Florida Gas Transmission Company

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November 26, 2008

UPS Overnight
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Ms. Trina Vielhauer, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blairstone, MS 5500
Tallahassee, FL 32399-2400
Phone: 850-921-9504

Reference: Facility: 0410004
Compressor Station No. 24, Gilchrist County
Project No.: 0410004-016-AC
Dear Ms. Vielhauer:

Subject: Application for Air Construction Permit

Florida Gas Transmission Company (FGT) is proposing to install a new 20,500 hp natural gas fired compressor turbine at Compressor Station No. 24 located in Gilchrist County. The facility is currently a minor source under both New Source Review and Title V definitions, but increases in emissions from the proposed modifications will make the facility a major source under Title V. It will remain a minor source for NSPS purposes. Therefore, a state only construction permit is required. FGT is also installing two new emergency generators at the above referenced facility. An initial Title V Permit application will be submitted independently.

Enclosed is an Application with supporting documentation for an Air Construction Permit for the proposed modifications. A processing fee of $2250.00 is attached.

If you have any questions or need additional information, please call me at (713) 989-7459.

Sincerely,

Charles Wait
Principal Engineer

CC: Arnold L. Eisenstein
Frank Diemont
Kevin McGlynn, P.E.
Duane Pierce, AQMcs, LLC
Compressor Station No. 24

Application for Air Permit to Construct

Florida Gas Transmission Company, LLC
Phase VIII Expansion Project
Quincy Compressor Station No. 24
Trenton, Gilchrist County, Florida
Facility No. 0410040

November 2008

Prepared by AQMcs, LLC

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1.0 INTRODUCTION

Florida Gas Transmission Company (FGT) is proposing to expand its existing natural gas pipeline facility near Trenton, in Gilchrist County, Florida (Compressor Station No. 24). This proposed modification is part of FGT's Phase VIII Expansion Project, aimed at increasing the supply capacity of FGT's network servicing domestic suppliers, commercial, and industrial customers in Florida. The scope of work for the Phase VIII Expansion Project includes expansion through the addition of state-of-the-art compressor engines at nine existing compressor stations within the States of Florida and Alabama. Three compressor stations within Florida will receive electric driven turbine compressors and five compressor stations within Florida will receive natural gas-fired turbine compressors.

Compressor Station No. 24 is located in Gilchrist County, Florida, approximately five miles north of Trenton on U.S. Highway 129, at the intersection with SW 50th Street. Figure 1-1 shows the location of the existing compressor station.

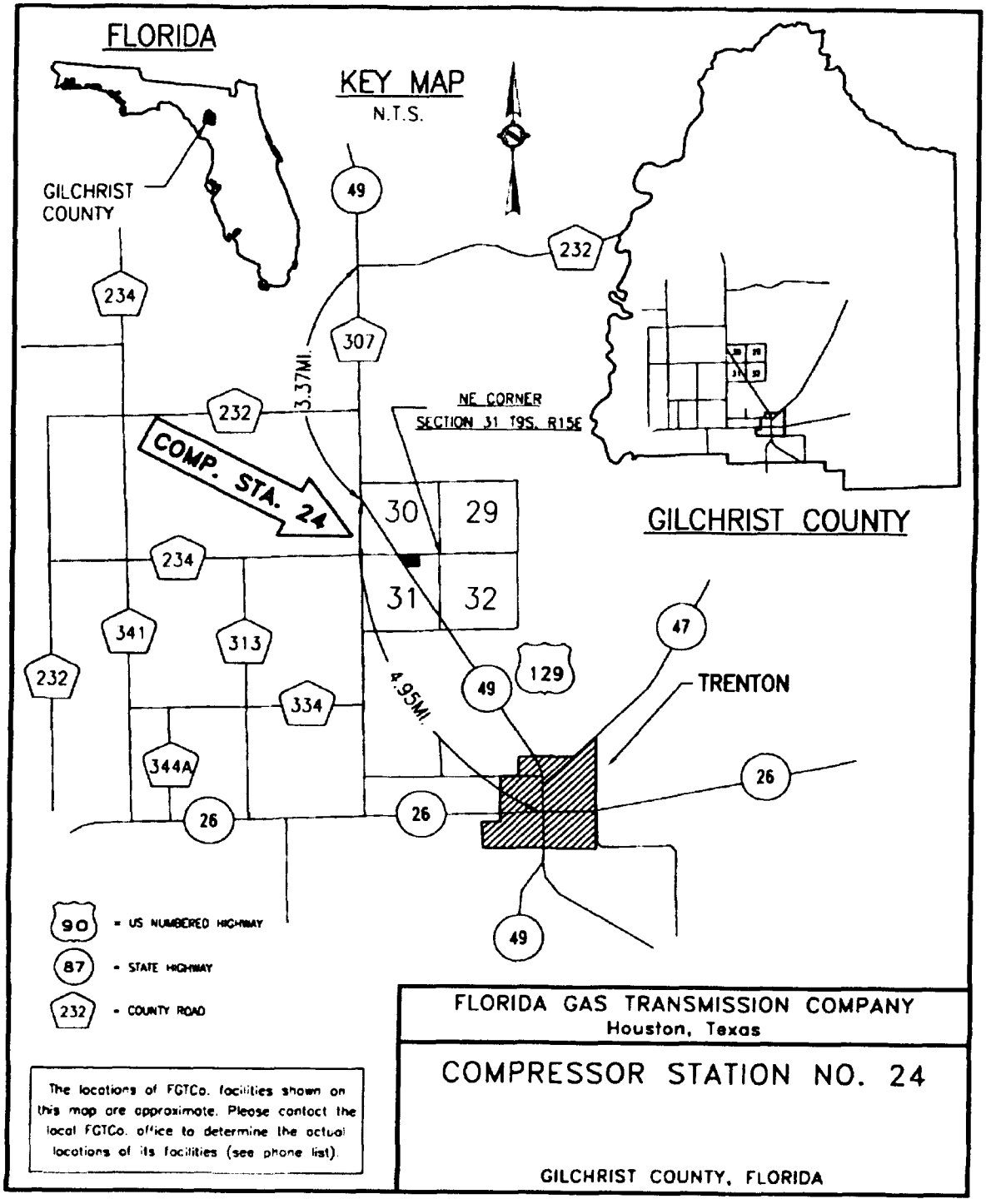
The proposed expansion consists of the installation of a 20,500 bhp natural gas-fired turbine. The turbine will be a Solar Titan 130-20502S unit and will be used solely for transporting natural gas by pipeline for distribution to markets in Florida.

