the exception. There are three exceptions to paying a PBR fee. (check all that apply)			
1. Registration is solely to establish a federally enforceable emission limit.	☐		
2. Registration is within six months of an initial PBR review, and it is addressing deficiencies, administrative changes, or other allowed changes.	☐		
3. Registration is for a remediation project (30 TAC § 106.533).	☐		
B. Fee Amount			
1. A $100 fee is required if any of the answers in III.B.1 are "YES."			
This business has less than 100 employees.	☐ Yes	☒ No	
This business has less than $6 million dollars in annual gross receipts.	☐ Yes	☒ No	
This registration is submitted by a governmental entity with a population of less than 10,000.	☐ Yes	☒ No	
This registration is submitted by a non-profit organization.	☐ Yes	☒ No	

III. Fee Information See Section VII. for address to send fee or pay online: www.tceq.texas.gov/epay			
2. A $450 fee is required for all other registrations.			
C. Payment Information			
Check/money order/transaction or voucher number: Please see STEERS			
Individual or company name on check: Please see STEERS			
Fee Amount: $ Please see STEERS			
Was Fee paid online?	[X] Yes	[ ] No	
IV. Technical Information Including State and Federal Regulatory Requirements **Check the appropriate box to indicate what is included in your submittal.** *Note: Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in a deficiency of the project.*			
A. PBR 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 § 106.4 are met?	[X] Yes	[ ] No	
Did you demonstrate that the individual requirements of the specific PBR are met?	[X] Yes	[ ] No	
B. Confidential Information Included (If confidential information is submitted with this registration, all confidential pages must be properly marked "CONFIDENTIAL.")	[ ] Yes	[X] No	
C. Process Flow Diagram	[X] Yes	[ ] No	
D. Process Description	[X] Yes	[ ] No	
E. Maximum Emissions Data and Calculations	[X] Yes	[ ] No	
Note: If the facilities listed in this registration are subject to the Mass Emissions Cap & Trade program under 30 TAC Chapter 101, Subchapter H, Division 3, the owner/operator of these facilities must possess NOx allowances equivalent to the actual NOx, emissions from these facilities.			
F. Is this certification being submitted to certify the emissions for the entire site?	[X] Yes	[ ] No	
If "NO," include a summary of the specific facilities and emissions being certified.			
G. Table 1(a) (Form 10153) Emission Point Summary	[X] Yes	[ ] No	
H. Distances from Property Line and Nearest Off-Property Structure			
Distance from this facility's emission release point to the nearest property line:	50.00	feet	
Distance from this facility's emission release point to the nearest off-property structure:	> 50	feet	

IV. Technical Information Including State and Federal Regulatory Requirements **Check the appropriate box to indicate what is included in your submittal.** *Note: Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in a deficiency of the project.*		
I. Project Status		
Has the company implemented the project or waiting on a response from TCEQ?	[X] Implemented	[ ] Waiting
J. Projected Start of Construction and Projected Start of Operation Dates		
Projected Start of Construction (provide date):	-	
Projected Start of Operation (provide date):	-	
V. Delinquent Fees		
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.		
VI. 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 this 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):	Submitted via STEERS	
Signature (original signature required):		
Date:		

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of 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.)

[X] New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)

[ ] Renewal (Core Data Form should be submitted with 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 600512628		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:*

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

11. Type of Customer: [ ] Corporation [ ] Individual Partnership: [ ] General [ ] Limited

Government [ ] City, County, Federal, State [ ] Sole Proprietorship [ ] Other

12. Number of Employees **13. Independently Owned & Operated?**

[ ] 0-20 [ ] 21-100 [ ] 101-250 [ ] 251-500 [ ] 501 and higher [ ] 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 and Operator

[ ] Occupational Licensee [ ] Responsible Party [ ] VCP/BSA Applicant [ ] Other

15. Mailing Address:							
City:		State:		ZIP		ZIP + 4	

16. Country Mailing Information (if outside USA)	17. Email Address (if applicable)

18. Telephone Number	18. Extension or Code	20. Fax:

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, this form should be accompanied by permit application)*							
[X] New Regulated Entity		[ ] Update to Regulated Entity Name			[ ] Update to Regulated Entity Information		
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency 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.)							
Guitar North West Wellpad							
23. Street Address:							
City:	Big Spring	**24. County:**	Howard	**ZIP Code:**	79720		
Enter Physical Location Description if no street address is provided.							
25. Description to Physical Location:	Head northeast on W 4th St toward S Gregg St. Turn left at the 1st cross street onto US-87 BUS N/S Gregg St for 1.2 mi. Turn left onto I-20 Frontage Rd for 0.1 mi. Slight right to stay on I-20 Frontage Rd for 0.6 mi. Slight right onto TX-176 W. After 8.7 mi, turn right. After 1.9 mi, turn right. Destination will be on the right.						

26. Nearest City	**State**	**Nearest ZIP Code**
Big Spring	Texas	79720

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:	32.2945	**28. Longitude (W) In Decimal:**	-101.6444

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
1311		211120	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*
Oil & Gas production and/or associated gathering and boosting

34. Mailing Address:	6301 Holiday Hill Road, Bldg #1						
City:	Midland	State:	TX	ZIP	79707	ZIP+4	

35. Email Address:	kmiracle@sm-energy.com

36. Telephone Number	**37. Extension or Code**	**38. Fax Number (if applicable)**
432-934-7741		

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 HW
[ ] Municipal Solid Waste	[X] New Source Review Air	[ ] OSSF	[ ] Petroleum Storage Tank	[ ] PWS
[ ] Sludge	[ ] Storm Water	[ ] Title V Air	[ ] Tires	[ ] Used Oil
[ ] Voluntary Cleanup	[ ] Waste Water	[ ] Wastewater Agriculture	[ ] Water Rights	[ ] Other:

SECTION IV: Preparer Information

40. Name:	Kara Miracle	**41. Title:**	Sr. Environmental Air Specialist

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
432-934-7741			kmiracle@sm-energy.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:	SM Energy Company	**Job Title:**	Environmental & Regulatory Director
Name:	Sean McGuire, REM	**Phone:**	432-688-1703
Signature:	Submitted via STEERS	**Date:**	

Texas Commission on Environmental Quality

Table 31 - Combustion Turbines

Turbine 1 - EPN : MT-1 - MT-9

Equipment Information			
Manufacturer	Model No.	Serial No.	EPN
Capstone	C200S	TBD	MT-1 - MT-9

Turbine Application

[X] Electric Generation [ ] Base Load [ ] Peaking [ ] Load Following [ ] Gas Compression

Cycle

[X] Simple Cycle 8,760 Hrs/ Year [ ] Regenerative Cycle [ ] Cogeneration [ ] Combined Cycle

Nominal Power Output at Baseload, ISO: 268 [X] HP or [ ] MW

Manufacturer's rated gross heat rate at baseload at expected conditions (in BTU/HP-hr):	8,507

Fuel Data

Primary Fuels:

[X] Natural Gas (Sulfur Content = 1.45 grains/100 dscf Heating Value (HHV): 995.8 Btu/scf

[ ] Process Offgas [ ] Landfill/ Digester Gas [ ] Fuel Oil [ ] Refinery Gas

Backup Fuels:

[X] Not Provided

[ ] Process Offgas [ ] Landfill/ Digester Gas [ ] Fuel Oil [ ] Refinery Gas

If using fuels other than natural gas, attach fuel analyses, including maximum sulfur content, heating value (specify LHV or HHV) and mole percent of gaseous constituents.