Additionally, FGT is also proposing to add two new emergency generators at this facility. Each of the two new generators will be powered by a 454 bhp, gas-fired reciprocating compressor engine which will meet the new 40 CFR Subpart JJJJ standards.

Based on projected new annual emission rates, the proposed modifications would result in a NO_X potential emission increase of 37.5 tpy and a CO potential emission increase of 38.3 tpy; therefore, this modification will not constitute a significant modification at an existing major stationary source under Prevention of Significant Deterioration (PSD) regulations. Since there will be no PSD significant increase in the emissions of any contaminant, a state only construction permit is required.

This narrative contains three additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 24, the proposed new engine and new emergency generators are presented in Section 2.0. The air quality review requirements and applicability of state and federal regulations are discussed in Section 3.0. References are included in Section 4.0. FDEP permit application forms are provided in Attachment A. Attachment B contains a process flow diagram, Attachment C contains Precautions to Prevent Emissions of Unconfined Particulate Matter, Attachment D contains a plot plan of the facility and Attachment E provides vendor information. Attachment F provides emission calculations, Attachment G a recent fuel analysis and Attachment H a list of exempt sources.

Figure 1-1 Location Map



2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 24, showing the location of the plant boundaries, and the location of the new turbine and generators is presented in Attachment D. The following sections provide a description of the existing operations at this location, as well as a description of the proposed project.

2.1 Existing Operations

FGT's existing Compressor Station No. 24 consists of one 15,000 bhp (ISO) and one 7,200 bhp (ISO) natural gas-fired turbines. Table 2-1 summarizes engine manufacturer, model, and the date of installation for each of the existing engines. Compressor Engine 2401 was initially installed in 2001 at 10,350 bhp, upgraded to 13,000 bhp in 2002 and finally upgraded to 15,000 bhp in 2006. Compressor Engine 2402 was initially installed in 2004.

The existing facility also has supporting equipment including lube and used oil storage tanks, air compressors and emergency generators.

2.2 Proposed Modifications

FGT proposes to increase the horsepower capacity of Compressor Station No. 24, as part of the Phase VIII Expansion Project. This will involve adding a new gas-fired turbine (Compressor Engine 2403). The new engine will be used to increase the volumetric delivery capacity by driving a gas compressor that is a part of a gas transmission line that transports natural gas from source wells in Texas and Louisiana for delivery throughout Florida. Without the proposed modifications, it would not be possible to increase the volumetric delivery capacity necessary to meet both short and long-term demands for natural gas in Florida.

In addition, as part of the project, two new emergency generators will be installed. Each will be powered by a 454 bhp, gas-fired, 4-stroke, rich burn reciprocating compressor engine equipped with emissions that will be controlled to meet the new 40 CFR Subpart JJJJ standards as required. Details of the changes are described in the following sections.

Table 2-1 Summary of Existing Compressor Engines

Engine #	Date of Installation	Type	Manufacturer	Model #	Brake Horse Power (bhp)
2401	2001	Turbine	Solar	Mars 100 T-15000S	15,000
2402	2004	Turbine	Cooper-Rolls Royce,	501-KC7 DLE	7,222

2.2.1 New Compressor Turbine

FGT proposes to install one new natural gas-fired turbine engine compressor unit at Compressor Station No. 24. The engine is a Solar Titan 130 - 20502S turbine compressor unit rated at 20,500 bhp (ISO). Fuel will be exclusively natural gas from FGT's natural gas pipeline. Engine specifications and stack parameters for the proposed engine are presented in Table 2-2.

Table 2-2 Proposed New Turbine (2403) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	2403
Type	Gas Turbine
Manufacturer	Solar
Model	Titan 130 20502S
Unit Size (shaft)	19,465 bhp (ISO)
Specific Heat Input (LHV)[a]	7,326 Btu/hp-hr
Specific Heat Input (HHV)[b]	8,112 Btu/hp-hr
Fuel Flow (LHV)[a]	142.59 MM Btu/hr
Fuel Flow (HHV)[a]	157.89 MM Btu/hr
Maximum Fuel Consumption [c]	0.1518 MMscf/hr
Speed	8,351 rpm
Stack Parameters	
Stack Height	55 ft
Stack Diameter	7.5 ft x 8 ft (rectangular)
Exhaust Gas Flow	393,142 lb/h 232,782 acfm
Exhaust Temperature	944 °F
Exhaust Gas Velocity	64.7 ft/sec

NOTE:

acfm	=	actual cubic feet per minute.
bhp	=	brake horsepower.
Btu/hp-hr	=	British thermal units per brake horsepower per hour.
°F	=	degrees Fahrenheit.
ft	=	feet.
ft/sec	=	feet per second.
MMscf/hr	=	million standard cubic feet per hour.
rpm	=	revolutions per minute.

[a] Based on vendor provided lower heat rate value (LVH) of 7,326 Btu/hp-hr, a lower heating value of 939.2 Btu/scf and

[b] Based on natural gas with a HHV of 1040 British thermal units per standard cubic foot (Btu/scf).

[c] While producing 19,465 bhp at ISO conditions and with gas having HHV of 1040 Btu/scf

Hourly and annual emissions of regulated pollutants from the proposed new turbine at ISO conditions are presented in Table 2-3. Emissions of oxides of nitrogen (NO_x), carbon monoxide (CO) and non-methane hydrocarbons (NMHC) or volatile organic compounds (VOC) are based on the engine manufacturer's supplied data (See Attachment C). These values are based on ISO conditions. Other factors such as inlet, outlet losses and ambient temperature can affect these rates.

Typically, turbine vendors do not provide information on particulate matter (PM), sulfur dioxide

(SO2) or hazardous air pollutant (HAP) emissions; therefore, PM and HAP emissions are based upon USEPA publication AP-42 Section 3.1 (USEPA, 2000). Emissions of SO_2 are based on FGT's Federal Energy Regulatory Commission (FERC) certificate limit of 10 grains sulfur per 100 cubic feet of natural gas.

Table 2-3 Proposed New Turbine (2403) Compressor Engine Emissions

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides [a]	8.52 lb/hr	Manufacturer Data	8.52	37.31
Carbon Monoxide [a]	8.64 lb/hr	Manufacturer Data	8.64	37.86
Volatile Organic Compounds [a, b]	0.50 lb/hr	Manufacturer Data	0.50	2.17
Particulate Matter [c]	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	1.04	4.56
Sulfur Dioxide [c]	10 grains/100 scf	FERC Limit	4.34	19.00
HAPS [c]	0.001027 lb/MMBtu	AP-42, Table 3.1-2a	0.16	0.71

[a] Emissions based on vendor provided values at ISO conditions and inlet and exhaust losses at 4" of H_2O.

[b] Assumes that VOCs are 10% of THC

[c] Emissions based on vendor provided heat rate at higher heating value.

2.2.2 New emergency Generators

The new generators will be powered by natural gas fueled, rich burn Generac Model SG300 rated at 300 kW (454 bhp). Engine specifications and stack parameters for the proposed engines are presented in Table 2-4 and emissions are presented in Table 2-5.

2.2.3 Support Equipment

In addition to the compressor engine, some support equipment will be installed at the site. They include:

- One compressor buildings
- An auxiliary building
- A control building

The locations of the structures are shown on the facility plot plan contained in Attachment D. The compressor buildings, each housing a new turbine, have approximate dimensions of 52 feet wide by 80 feet long by 26 feet high. The approximate dimensions of the auxiliary building will be 32 feet wide by 48 feet long by 14 feet high and the approximate dimensions of the control building will be 14 feet wide by 55 feet long by 12 feet high.

2.2.4 New Storage Tank

A new 500 gallon oily water storage tank will be installed at Compressor Station No. 24. Table 2-6 provides the specifications. Emissions were calculated with the U.S EPA's (USEPA) Tank 4.0D program. Details of the calculations can be found in Attachment F. This emission unit is exempt under Rule 62-210.300(3)(b), F.A.C.

2.2.5 Fugitive Emissions

Potential new emissions from Compressor Station No. 24 also include fugitive emissions from the new valves and flanges that will be in gas service. These fugitive emissions have been estimated using USEPA factors for components in gas service at oil and gas facilities (EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"). Table 2-7 lists the quantities new components to be added as part of the Phase VIII Expansion Project and an estimate of the fugitive emissions from these sources. These emissions are exempt under Rule 62-210.300(3)(b), F.A.C.

Table 2-4 Proposed Emergency Generator Engines Specifications and Stack Parameters

Parameter	Design
Compressor Engine	Gen04/Gen05
Type	Natural Gas, Rich Burn Reciprocating
Manufacturer	Generac
Model	SG300
Unit Size	454 bhp
Heat Input	4.26 MM Btu/hr
Fuel Consumption [a]	0.00410 MMscf/h
Speed	2300 rpm
Stack Parameters	
Stack Height	20 ft
Stack Diameter	0.67 ft
Exhaust Gas Flow	5,300 lb/hr
Exhaust Gas Flow	2,911 acfm
Exhaust Temperature	1490 °F
Exhaust Gas Velocity	138.85 ft/sec

NOTE:

acfm	=	actual cubic feel per minute.
bhp	=	brake horsepower.
Btu/hr	=	British thermal units per hour.
°F	=	degrees Fahrenheit.
ft	=	feet.
ft/sec	=	feet per second.
Lb/hr	=	pound per hour.
rpm	=	revolutions per minute.
scf/h	=	standard cubic feet per hour

[a] Based on heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).