Emissions Data

Attach manufacturer's information showing emissions of NOX, CO, VOC, SOX, and PM for each proposed fuel at turbine loads and site ambient temperatures representative of the range of proposed operation. The information must be sufficient to determine maximum hourly and annual emission rates. Annual emissions may be based on a conservatively low approximation of site annual average temperature. Provide emissions in pounds per hour and except for PM, parts per million by volume at actual conditions and corrected to dry, 15% oxygen conditions. In Table 1 (a), provide speciation of PM/PM10/PM2.5.

Method of Emission Control:

[ ] Lean Premix Combustors [ ] Oxidation Catalyst [ ] Water Injection

[X] Low-NOX Combustors [ ] SCR Catalyst [ ] Steam Injection

Additional Information

On separate sheets attach the following:

A. Details regarding principle of operation of emission controls. If add-on equipment is used, provide make and model and manufacturer's information. Example details include: controller input variables and operational algorithms for water or ammonia injection systems, combustion mode versus turbine load for variable mode combustors, etc.

B. Stack parameters (not required if represented on Page 2 of Table 1(a)).

C. If fired duct burners are used (as often used with a Combined Cycle Heat Recovery Steam Generator), supplementary fuel firing information as specified on Table 6, Boilers and Heaters (TCEQ Form Number 10163).

REGULATORY REVIEW
AND
TCEQ CHECKLISTS

FEDERAL AND STATE REGULATIONS - APPLICABILITY REVIEW

Regulation	Applicability Criteria	Applicability Determination	Compliance Acknowledgment
NSPS (40 CFR 60) Subpart A	Applies to any site that is subject to an applicable NSPS Subpart.	Since the site is subject to at least one NSPS Subpart (as detailed below), the site is also subject to NSPS Subpart A.	The site will comply with applicable recordkeeping, reporting, and notification requirements of this subpart.
NSPS (40 CFR 60) Subpart Dc	Applies to steam generating units for which construction, modification, or reconstruction commenced after June 9, 1989 and that have a maximum design heat input capacity of greater than or equal to 10 MMBtu/hr and less than or equal to 100 MMBtu/hr. Process heaters are not subject to this subpart.	This site does not have steam generating units with heat input rating greater than 10 MMBtu/hr; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR 60) Subpart Kb	Applies to storage tanks with volatile organic liquids that are larger than 19,812 gallons and were built after July 23, 1984. Pre-custody transfer tanks that have a capacity greater than 10,000 bbl (1,589.874 m3) are subject to 40 CFR 60.110b.	This site does not have any storage tanks; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subpart GG	Applies to stationary gas turbines with a heat input at peak load equal to or greater than 10 MMBtu/hr, based on the lower heating value of the fuel.	This site does not have turbines with peak heat input rating greater than 10 MMBtu/hr that were constructed, reconstructed, or modified on or prior to February 18, 2005; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subpart KKK	Applies to onshore natural gas processing plants that are constructed, reconstructed, or modified after January 20, 1984, and that are not subject to NSPS OOOO/OOOOa.	Based on the site's operations and last construction/ modification date, this site does not qualify as a gas processing plant that was last constructed, reconstructed, or modified prior to August 23, 2011; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subpart LLL	Applies to onshore natural gas processing plants with sweetening units that commenced construction or modification after January 20, 1984, and that are not subject to NSPS OOOO/OOOOa.	Based on the site's operations and last construction/ modification date, this site does not qualify as a gas processing plant with a sweetening unit that was last constructed, reconstructed, or modified prior to August 23, 2011; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subpart IIII	Applies to stationary compression ignition (CI) Internal Combustion Engines (ICE) that commenced construction, modification, or reconstruction after July 11, 2005, and that meet the manufacture date thresholds of the subpart.	This site does not have compression ignition (CI) engines; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subpart JJJJ	Applies to stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction after June 12, 2006, and that meet the manufacture date thresholds of the subpart.	This site does not have spark ignition (SI) engines; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.

FEDERAL AND STATE REGULATIONS - APPLICABILITY REVIEW

Regulation	Applicability Criteria	Applicability Determination	Compliance Acknowledgment
NSPS (40 CFR Part 60) Subpart KKKK	Applies to stationary combustion turbines that commenced construction, modification, or reconstruction after February 18, 2005.	This site does not have turbines with peak heat input rating greater than 10 MMBtu/hr that were constructed, reconstructed, or modified after February 18, 2005; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NSPS (40 CFR Part 60) Subparts OOOO	Applies to storage vessels with uncontrolled (or post-federally enforceable PTE) VOC emissions greater than or equal to six tons per year which are constructed, modified or reconstructed after August 23, 2011, and on or before September 18, 2015. This subpart also applies to well completions, pneumatic controllers, reciprocating compressors, and other equipment at oil and gas sites which are constructed, modified or reconstructed after August 23, 2011, and on or before September 18, 2015.	Please see the Supporting Documentation section of this application for a detailed applicability breakdown for NSPS Subparts OOOO, OOOOa, and OOOOb.	This subpart is not applicable to emissions sources at this site.
NSPS (40 CFR Part 60) Subpart OOOOa	Applies to storage vessels with uncontrolled (or post-federally enforceable PTE) VOC emissions greater than or equal to six tons per year which are constructed, modified or reconstructed after September 18, 2015. This subpart also applies to well completions, pneumatic controllers, reciprocating compressors, and other equipment at oil and gas sites which are constructed, modified or reconstructed after September 18, 2015.	Please see the Supporting Documentation section of this application for a detailed applicability breakdown for NSPS Subparts OOOO, OOOOa, and OOOOb.	This subpart is not applicable to emissions sources at this site.
NSPS (40 CFR Part 60) Subpart OOOOb	Applies to storage vessel trains with uncontrolled (or post-federally enforceable PTE) VOC emissions greater than or equal to six tons per year (or methane greater than twenty tons per year) which are constructed, modified or reconstructed after December 6, 2022. This subpart also applies to well completions, pneumatic controllers, compressors, and other equipment at oil and gas sites which are constructed, modified or reconstructed after December 6, 2022.	Please see the Supporting Documentation section of this application for a detailed applicability breakdown for NSPS Subparts OOOO, OOOOa, and OOOOb.	The site will comply with applicable requirements of this subpart.
NESHAP (40 CFR Part 61) Subpart V	Applies to fugitive emissions sources that are in volatile hazardous air pollutant (VHAP) service. VHAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a VHAP.	The site does not handle streams containing 10% or more by weight of volatile hazardous air pollutants; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NESHAP (40 CFR Part 63) Subpart A	Applies to any site that is subject to an applicable NESHAP Subpart.	Since the site is not subject to any NESHAP Part 63 Subpart (as detailed below), the site is also not subject to NESHAP Subpart A.	This subpart is not applicable to this site.