Table 2-5 Emissions from Each Proposed Generator Engine

	Uncontrolled			Controlled			
Pollutant	**Emission Factor**	**lb/hr [a]**	**TPY [a, b]**	**Emission Factor**	**lb/hr [a]**	**TPY [a, b]**	**Reference**
Nitrogen Oxides	2.12 g/hp-hr	2.12	0.11	2.0 g/hp-hr	2.00	0.109	NSPS
Carbon Monoxide	118.3 g/hp-hr	118.41	5.92	4.0 g/hp-hr	4.03	0.20	NSPS
Volatile Organic Compounds [c]	0.29 g/hp-hr	0.29	0.01	0.29 g/hp-hr	0.29	0.01	NSPS
Particulate Matter	0.01941 lb/MMBtu	0.083	<0.01	0.01941 lb/MMBtu	0.083	<0.01	AP-42, Table 3.2-3
Sulfur Dioxide	10 grains/100 scf	0.117	0.01	10 grains/100 scf	0.117	0.01	FERC Limit
Hazardous Air Pollutants	0.0234 lb/MMBtu	0.10	0.01	0.0234 lb/MMBtu	0.10	0.01	AP-42, Table 3.2-3

a. The manufacturer has not finalized design at this time. Actual values may be lower.
b. Based on 454 bhp, 100 hours of operation per year
c. assumed VOC 10% of UHC/THC

Table 2-6 New Storage Tanks for Compressor Station No. 24

Tank Name	Oily Water Tank
Type of Tank	Vertical, Cone Roof
Contents	Drain water from washings; oily water
Dimensions	4' dia x 6' high
Capacity	500 Gallons
Paint Color	White
Maximum Annual Throughput	500 Gallons
Pressurized	No
VOC Emissions (tpy)	<0.001

Table 2-7 VOC Fugitive Emission Calculations and Summary

Component	Service	Component Count	Emissions * Factor (ton/yr)	NM/NE Fraction	Emissions (ton/yr)
Valves	Gas	68	0.0434606	0.05	0.1478
Connector	Gas	0	0.0019316	0.05	0.0000
Flanges	Gas	180	0.0037666	0.05	0.0339
Open-Ended Line	Gas	0	0.0193158	0.05	0.0000
Pumps	Gas	0	0.023179	0.05	0.0000
Other	Gas	0	0.0849895	0.05	0.0000
Valves	Light Oil	0	0.0241448	1.00	0.0000
Connector	Light Oil	0	0.0020282	1.00	0.0000
Flanges	Light Oil	0	0.0010624	1.00	0.0000
Open-Ended Line	Light Oil	0	0.0135211	1.00	0.0000
Pumps	Light Oil	0	0.1255527	1.00	0.0000
Other	Light Oil	0	0.0724343	1.00	0.0000
Valves	Heavy Oil	0	0.0000811	1.00	0.0000
Connector	Heavy Oil	0	0.0000724	1.00	0.0000
Flanges	Heavy Oil	0	0.0000038	1.00	0.0000
Open-Ended Line	Heavy Oil	0	0.0013521	1.00	0.0000
Other	Heavy Oil	0	0.0002994	1.00	0.0000
				TOTAL:	**0.1817**

*EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates

2.2 Emissions Summary

The total changes in emissions resulting from the project are listed on Table 2-8. The calculations used to estimate these emissions are presented in Attachment F.

Table 2-8 Potential Annual Emissions (tpy) Summary

SOURCE ID	DESCRIPTION	NO_x	CO	VOC[a]	SO_2	PM	HAPs
EXISTING FACILITY							
2401	15,000 bhp Turbine Engine	52.1	63.5	1.8	15.9	3.3	0.6
2402	7,200 bhp Turbine engine	25.0	30.5	6.5	8.2	2.0	0.3
GEN03	443 bhp Recip. Engine [b]	2.2	0.6	0.0	0.2	0.2	0.0
	Other Sources: [c]	0.0	0.0	0.3	0.0	0.0	0.0
EXISTING ANNUAL POTENTIALTOTALS:		**79.3**	**94.6**	**8.6**	**24.3**	**5.5**	**0.9**
PROPOSED MODIFIED FACILITY							
2401	15,000 bhp Turbine Engine	52.1	63.5	1.8	15.9	3.3	0.6
2402	7,200 bhp Turbine engine	25.0	30.5	6.5	8.2	2.0	0.3
2403	20,500 hp Turbine Engine – New	37.3	37.9	2.2	19.0	4.6	0.7
GEN03	443 bhp Recip. Engine [b]	2.2	0.6	0.0	0.2	0.2	0.0
GEN04	454 bhp Recip. Engine [d] - New	0.1	0.2	0.0	0.0	0.0	0.0
GEN05	454 bhp Recip. Engine [d] - New	0.1	0.2	0.0	0.0	0.0	0.0
	Other Sources: [c]	0.0	0.0	0.5	0.0	0.0	0.0
PROPOSED ANNUAL POTENTIAL TOTALS:		**116.8**	**132.9**	**11**	**43.3**	**10.1**	**1.6**
NET CHANGES IN POTENTIAL EMISSIONS:		**37.5**	**38.3**	**2.4**	**19**	**4.6**	**0.7**

a VOC = Non-methane/non-ethane HC
b Based on 500 hr/yr
c Other Sources Includes ancillary equipment, storage tanks and equipment leaks
d Based on 100 hr/yr

3.0 REGULATORY ANALYSIS

This section presents a review of federal and Florida State air quality regulations, which govern the operations and proposed modifications to be conducted at Compressor Station No. 24.

3.2 Federal Regulations Review

The federal regulatory programs administered by the USEPA have been developed under the authority of the Clean Air Act. The following subsections review the essential elements of the federal regulatory program and the impact they have on the operations and proposed modifications at Compressor Station No. 24.