FEDERAL AND STATE REGULATIONS - APPLICABILITY REVIEW

Regulation	Applicability Criteria	Applicability Determination	Compliance Acknowledgment
NESHAP (40 CFR Part 63) Subpart H	Applies to equipment in organic hazardous air pollutant service for 300 hours or more during the calendar year at a site that is subject to provisions of a specific subpart in 40 CFR part 63 that references this subpart.	This site is not subject to any NESHAP subpart that references Subpart H; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NESHAP (40 CFR Part 63) Subpart HH	Applies to dehydration units at Oil and Natural Gas Production Facilities.	This site does not have glycol dehydration units; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.
NESHAP (40 CFR Part 63) Subpart VV	Applies to oil-water separators and organic-water separators for which another subpart references Subpart VV.	This site is not subject to any NESHAP subpart that references Subpart VV; therefore, this site is not subject to this subpart.	This subpart is not applicable to this site.
NESHAP (40 CFR Part 63) Subpart YYYY	Applies to stationary combustion turbines located at a major source of HAP emissions.	This site is not a major source of HAPs; therefore, the turbine(s) at this site are not subject to this subpart.	This subpart is not applicable to this site.
NESHAP (40 CFR Part 63) Subpart ZZZZ	Applies to stationary reciprocating internal combustion engines; however, engines constructed after June 12, 2006 comply with this subpart by complying with NSPS Subpart IIII or JJJJ, as applicable.	This site does not have engines; therefore, it is not subject to this subpart.	This subpart is not applicable to this site.
30 TAC 111 (Chapter 111)	Applies to particulate matter emission sources at the site	This site consists of particulate matter (PM) emission sources; therefore, the requirements of 30 TAC 111 apply to the PM emission sources at this site.	The site will comply with applicable requirements of this chapter.
30 TAC 112 (Chapter 112)	Applies to H2S and SO2 emission sources at the site	This site consists of H2S and/or SO2 emission sources that would be subject to the net ground level concentration limits of 30 TAC 112.	The site will comply with applicable requirements of this chapter.
30 TAC 115 (Chapter 115)	Applies to specific VOC emission sources (storage vessels and loading) at O&G sites that are located in a listed county under Chapter 115.	The site is located in a county that is not listed under 30 TAC 115 applicability; therefore, the site is not subject to this chapter.	This chapter is not applicable to this site.
30 TAC 117 (Chapter 117)	Applies to NOx emission sources at sites located in non-attainment areas listed under 30 TAC 117 applicability.	The site is not located in a non-attainment county listed under 30 TAC 117 applicability for minor sources of NOx; therefore, the site is not subject to this chapter.	This chapter is not applicable to this site.

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), Air Permits Division, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of Title 30 Texas Administrative Code § 106.4 (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing Form PI-7 (Registration for Permits by Rule) or Form PI-7-CERT (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division website at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission Limits	**Answer**
List emissions in tpy for each facility (add additional pages or table if needed):	
Are the SO2, PM10, VOC, or other air contaminant emissions claimed for each facility in this PBR submittal less than 25 tpy?	[X] YES [ ] NO
Are the NOx and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	[X] YES [ ] NO
If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a PBR cannot be claimed.	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	[ ] YES [X] NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
Are the SO2, PM10, VOC, or other emissions claimed for all facilities in this PBR submittal less than 25 tpy?	[X] YES [ ] NO
Are the NOx and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	[X] YES [ ] NO
If the answer to both questions is "Yes," continue to Section 2.	
If the answer to either question is "No," a PBR cannot be claimed. A permit will be required under Chapter 116.	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

2. 30 TAC § 106.4(a)(2): Nonattainment Check	**Answer**
Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☐ YES ☒ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☐ HGB
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties:	☐ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
Does this project trigger a nonattainment review?	☐ YES ☐ NO
Is the project's potential to emit (PTE) for emissions of VOC or NOx increasing by 100 tpy or more?	☐ YES ☐ NO
PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.	
Is the site an existing major nonattainment site and are the emissions of VOC or NOx increasing by 40 tpy or more?	☐ YES ☐ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
If "Yes," to any of the above, the project is a major source or a major modification and a PBR may not be used. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
If "Yes," to any of the above, a PBR may not be used. A PSD Permit review must be completed to authorize project.	
If "No," continue to Section 4.	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

4. 30 TAC § 106.4(a)(6): Federal Requirements	**Answer**
Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations Part 60, New Source Performance Standards (NSPS)?	[X] YES [ ] NO [ ] NA
If "Yes," which Subparts are applicable? (answer below.)	
Subpart(s) A, OOOOb	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology standards?	[ ] YES [ ] NO [X] NA
If "Yes," which Subparts are applicable? (answer below.)	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	[ ] YES [ ] NO [X] NA
If "Yes," which Subparts are applicable? (answer below.)	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	[ ] YES [X] NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6.30 TAC § 106.4(a)(8): NOx Cap and Trade	
Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	[ ] YES [X] NO
If "Yes," answer the question below.	
If "No," continue to Section 7.	
Will the proposed facility or group of facilities obtain required allowances for NOx if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	[ ] YES [ ] NO

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

7.Highly Reactive Volatile Organic Compounds (HRVOC) check		
Is the facility located in Harris County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," skip to the box below.		
Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question.		
If "No," skip to the box below.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
Information	**lb/hr**	**tpy**
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
Information	**lb/hr**	**tpy**
► ethylene		
► propylene		

Texas Commission on Environmental Quality
Oil and Gas Handling and Production Facilities
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.352(l)

Check the most appropriate answer and include any technical information in the spaces provided. If additional space is needed, please include an extra page that references this checklist. The forms, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-o/oil_and_gas.html. If you have any questions, or need additional assistance, please contact the Air Permits Division at (512) 239-1250.

The facility can register by submitting this application and any supporting documentation. Below is a checklist to ensure you have provided all appropriate documentation. For sites that require registration or if the company chooses to register the site with the TCEQ, a Core Data Form is required with this checklist. For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org.

This checklist is for use by the operator to ensure a complete application.	
[X]	Process Description.
[X]	Plot plan or area map.
[X]	TCEQ Oil and Gas Emission Calculation Spreadsheet (or equivalent).
[X]	Detailed summary of maximum emissions estimates with supporting documentation, such as result reports from any emission estimation computer program.
[X]	Gas and Liquid analyses. If a site specific analysis is not submitted, please provide justification as to why a representative site was used.
[X]	Technical documents (manufacturer's specification sheet, operational design sheets)
[X]	State and Federal applicability.
[X]	Core Data Form (for new sites that have never been registered with the TCEQ).

1. Is the project located in one of the Barnett Shale counties and did the start of construction or modification begin on or after April 1, 2011?	[ ] YES	[X] NO
Note: Counties included in the Barnett Shale area: Cooke, Dallas, Denton, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Somervell, Tarrant, and Wise counties.		
For what is considered start of construction see: www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/factsheet-const.pdf		
If "Yes," do not complete this checklist. The project is subject to the requirements of §106.352(a)-(k). Additional information for Barnett Shale area projects can be found at: www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-o/oil_and_gas.html.		

Texas Commission on Environmental Quality
Oil and Gas Handling and Production Facilities
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.352(l)

General Information and Questions/Descriptions (continued)	
2. Are the total site-wide emissions from all facilities claimed under 30 TAC §106. 352(l) less than 25 tpy VOC, 250 tpy NOx, 250 tpy CO, and 25 tpy SO2?	[X] YES [ ] NO
3. Are there flares, engines, or turbines at the site?	[X] YES [ ] NO
If "Yes", attach supporting documentation to demonstrate compliance with the requirements. *Additional information and checklists can be found at:* *§106.492 Flares: www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-v/flares.html* *§106.512 Stationary Engines and turbines: www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-w/stationary_eng_turb.html*	
4. Does any facility at the site handle a stream with more than 24 ppm hydrogen sulfide (H2S)?	[ ] YES [X] NO
If "Yes", proceed to question (4)(a) and (4)(b) and then proceed to questions 5 and 6. *If "No", continue to questions 5 and 6.*	
4a. What is the actual H2S content of the stream?	_____ ppm
Site specific H2S analysis is required.	
4b. Indicate the actual distance from the nearest emissions point to the nearest offsite receptor:	_____ ft.
Note: An offsite receptor includes any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility. A facility handling sour gas must be located at least 1/4 mile from the nearest offsite receptor.	
5. Indicate the total actual emission rate of sulfur compounds, excluding sulfur oxides, from all vents	<0.01 lb/hr
6. Does the height of all vents at the site emitting sulfur compounds meet the minimum required height based on the H2S emission rate in 106.352(l)(4)?	[X] YES [ ] NO
Note: Truck loading and fugitive sources are not considered vents.	

Recordkeeping: To demonstrate compliance with the requirements of the PBR, sufficient records must be maintained at all times. The records must be made available immediately upon request to the commission or any air pollution control program having jurisdiction. If you have any questions about the recordkeeping requirements, contact the Air Permits Division or the Air Program in the TCEQ Regional Office for the region in which the site is located.

SM Energy Company
Guitar North West Wellpad

Title 30 Texas Administrative Code § 106.512 - Compliance

Citation	Summary of Requirement	Compliance Acknowledgment/ Approach
106.512 (1)	The facility shall be registered by submitting the commissions Form PI-7, Table 29 for each proposed reciprocating engine, and Table 31 for each proposed gas turbine to the commissions Office of Permitting, Remediation, and Registration in Austin within ten days after construction begins. Engines and turbines rated less than 240 horsepower (hp) need not be registered, but must meet paragraphs (5) and (6) of this section, relating to fuel and protection of air quality. Engine hp rating shall be based on the engine manufacturers maximum continuous load rating at the lesser of the engine or driven equipments maximum published continuous speed. A rich-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content less than 4.0% by volume. A lean-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content of 4.0% by volume, or greater.	Table 31s have been included for the turbines at this site. The turbines will meet the applicable requirements listed in this paragraph and this permit by rule.
106.512 (2)	For any engine rated 500 hp or greater, subparagraphs (A) - (C) of this paragraph shall apply.	There are no engines at this site that are greater than or equal to 500 HP; therefore, the provisions of this section do not apply to this site.
106.512 (2)(A)	For any engine rated 500 hp or greater, subparagraphs (A) - (C) of this paragraph shall apply. (A) The emissions of nitrogen oxides (NOx) shall not exceed the following limits: (A)(i) - (iv)	
106.512 (2)(B)	For such engines which are spark-ignited gas-fired or compression-ignited dual fuel-fired, the engine shall be equipped as necessary with an automatic air-fuel ratio (AFR) controller which maintains AFR in the range required to meet the emission limits of subparagraph (A) of this paragraph. An AFR controller shall be deemed necessary for any engine controlled with a non-selective catalytic reduction (NSCR) converter and for applications where the fuel heating value varies more than ± 50 British thermal unit/standard cubic feet from the design lower heating value of the fuel. If an NSCR converter is used to reduce NOx, the automatic controller shall operate on exhaust oxygen control.	
106.512 (2)(C)	Records shall be created and maintained by the owner or operator for a period of at least two years, made available, upon request, to the commission and any local air pollution control agency having jurisdiction, and shall include the following: (C)(i)-(C)(iii)	
106.512 (3)	For any gas turbine rated 500 hp or more, subparagraphs (A) and (B) of this paragraph shall apply. (A) The emissions of NOx shall not exceed 3.0 g/hp-hr for gas-firing. (B) The turbine shall meet all applicable NOx and sulfur dioxide (SO_2) (or fuel sulfur) emissions limitations, monitoring requirements, and reporting requirements of EPA New Source Performance Standards Subpart GG--Standards of Performance for Stationary Gas Turbines. Turbine hp rating shall be based on turbine base load, fuel lower heating value, and International Standards Organization Standard Day Conditions of 59 degrees Fahrenheit, 1.0 atmosphere and 60% relative humidity.	There are no turbines at this site that are greater than or equal to 500 HP; therefore, the provisions of this section do not apply to this site.
106.512 (4)	Any engine or turbine rated less than 500 hp or used for temporary replacement purposes shall be exempt from the emission limitations of paragraphs (2) and (3) of this section. Temporary replacement engines or turbines shall be limited to a maximum of 90 days of operation after which they shall be removed or rendered physically inoperable.	The site does not have temporary replacement engines or turbines.
106.512 (5)	Gas fuel shall be limited to: sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains total sulfur per 100 dry standard cubic feet, or field gas. If field gas contains more than 1.5 grains hydrogen sulfide or 30 grains total sulfur compounds per 100 standard cubic feet (sour gas), the engine owner or operator shall maintain records, including at least quarterly measurements of fuel hydrogen sulfide and total sulfur content, which demonstrate that the annual SO_2 emissions from the facility do not exceed 25 tpy. Liquid fuel shall be petroleum distillate oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur.	The site will comply with fuel specification and/or monitoring and recordkeeping requirements of this section.
106.512 (6)(A)-(C)	There will be no violations of any National Ambient Air Quality Standard (NAAQS) in the area of the proposed facility. Compliance with this condition shall be demonstrated by one of the following three methods: (A) ambient sampling or dispersion modeling accomplished pursuant to guidance obtained from the executive director. Unless otherwise documented by actual test data, the following nitrogen dioxide NO_2/NOX ratios shall be used for modeling NO_2 NAAQS; (B) all existing and proposed engine and turbine exhausts are released to the atmosphere at a height at least twice the height of any surrounding obstructions to wind flow. (C) the total emissions of NOX (nitrogen oxide plus NO_2) from all existing and proposed facilities on the property do not exceed the most restrictive ofthe following: (i)-(ii)	NAAQS compliance for the engines / turbines at this site has been demonstrated using dispersion modeling (SCREEN3) as allowed under 106.512(6)(A). Please refer to the NO_2 NAAQS compliance table and SCREEN3 output files for more details.
106.512 (7)	Upon issuance of a standard permit for electric generating units, registrations under this section for engines or turbines used to generate electricity will no longer be accepted, except for: (A) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants; (B) engines or turbines satisfying the conditions for facilities permitted by rule under Subchapter E of this title (relating to Aggregate and Pavement); or (C) engines or turbines used exclusively to provide power to electric pumps for irrigating crops.	This section does not apply to this site.