3.1.1 Classification of Ambient Air quality

The 1970 Amendments to the CAA gave the USEPA specific authority to establish the minimum level of air quality that all states would be required to achieve. These minimum values or standards were developed in order to protect the public health (primary) and welfare (secondary). The federally promulgated standards and additional state standards are presented on Table 3-1.

Areas of the country that have air quality equal to or better than these standards (i.e., ambient concentrations less than a standard) are designated as "Attainment Areas", while those where monitoring indicates air quality is worse than the standards are known as "Non-attainment Areas." The designation of an area has particular importance for a proposed project as it determines the type of permit review to which the application will be subject.

Major new sources or major modifications to existing major sources located in attainment areas are required to obtain a PSD permit before initiation of construction. Similar sources located in areas designated as non-attainment or that adversely impact such areas undergo more stringent Non-attainment New Source Review (NNSR). In either case, it is necessary, as a first step, to determine the air quality classification of a project site.

All areas of all states are classified as either attainment, non-attainment or unclassifiable for each criteria pollutant. Gilchrist County in designated as unclassifiable or attainment for all criteria pollutants. These designations were obtained from 40 CFR 81.310, and 62-204.340 F.A.C.

Table 3-1 National and State Ambient Air Quality Standards ($\mu g/m^3$)

POLLUTANT	AVERAGING PERIOD	EPA STANDARDS		FLORIDA STANDARDS
		PRIMARY	SECONDARY	
PM_{10}	24-hour[1]	150	150	150
	Annual[2]	50	50	50
SO_2	3-hour[1]	---	1,300	1,300
	24-hour[1]	365	---	260
	Annual[2]	80	---	60
CO	1-hour[1]	---	40,000	40,000
	8-hour[1]	10,000	---	10,000
NO_2	Annual[2]	100	100	100
O_3	1-hour[3]	235	235	235

1. Not to be exceeded more than once per year.
2. Never to be exceeded.
3. Not to be exceeded on more than 3 days over 3 years.

Sources: 40 CFR 50; 36FR22384; Chap. 17-2.300.

The designation of Unclassifiable indicates that there is insufficient monitoring data to prove that the area has attained the federal standards; however, the limited data available indicate that the standard has been achieved. Areas with this classification are treated as attainment areas for permitting purposes. Since Gilchrist County is considered in attainment for all pollutants, the proposed new emissions are potentially subject to PSD review and not non-attainment review.

3.1.2 PSD Applicability

The 1977 CAA Amendments added Part C: Prevention of Significant Deterioration to the Act. This part required proposed new major stationary sources or existing sources planning a major modification in an area that has attained the National AAQS, to conduct a preconstruction review that includes a detailed analysis of the impacts from the source's emissions.

Federal air quality permitting regulations for attainment areas are codified in the Code of Federal Regulations (CFR), Title 40- Protection of the Environment, Part 52.21 - Prevention of Significant Deterioration (40 CFR 52.21). Major revisions to the rules were finalized on December 31, 2002, and became effective on March 3, 2003. State of Florida requirements are located at 62-212.400 F.A.C.

For the PSD regulations to apply to a given project, the project's potential to emit must constitute a new major stationary source or a major modification to an existing major stationary source. A major stationary source is defined as any of the 28 sources identified in 40 CFR 52.21 that has a potential to emit 100 tons or more per year of any regulated pollutant, or any other stationary source that has the potential to emit 250 tons or more per year of a regulated pollutant. "Potential to emit" is determined on an annual basis after the application of air pollution control equipment, or any other federally enforceable restriction.

"Significant" emission rates are defined as amounts equal to or greater than the emission rates given in Table 3-2.

Table 3-2 Applicability of PSD Significant Emission Rates

Pollutant	Emission Rate Tons/Year
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
Particulate Matter (PM/PM_{10})	25/15
Ozone (VOC)	40
Lead	0.6
Fluorides	3
Reduced Sulfur including Hydrogen Sulfide	10
Total Reduced Sulfur including Hydrogen Sulfide	10
Sulfuric Acid Mist	7
Lead	0.6
Mercury	0.1
VOC = Volatile Organic Compounds Sources:40 CFR 52.21(b)(23); Table 212.400-2 62-212 F.A.C.	

Proposed project increases for modified sources are determined for each pollutant and are equal to the actual emissions (average of the actual emissions over any 24 month of the ten years immediately prior to the proposed project) subtracted from the proposed future actual emissions. For new sources the emission increase is equal to the potential to emit (PTE) of the source. Fugitive emissions are only included in the potential to emit if the source is one of the 28 named source categories in 40 CFR 52.21(b)(1) or belongs to a stationary source category that is subject to an NSPS proposed prior to August 7, 1980 or that is subject to an NESHAPS promulgated prior to August 7, 1980.

Netting is only required for each regulated pollutant for which the proposed project increases

(decreases are not considered yet) result in a significant increase in emissions. Netting is performed by identifying both the creditable and contemporaneous increases and the reductions in emissions. The contemporaneous period is defined as the period of time from five years prior to the estimated start of construction through estimated start of operation. Since this project does not result in a significant increase, netting is not required.

To summarize, since Compressor Station No. 24 is not one of the 28 named source categories, and emits <250 TPY of each regulated pollutant and the proposed new emissions are not major in themselves, it is not considered a major source or major new source; therefore, the compressor station is not subject to PSD pre-construction review.