SM Energy Company
Guitar North West Wellpad

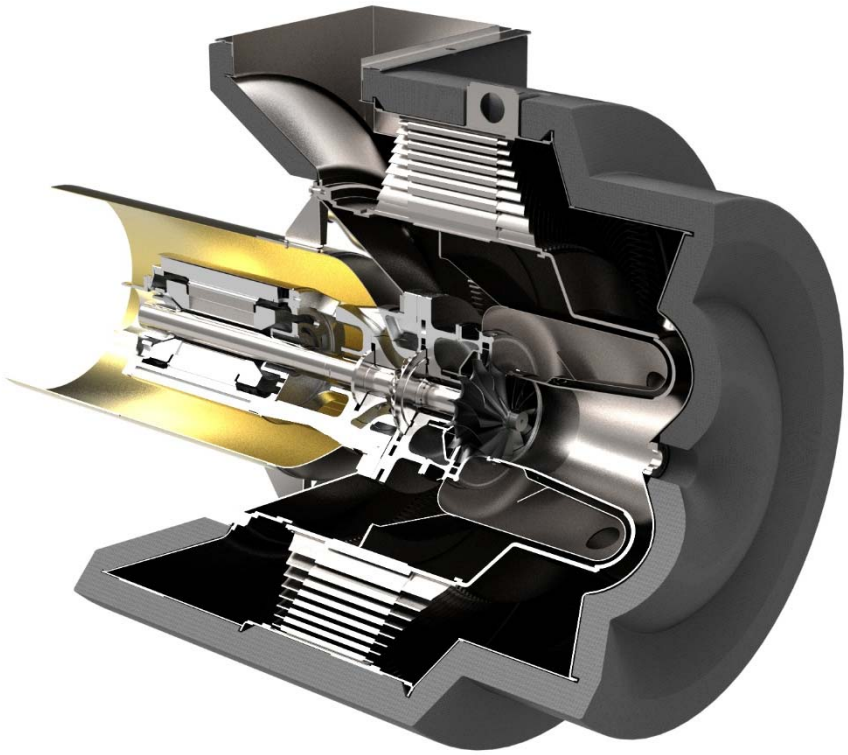
Title 30 Texas Administrative Code § 106.359 - Compliance

Citation	Summary of Requirement	Compliance Acknowledgment/ Approach
106.359 (a)	Applicability. This section applies to certain authorized oil and gas handling or production facilities or sites, and authorizes emissions from planned maintenance, startup, and shutdown (MSS) facilities and activities, and any associated emission capture and control facilities, if all of the applicable requirements of this section are met.	The site is utilizing 106.359 PBR to authorize planned MSS emissions in accordance with the requirements of this PBR.
106.359 (a)(1)	This section does not apply to oil and gas handling or production facilities or sites authorized under §106.352(a) - (k) of this title (relating to Oil and Gas Handling and Production Facilities), subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities, §106.355 of this title (relating to Pipeline Metering, Purging, and Maintenance), or Subchapter U of this chapter (relating to Tanks, Storage, and Loading).	The site is not being authorized under 106.352(a)-(k), 106.355, or the O&G Non-Rule Standard Permit.
106.359 (a)(2)	This section may not be used to supersede an existing authorization for planned MSS under Chapter 106 of this title (relating to Permits by Rule) or §116.620 under this chapter (relating to Installation and/or Modification of Oil and Gas Facilities) unless any previously represented emission control methods, techniques, and devices remain in use and there is no resulting increase in hourly emissions.	The site is not using this PBR to supercede an existing authorization.
106.359 (b)	Activities. Planned MSS activities and facilities authorized by this section include the following: (1) engine, compressor, turbine, and other combustion facilities maintenance; (2) repair, adjustment, calibration, lubrication, and cleaning of site process equipment; (3) replacement of piping components, pneumatic controllers, boiler refractories, wet and dry seals, meters, instruments, analyzers, screens, and filters; (4) turbine or engine component swaps; (5) piping used to bypass a facility during maintenance; (6) planned MSS activities with the same character and quantity of emissions as those listed in paragraphs (1) - (5) of this subsection; (7) pigging and purging of piping; (8) blowdowns; (9) emptying, purging, degassing, or refilling of process equipment, storage tanks and vessels (except landing floating roof tanks for convenience purposes), if subparagraphs (A) - (C) of this paragraph are met. (10) abrasive blasting, surface preparation, and surface coating of facilities and structures used at the site in oil and gas handling and production.	The site is authorizing several planned MSS activities under this PBR. Please see the MSS emissions calculation tables for details.
106.359 (c)	(c) Best Management Practices. (1) All facilities with the potential to emit air contaminants must be maintained in good condition and operated properly. (2) Each permit holder shall establish, implement, and update, as appropriate, a program to maintain and repair facilities as required by paragraph (1) of this subsection. The minimum requirements of this program must include: (A) a maintenance program developed by the permit holder for all facilities that is consistent with good air pollution control practices, or alternatively, manufacturer's specifications and recommended programs applicable to facility performance and the effect on emissions; (B) cleaning and routine inspection of all facilities; (C) repair of facilities on timeframes that minimize failures and maintain performance; (D) training of personnel who implement the maintenance program; and (E) records of conducted planned MSS activities.	The site will comply with the Best Management Practices requirements of this section.

SUPPORTING DOCUMENTATION

Technical Reference

Capstone MicroTurbine® Systems Emissions



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1. Introduction

This technical reference is to provide customers with information that may be requested by local air permitting organizations or to compare air quality impacts of different technologies for a specific project. The information is provided in both an "output based" format (e.g., pounds-per-Megawatt-hour) and a volumetric basis at a reference dilution of 15% oxygen (e.g., parts-per-million by volume).

1.1. Definitions

- ISO conditions are defined as: 15°C (59°F), 60% relative humidity, and sea level pressure of 101.325 kPa (14.696 psia).
- HHV: Higher Heating Value
- LHV: Lower Heating Value
- kW_{th}: Kilowatt (thermal)
- kW_e : Kilowatt (electric)
- MWh: Megawatt-hour
- hp-hr: horsepower-hour
- scf: Standard cubic foot (standard references ISO temperature and pressure)
- m^3: Normal cubic meter (normal references 0 °C and one atmosphere pressure)

1.2. Useful Unit Conversions

For reference, various emissions-related unit conversions are provided in Table 1. Some of these conversion factors are approximate.