3.1.3 Non-attainment New source Review (NNSR) Applicability

Based on the current non-attainment provisions, all new major stationary sources, or major modifications to such sources, located in a non-attainment area must undergo non-attainment New Source Review, if they have the potential to emit above an NSR significant threshold. For major new sources or major modifications in an attainment or unclassifiable area, the non-attainment provisions apply if the source or modification is located within the area of influence of a non-attainment area. The area of influence is defined as an area, which is outside the boundary of a non-attainment area, but within the locus of all points that are 50 kilometers outside the non-attainment area.

Compressor Station No. 24 is located in an area that is designated as either attainment or not classifiable for all criteria pollutants and is not located in an area of influence outside a non-attainment area. Additionally, Compressor Station No. 24 is not a major source; therefore, this compressor station is not subject to federal non-attainment New Source Review.

3.1.4 Applicability of New source Performance Standards (NSPS)

Standards of Performance for New Sources are published in 40 CFR 60. All Standards apply to all new sources within a given category, regardless of geographic location or ambient air quality at the location.

<u>40 CFR 60 Subpart KKKK</u>

The new turbine to be installed at Compressor Station No. 24 is subject to Subpart KKKK (40 CFR 60.4300), Standards of Performance for Stationary Combustion Turbines, because it will have a maximum heat input at peak load of >10.7 gigajoules/hour (10 MMBtu/hr) based on the higher heating value of the natural gas fuel and because construction will commence after 18

February 2005. This regulation establishes emission limits for NO_X and SO_2 and requires performance testing and monitoring of fuel sulfur.

The NO_x emission limit for Subpart KKKK is based on Table 1 of 40 CFR 60 Subpart KKKK. The limit for new turbines firing natural gas and with a heat input at peak load greater than 50 MMBtu/h but not more than 850 MMBtu/h is 25 ppm at 15% O_2. SO_2 emissions are limited to 0.060 lb SO_2/MMBtu heat input. For this turbine the limit will be 9.47 lb/hr.

Table 3-3 summarizes the NSPS applicability for the proposed gas engines. FGT will also be required to comply with all recordkeeping and monitoring requirements of this regulation.

The turbine will meet the NSPS for NO_X of 25 ppmv (i.e., manufacturer's estimation of 15 ppmv), and for SO_2 of 9.47 lb/nr (estimated for this turbine to be 4.34 lb/hr).

40 CFR 60 Subpart JJJJ

The new emergency generator engines are subject to 40 CFR Subpart 60 Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. Owners and operators of stationary spark ignition internal combustion engines with maximum engine power greater than or equal to 100 hp must comply with the standards for NO_X, CO and VOC established in Table 1 of Subpart JJJJ. The manufacturer of the proposed generator engines has not provided final emissions data. FGT will only install units that will comply with the applicable standards. FGT will also be required to comply with all recordkeeping and monitoring requirements of this regulation.

Table 3-4 summarizes the NSPS applicability for the proposed gas-fired emergency generator engines.

Table 3-3 Applicability of New Source Performance Standards Subpart KKKK

NSPS Regulations	Fuel	Pollutant	Heat Input Applicability	Equipment Design Maximum	NSPS Emission Limits	Equipment Emissions
60.4320(a)	Gas	NO_x	>50 MM Btu/hr	158 MM Btu/hr	25 ppm_v	15 ppm_v
60.4330(a)(2)	Gas	SO_2	>50 MM Btu/hr	158 MM Btu/hr	9.47 lb/hr	4.34 lb/hr

Table 3-4 Applicability of New Source Performance Standards Subpart JJJJ

NESHAP Regulations	Fuel	Pollutant	Equipment Design Maximum	NSPS Emission Limits (g/hp-hr)	Equipment Emissions (G/hp-hr)
60.4230 Table 1	Gas	NO_2	100 hp and higher	2.0	2.00
60.4230 Table 1	Gas	CO	100 hp and higher	4.0	4.00
60.4230 Table 1	Gas	VOC	100 hp and higher	1.0	0.29

3.1.5 Applicability of National Emission Standards for Hazardous Air Pollutants (NESHAPS)

Section 112 of the Clean Air Act required the USEPA to list categories and subcategories of major sources and area sources of hazardous air pollutants (HAP) and to establish NESHAPS for the listed source categories and subcategories. NESHAPS require all major sources to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). Compressor Station 24 is not a major source of HAPS and is, therefore, not subject to any applicable NESHAPS.

3.1.6 Applicability of Title V

In 1990, Congress established an operating permit program under Title V of the Clean Air Act Amendments. This operating permit program streamlines the way federal, state, tribal, and local authorities regulate air pollution by consolidating all air pollution control requirements into a single, comprehensive "operating permit" that covers all aspects of a source's year-to-year air pollution activities.

All "major" stationary sources emitting certain air pollutants are required to obtain operating permits. Generally, major sources include those stationary facilities that emit 100 tons or more per year of a regulated air pollutant. Smaller sources are considered "major" in areas that are not meeting the national air quality standards for a particular pollutant. Also, sources of toxic air pollutants (i.e., any source that emits more than 10 tons per year of an individual toxic air pollutant or more than 25 tons per year of any combination of toxic air pollutants) are considered major.

Currently CS 24 is not a major source under Title V definitions. After the addition of the new

NO_X and CO emissions proposed by this project, CS 24 will become a major Title V source and will be required to obtain a Title V operating permit.

3.2 Florida State Air Quality Regulations

Compressor Station No. 24 is currently operating under Permit No.0041004-014-OA and is subject to the provisions of that permit. Rule 62, F.A.C., contains the air quality rules and regulations for the State of Florida. The primary federal regulations that affect Compressor Station No. 24 have been incorporated into or are referenced by these rules. The significant state regulations that are applicable to the new emission units are briefly listed below.

3.2.1 Rule 62-210.300 Permits Required

FGT is required to obtain a construction permit prior to modification of an emission unit. This requirement is being met by the submittal of this application. After the modification, FGT will be required to modify the state operating permit to incorporate the new sources.

3.2.2 Rule 62-204.240 Ambient Air Quality Standards

FGT must not violate any of the ambient air quality standards listed under this rule. The proposed new emissions will not violate any air quality standards. .

3.2.3 Rule 62-296.320(2) Objectionable Odors

This rule prohibits the discharge of pollutants that will cause or contribute to an objectionable odor. There will be no odors from the proposed changes.

3.2.4 Rule 62-296.320(4)(b)1 General Particulate Emission Limiting Standards

FGT is prohibited from allowing the new compressor engine to discharge into the atmosphere the emissions of air pollutants, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). The new engines will not violate this standard.

4.0 REFERENCES

U.S. Environmental Protection Agency (USEPA). 1980. PSD Workshop Manual. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). 1985. Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017

U.S. Environmental Protection Agency (USEPA). 2000. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (5th Ed.) AP-42. Supplement E, Research Triangle Park, NC.

Attachment A

DEP Forms

Department of Environmental Protection

Division of Air Resource Management

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BUREAU OF AIR REGULATION

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company, LLC	
2. Site Name: Compressor Station No. 24	
3. Facility Identification Number: 0410004	
4. Facility Location... Street Address or Other Locator: 5030 South U.S. Highway 129 City: Trenton County: Gilchrist Zip Code: 32693	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☐ Yes ☒ No

Application Contact

1. Application Contact Name: Charles Wait
2. Application Contact Mailing Address... Organization/Firm: Florida Gas Transmission Company, LLC Street Address: 5444 Westheimer City: Houston State: TX Zip Code: 77056
3. Application Contact Telephone Numbers... Telephone: (713) 989 - 7459 ext. Fax: (713) 989 - 1135
4. Application Contact E-mail Address: charles.wait@SUG.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 11-26-08	3. PSD Number (if applicable):
2. Project Number(s): 0410004-016-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).

☐ Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

☐ Initial Title V air operation permit.

☐ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Florida Gas Transmission Company is proposing to install a new 20,500 bhp gas-fire compressor turbine and two new 454 bhp gas-fired SI ICE 4-stroke rich-burn emergency generator engines.

These proposed modifications are part of FGT's Phase VIII Expansion project, aimed at increasing the supply capacity of FGT's network servicing domestic, commercial, and industrial customers in Florida.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
004	Turbine Compressor Engine No. 2403, 20,500 bhp ISO, Natural Gas Fired	AC1D	$2000
005	Emergency Generator Engine No. GEN04, 454 bhp, 4-stroke, rich-burn natural gas fired	AC1D	$250
006	Emergency Generator Engine No. GEN05, 454 bhp, 4-stroke, rich-burn natural gas fired	AC1D	Similar Unit $0

Application Processing Fee

Check one: ☒ Attached - Amount: $ 2,250.00 ☐ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   David Shellhouse, Vice President, Southeastern Operations

2. Owner/Authorized Representative Mailing Address
   Organization/Firm: Florida Gas Transmission Company, LLC
   Street Address: 2405 Lucien Way, Suite 200
   City: Maitland State: FL Zip Code: 32751

3. Owner/Authorized Representative Telephone Numbers
   Telephone: (407) 838 - 7122 ext. Fax: (407) 838 - 7151

4. Owner/Authorized Representative E-mail Address: dave.shellhouse@SUG.com

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

Signature on behalf of David Shellhouse Date 11-25-08

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: NA

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
Organization/Firm:
Street Address:
City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official E-mail Address:

6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kevin J. McGlynn
   Registration Number: 50908

2. Professional Engineer Mailing Address.
   Organization/Firm: Trow Engineering consultants, Inc.
   Street Address: 1200 Metropolitan Blvd. Ste. 200
   City: Tallahassee State: FL Zip Code: 32308

3. Professional Engineer Telephone Numbers.
   Telephone: (850) 385 - 5441 ext. 314 Fax: (850) 385 - 5523

4. Professional Engineer E-mail Address: Kevin.mcglynn@trow.com

5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Nov. 18, 2008
Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION
A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 321.323 North (km) 3282.787		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 29/39/51 Longitude (DD/MM/SS) 82/50/46	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4922
7. Facility Comment : Compressor Station No. 24 is an existing natural gas pipeline compressor station with two compressor turbines.			

Facility Contact

1. Facility Contact Name: : Allan Gunter
2. Facility Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 5030 South U.S. Hwy. 129 City: Trenton State: FL Zip Code: 32693
3. Facility Contact Telephone Numbers: Telephone: (850) 350 - 5555 ext. Fax: (850) 350 - 5551
4. Facility Contact E-mail Address: Allan.Gunter@SUG.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: NA
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1.	☐ Small Business Stationary Source	☐ Unknown
2.	☐ Synthetic Non-Title V Source	
3.	☐ Title V Source	
4.	☐ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5.	☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6.	☐ Major Source of Hazardous Air Pollutants (HAPs)	
7.	☐ Synthetic Minor Source of HAPs	
8.	☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9.	☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10.	☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11.	☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	

12. Facility Regulatory Classifications Comment:

Facility will be a Title V major source of Air Pollutants after these modifications.