Table 1. Unit Conversions

From	Multiply By	To Get
lb/MWh	0.338	g/bhp-hr
g/bhp-hr	2.96	lb/MWh
lb	0.454	kg
kg	2.20	lb
kg	1000	g
hp (electric)	0.746	kW
kW	1.34	hp (electric)
MW	1000	kW
kW	0.001	MW

2. Exhaust Emissions

The exhaust emissions of a Capstone microturbine are summarized in Table 2 for a variety of fuel types. The definitions of these fuel types are provided in Capstone's Fuel Requirements Technical Reference (410002). The specific emissions listed in Table 2 are the oxides of nitrogen (NO_X), carbon monoxide (CO), and volatile organic compounds (VOC).

Table 2. Emission for a Capstone Microturbine

Fuel	Model	Pounds per Megawatt Hour (lb/MWh)			Grams per Horsepower Hour (g/hp-hr)			Parts per Million (ppmvd) at 15% O_2			Milligrams per Cubic Meter (mg/m^3) at 15% O_2		
		NO_X	CO	VOC	NO_X	CO	VOC	NO_X	CO	VOC	NO_X	CO	VOC
High Pressure Natural Gas (3)	C30	0.64	1.8	0.23	0.22	0.60	0.078	9	40	9	18	50	6
	C65	0.46	1.25	0.10	0.16	0.42	0.034	9	40	7	19	50	5
	C65 CARB	0.17	0.24	0.05	0.06	0.08	0.017	4	8	3	8	9	2
	C200, C600, C800, C1000	0.40	1.10	0.10	0.14	0.37	0.034	9	40	7	18	50	5
Medium Btu: Type A (4)	C30	0.64	22.0	1.00	0.22	7.4	0.340	9	500	40	18	620	30
	C65	0.46	4.0	0.10	0.16	1.4	0.034	9	130	7	18	160	5
	C200, C600, C800, C1000	0.40	3.6	0.10	0.14	1.3	0.034	9	130	7	18	160	5
Medium Btu: Type B (5)	C30	0.64	11.0	1.00	0.22	3.7	0.340	9	250	40	18	310	30
	C65	0.46	4.0	0.10	0.16	1.4	0.034	9	130	7	18	160	5
	C200, C600, C800, C1000	0.40	3.6	0.10	0.14	1.3	0.034	9	130	7	18	160	5

Table 2 Notes:

1 Emissions levels for a nominal microturbine at steady state, full load and ISO conditions with clean air filtration. Does not include parasitic loads, installation conditions (e.g., exhaust back pressure), transient events (e.g., start-up & shut-down), off-spec fuel compositions, equipment malfunction and the lack of required maintenance.

2 VOC emissions are expressed as methane.

(3) Emissions for standard pipeline-quality natural gas at 1,000 BTU/scf (HHV) or 39.4 MJ/m^3 (HHV).

(4) Emissions for surrogate gas containing 42% natural gas, 39% CO_2, and 19% nitrogen. Typical of landfill gas.

(5) Emissions for surrogate gas containing 63% natural gas and 37% CO_2. Typical of digester gas.

NOTE

The emission values listed in Table 2 are the expected emissions of a new microturbine during the standard warranty period. They are also the expected emission levels for a properly maintained microturbine, per Capstone's Standard Maintenance Schedule.

2.1. Measurement in Parts per Million

Emissions reported in units of parts-per-million (ppm) are on a volumetric basis without considering moisture content. The abbreviation for this unit of measurement is "ppmvd" (parts per million by volume, dry), and also include a dilution correction to an exhaust oxygen content of 15%. The relationship between an output based measurement like pounds-per-MWh and a volumetric measurement like ppmvd depends on the characteristics of the generating equipment and the molecular weight of the criteria pollutant being measured. Raw measurements expressed in ppmvd will typically be lower than the corrected values shown in Table 3 because the microturbine exhaust is typically between 17% and 18% oxygen.

If required, the listed emissions values may be adjusted to a new percentage of oxygen dilution. The adjustment may be accomplished using the equation below:

$$Emissions\ at\ new\ O_2 = \frac{(20.9 - New\ O_2\ Percent)}{(20.9 - Current\ O_2\ Percent)} \times Emissions\ at\ current\ O_2$$

For example, to adjust 9 ppmvd of NO_X at 15% oxygen to ppmvd at 3% oxygen:

$$Emissions\ at\ 3\%\ O_2 = \frac{(20.9 - 3.0)}{(20.9 - 15.0)} \times 9 = 27\ ppmvd$$

2.2. Measurement in Milligrams per Cubic Meter

Another volumetric unit of measurement expresses the mass of a specific criteria pollutant per unit of volume. Table 2 expresses the emissions in milligrams per normal cubic meter at 15% oxygen. Normal conditions for this purpose are expressed at one atmosphere of pressure and zero degrees Celsius. Note that both the ppmvd and mg/m^3 values are at a dilution level of 15% oxygen by volume.

2.3. Emissions at Part Power

Capstone microturbines are designed to maintain combustion stability and low emissions over a wide operating range. Capstone microturbines utilize multiple fuel injectors, which are switched on or off depending on the power output of the turbine. All injectors are typically on when maximum power is demanded, regardless of the ambient temperature or elevation. As the load requirements of the microturbine are decreased, injectors will be switched off to maintain stability and low emissions. However, at low load, the emissions of a microturbine may increase relative to the values provided in this document.

2.4. Catalyst Reduction Module (CRM) Limitations

Specific microturbine modules may include a catalyst reduction module (CRM) that incorporates one or more catalyst “bricks”. The installed CRM is primarily intended to reduce the level of carbon monoxide (CO) in the exhaust stream to 10 ppmVd or less (at 15% Oxygen) for a microturbine operating on pipeline natural gas at full power and ISO conditions. However, the levels of reduction may not be achieved consistently if the required fuel and air conditions are not satisfied.

Microturbine operation with fuels containing catalyst deactivators (e.g., sulfur, chrome, silicon, etc.) may shorten the effective life of the catalyst. High levels of dust and particulate matter in the exhaust stream (typically the result of inadequate air filter maintenance) may result in temporary catalyst masking. As a result, microturbine operation with catalyst deactivators in the fuel and/or high levels of dust and particulate matter in the air intake may require the customer to periodically clean/replace the catalyst to maintain the expected CO emissions levels.

2.5. Emissions Calculations for Permitting

Air Permitting agencies are often concerned with the amount of a given pollutant being emitted per unit of time (e.g., pounds-per-day of NO_X). For a microturbine operating at or near full power, for example, one may estimate this value using the maximum microturbine electrical power output (expressed in MW) multiplied with the emissions rate in pounds-per-MWh times and the number of hours per day.

For example, a C65 operating at full power on natural gas would have a NO_X emissions rate of:

$$NO_x = 0.46\ \text{lb/MWh} \times \left(\frac{65\ \text{kW}}{1000\ \text{kW/MW}}\right) \times 24\ \text{hours} = 0.72\ lb\ per\ day$$

NOTE

As a general rule, if local permitting is required, use the published agency levels as the stated emissions for the permit to ensure that this permitted level is above the calculated values in this technical reference.

2.6. Consideration of Useful Thermal Output

Capstone microturbines are often deployed where their clean exhaust can be used to provide heating, either directly or indirectly using hot water or other heat transfer fluids. In this case, the local permitting or standards agency may allow the end-user to account for the useful thermal output when reporting the emissions of the microturbine. This increases the overall output of the microturbine, and decreases the relative emissions of the combined heat and power system.

For example, a C65 with an electrical load of 65 kW and a thermal load of 115 kW could be considered as having a total output of 180 kW, reducing the output-based emission rate when compared to an electric-only application. In this instance, the adjusted total output of the C65 may potentially reduce the output-based NOx emissions listed in Table 2 from 0.46 lb/MWh to approximately 0.17 lb/MWh.

3. Greenhouse Gas Emissions

Many gasses are considered “greenhouse gasses”, and agencies have ranked them based on their global warming potential (GWP) in the atmosphere compared with carbon dioxide (CO_2), as well as their ability to maintain this effect over time. For example, methane is a greenhouse gas with a GWP of 21. Criteria pollutants like NOx and organic compounds like methane are monitored by local air permitting authorities, and are subject to strong emissions controls. Even though some of these criteria pollutants can be more troublesome for global warming than CO_2, they are released in small quantities – especially from Capstone microturbines. So the major contributor of concern is carbon dioxide, or CO_2. Emission of CO_2 depends on two things:

1. Carbon content in the fuel
2. Efficiency of converting fuel to useful energy

It is for these reasons that many local authorities are focused on using clean fuels (for example natural gas compared with diesel fuel), achieving high efficiency using combined heat and power systems, and displacing emissions from traditional power plants using renewable fuels like landfill gas and digester gas.

Table 3 shows the nominal CO_2 emissions due to combustion for different Capstone microturbine models at full power and ISO conditions. The values do not include CO_2 that may already exist in the fuel itself, which is typical for renewable fuels like landfill and digester gas. These values are expressed on an output basis in pounds-per-megawatt-hour for an electric power only application as well as a heat recovery application with a total system efficiency of 70% (LHV).

Table 3. CO_2 Emissions for Capstone Microturbines in lb/MWh

Fuel	Model	Carbon Dioxide (CO_2)	
		Electric Only	70% Total CHP
High Pressure Natural Gas (2)	C30	1,690	625
	C65	1,570	625
	C65 CARB	1,630	625
	C200, C600, C800, C1000	1,330	625
Low Pressure Natural Gas (2)	C200, C600, C800, C1000	1,420	625
Medium Btu: Types A & B (2)(3)	C30	1,690	625
	C65	1,570	625
	C200, C600, C800, C1000	1,330	625

Table 3 Notes:

1 Emissions levels for a nominal microturbine at steady state, full load and ISO conditions with clean air filtration. Does not include parasitic loads, installation conditions (e.g., exhaust back pressure), transient events (e.g., start-up & shut-down), off-spec fuel compositions, equipment malfunction and the lack of required maintenance.

(2) Emissions due to combustion only, assuming CO_2 content of 117 lb/MMBTU (HHV). Does not include CO_2 blended with the fuel prior to the microturbine fuel inlet.

(3) Type-A is typical of landfill gas and Type-B is typical of digester gas.

C200S Power Package

High-pressure Natural Gas, ICHP

The Signature Series Microturbine provides reliable electrical/thermal generation from natural gas with ultra-low emissions.

- Ultra-low emissions
- One moving part – minimal maintenance and downtime
- Patented air bearings – no lubricating oil or coolant
- Integrated utility synchronization – no external switchgear
- Compact modular design allows for easy, low-cost installation
- Multiple units easily combined – act as single generating source
- Remote monitoring and diagnostic capabilities
- Proven technology with tens of millions of operating hours
- Various Factory Protection Plans available

C200S ICHP Microturbine

Electrical Performance[1]

Electrical Power Output	200kW
Voltage	400/480 VAC
Electrical Service	3-Phase, 4 Wire Wye
Frequency	50/60 Hz
Electrical Efficiency LHV	33%

Fuel/Engine Characteristics[1]

Natural Gas HHV	30.7–47.5 MJ/m³ (825–1,275 BTU/scf)
Inlet Pressure	517–551 kPa gauge (75–80 psig)
Fuel Flow HHV	2,400 MJ/hr (2,280,000 BTU/hr)
Net Heat Rate LHV	10.9 MJ/kWh (10,300 BTU/kWh)

Exhaust Characteristics[1]

NOx Emissions @ 15% O_2	< 9 ppmvd (18 mg/m³)
Exhaust Mass Flow	1.3 kg/s (2.9 lbm/s)
Exhaust Gas Temperature	280°C (535°F)

Dimensions & Weight[2]

Width x Depth x Height[3]	3.0 x 2.5 x 3.8 m (117 x 100 x 148 in)
Weight - Grid Connect Model	6,000 kg (13,200 lbs)
Weight - Dual Mode Model	6,700 kg (14,700 lbs)

Reliable power when and where you need it. Clean and simple.

Minimum Clearance Requirements[4]

Horizontal Clearance	
Left	1.5 m (60 in)
Right	0.0 m (0 in)
Front	1.7 m (65 in)
Rear	2.2 m (85 in)

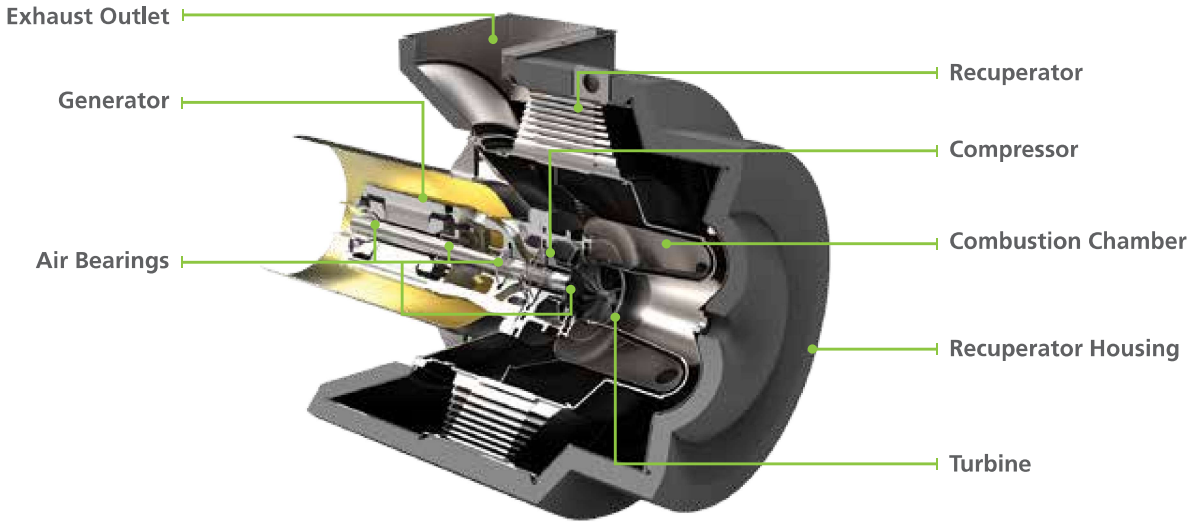
ICHP Heat Recovery[5]

Hot Water Heat Recovery	300 kW (1.0 MMBtu/hr)

Certifications

- UL 2200 Listed
- CE Certified
- Certified to the following grid interconnection standards: UL 1741, VDE, BDEW and CEI 0-16
- Compliant to California Rule 21

C200 Engine Components



(1) Nominal full power performance at ISO conditions: 15°C (59°F), 14.696 psia, 60% RH
(2) Approximate dimensions and weights
(3) Height dimensions are to the roofline. Exhaust outlet extends at least 241 mm (9.5 in) above the roofline
(4) Clearance requirements may increase due to local code considerations
(5) Nominal hear recovery for water inlet temperature of 38°C (100°F) and flow rate of 6.3 l/s (100 gpm)
Specifications are not warranted and are subject to change without notice.

21211 Nordhoff Street | Chatsworth, CA 91311 | 866.422.7786 818.734.5300

www.capstoneturbine.com

NattyGas Lab

10700 FM 307
Midland, TX 79706
432-686-2719
www.nattygaslab.com

Gas Analysis Report

Method GPA 2261 **Analyzed On** 9/24/2024
Analysis # 1633
Cylinder # 638 **Analyzed By** Alex Mata

Customer Information

SM Energy
Attn: Jerry Keese
6301 Holiday Hill Rd. Bld 1
Midland, TX 79707

Sample Information

Producer: SM Energy
Lease/Well: Guitar North 17 Fuel
Meter #: 50000010
Sample Type: Spot
Remarks: RUSH

Sampled By: Phillip Harrell
Sample Date: 9/23/2024
Sample Pressure: 290 psig
Sample Temperature: 80 F
Sample Method: Purge
Flow Rate: 2816 MCFD
Field H2S: 0 ppm

Base Condition: 14.65 psia and 60° F

Physical Constants per GPA 2145-16

Component	Mol %	Wt %	GPM Real
Nitrogen	3.9799	6.5530	
Carbon Dioxide	0.0000	0.0000	
H2S	0.0000	0.0000	
Methane	92.4835	87.1660	
Ethane	3.4968	6.1776	0.932
Propane	0.0398	0.1034	0.011
Iso-Butane	0.0000	0.0000	0.000
N-Butane	0.0000	0.0000	0.000
Iso-Pentane	0.0000	0.0000	0.000
N-Pentane	0.0000	0.0000	0.000
Hexanes Plus	0.0000	0.0000	0.000
	100.0000	**100.0000**	**0.943**

Gross Heating Value (BTU/ft^3)

Dry	Wet	
993.8	976.5	Ideal
995.8	978.8	Real

Specific Gravity (air=1.000)

Dry	Wet	
0.5877	0.5883	Ideal
0.5886	0.5895	Real

Compressibility Factor (Z)

Dry	Wet
0.998	0.9976

GPM (Dry Real)

C2 +	0.943
C3 +	0.011

Stefan Carrasco

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 13043 ***

MT-1 - MT-9

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =     0.126000
   STACK HEIGHT (M)       =       4.0000
   STK INSIDE DIAM (M)    =       0.2300
   STK EXIT VELOCITY (M/S)=      30.8900
   STK GAS EXIT TEMP (K)  =     552.5900
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       0.0000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =       0.0000
   MIN HORIZ BLDG DIM (M) =       0.0000
   MAX HORIZ BLDG DIM (M) =       0.0000

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


BUOY. FLUX =    1.882 M**4/S**3;  MOM. FLUX =    6.691 M**4/S**2.

*** FULL METEOROLOGY ***

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

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

  DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)   Z (M)  DWASH
-------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
    15.   0.1373E-02    3    10.0   10.0  3200.0    7.44    2.23    1.42    NO
   100.     30.39        3     5.0    5.0  1600.0   10.88   12.62    7.70    NO
   200.     26.91        4     5.0    5.0  1600.0   10.88   15.69    8.72    NO
   300.     21.78        4     3.0    3.0   960.0   15.47   22.85   12.53    NO
   400.     18.14        4     2.5    2.5   800.0   17.77   29.72   15.77    NO
   500.     15.50        4     2.0    2.0   640.0   21.21   36.48   18.95    NO
```

600.	13.34	4	1.5	1.5	480.0	26.95	43.22	22.20	NO
700.	12.05	4	1.5	1.5	480.0	26.95	49.62	24.91	NO
800.	10.75	4	1.5	1.5	480.0	26.95	55.96	27.57	NO
900.	9.588	4	1.0	1.0	320.0	38.42	62.66	31.06	NO
1000.	9.015	4	1.0	1.0	320.0	38.42	68.83	33.57	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 15. M:

67.	32.27	3	10.0	10.0	3200.0	7.44	8.77	5.31	NO

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

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

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	32.27	67.	0.

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

40 CFR Part 60, Subpart OOOO, OOOOa, OOOOb
Regulatory Applicability Table
SM Energy Company
Guitar North West Wellpad

Federal Rules and Regulations		Applicability	Comment
40 CFR Part 60, Subpart OOOO		Not Applicable	The site was not constructed, modified, or reconstructed between 8/23/2011 and 9/18/2015; therefore, the site is not subject to NSPS OOOO.
40 CFR Part 60, Subpart OOOOa		Not Applicable	The site was not constructed, modified, or reconstructed between 9/18/2015 and 12/06/2022; therefore, the site is not subject to NSPS OOOOa.
40 CFR Part 60, Subpart OOOOb		Applicable	The site was constructed, modified, or reconstructed after 12/6/2022 and has at least one affected facility under this subpart.
OOOOb Affected Facilities 12/6/2022	Oil Well with Associated Gas at Well Affected Facility	Affected	This site is an oil well with associated gas at a well affected facility and will comply with the applicable parts of the rule.
	Centrifugal Compressors	Not Affected	This site does not have centrifugal compressors.
	Reciprocating Compressor	Not Affected	The site does not have reciprocating compressors.
	Pneumatic Controllers	Not Affected	There are no natural gas driven pneumatic controllers at this site.
	Pneumatic Pumps	Not Affected	There are no gas driven pneumatic pumps at this site.
	Storage Vessel Affected Facility	Not Affected	There are no storage vessels at the site.
	Fugitive Emission Components	Affected	This site is a wellsite and the collection of fugitive emission components are subject to this subpart.
	Flares	Not Affected	The site does not have any flares.
	Process Unit Affected Facility	Not Affected	The site is not a gas processing facility.
	Sweetening Units	Not Affected	The site does not have any sweetening units.
	Super Emitter	Affected	The site is an affected facility and will comply with the applicable parts of the rule.