New gas-fired compressor turbine (No. 2403) is subject to (NSPS) 40 CFR Part 60, Subpart KKKK

New gas-fired reciprocating internal combustion emergency generator engines are subject to (NSPS) 40 CFR 60 Subpart JJJJ.

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NOX	A	N
CO	A	N
VOC	B	N
SO2	B	N
PM	B	N
HAP	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
NA					

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. D* ☐ Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. B* ☐ Previously Submitted, Date: _____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID *Attach. C* ☐ Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☒ Attached, Document ID: *Narr.Fig. 1-1* ☐ Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   ☒ Attached, Document ID: *Narr.Sect 2.0*
3. Rule Applicability Analysis:
   ☒ Attached, Document ID: *Narr.Sect 3.0*
4. List of Exempt Emissions Units:
   ☒ Attached, Document ID: *Attach.H* ☐ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification:
   ☒ Attached, Document ID: *Narr.Sect 2.2.5* ☐ Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   ☐ Attached, Document ID: _____ ☒ Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   ☐ Attached, Document ID: _____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   ☐ Attached, Document ID: _____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID: _____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID: _____ ☒ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units:
   ☐ Attached, Document ID: NA ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID: NA ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID: NA
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID: NA
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID: NA
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID: NA ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID: NA ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms: NA

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)): NA
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)): NA
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☐ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

Attachment B provides a Process Flow Diagram
Attachment C presents Precautions to Prevent Emissions of Unconfined Particulate Matter
Attachment D contains a plot plan.
Attachment E has vendor supplied information.
Attachment F has supporting calculations.
Attachment G contains a fuel analysis
Attachment H contains a list of Exempt Emission Units

EMISSIONS UNIT INFORMATION
Section [1] of [3]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.) NA

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

20,500 bhp (ISO) natural gas fired turbine compressor unit, FGT Engine No. 2403

3. Emissions Unit Identification Number: 004

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	NA	NA	49

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: Solar Model Number: Titan 130 - 20502S

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Fuel will be exclusively natural gas from the FGT's gas pipeline. The proposed engine will incorporate dry, low NO_X combustion technology.

EMISSIONS UNIT INFORMATION
Section [1] of [3]

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description: The proposed engine will incorporate dry, low NO_X combustion technology.
2. Control Device or Method Code: 99

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: NA	
2. Maximum Production Rate: NA	
3. Maximum Heat Input Rate: 157.89 million Btu/hr HHV	
4. Maximum Incineration Rate: pounds/hr NA tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year

6. Operating Capacity/Schedule Comment:

Heat input is 157.89 MM Btu/hr Higher heating value (HHV). This is based on a vendor provided bhp of 19,465 bhp, a specific heat rate of 7,326 Btu/hp-hr, a lower heating value (LHV) of 939.2 Btu/scf and a higher heating value (HHV) of 1040 Btu/scf.

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: 2403	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code: V	6. Stack Height: 55 Feet	7. Exit Diameter: 8.7 feet (De)
8. Exit Temperature: 944 °F	9. Actual Volumetric Flow Rate: 232,782 acfm	10. Water Vapor: NA %
11. Maximum Dry Standard Flow Rate: NA dscfm	12. Nonstack Emission Point Height: NA feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 321.3 North (km): 3282.8	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack has rectangular cross section with dimensions of 7.5 x 8 feet.		

EMISSIONS UNIT INFORMATION
Section [1] of [3]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Natural gas fired turbine engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01	3. SCC Units: million cubic feet burned	
4. Maximum Hourly Rate: 0.1518	5. Maximum Annual Rate: 1329.92	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 1040
10. Segment Comment: None		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			NS
SO2			EL
PM25			NS
NOX	99		EL
CO			NS
PM10			NS
HAPs			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 8.52 lb/hour 37.31 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 8.52 lb/hr Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(8.52 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 37.31 tons/year

11. Potential, Fugitive, and Actual Emissions Comment:

Vendor's data based on ISO conditions with inlet and exhaust losses of 4" of H2O.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 15 ppmvd @ 15% O2	4. Equivalent Allowable Emissions: 8.52 lb/hour 37.31 tons/year
5. Method of Compliance: Initial performance test	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.4320(a) limits NOX emissions to 25 ppmv.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 8.64 lb/hour 37.84 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 8.64 lb/hr Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(8.64 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 37.84 tons/year

11. Potential, Fugitive, and Actual Emissions Comment:

Vendor's data based on ISO conditions with inlet and exhaust losses of 4" of H2O.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.495 lb/hour 2.17 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.495 lb/hr Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.495 lb/hr)(1 ton/2000 lb)(8760hr/1 yr) = 2.17 tons/year

11. Potential, Fugitive, and Actual Emissions Comment:

Vendor's data based on ISO conditions with inlet and exhaust losses of 4" of H2O.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 4.34 lb/hour 19.00 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 10 grain/100 scf Reference: FERC limit	7. Emissions Method Code: 2
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(10 gr S/100 scf)(151,800 scf/hr)(1 lb/7000 gr) = 2.17 lb S/hr
(2.17 lb S/hr)(2 lb SO2/lb S) = 4.34 lb SO2/hr
(4.34 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb) = 19.00 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Vendor's data based on ISO conditions with inlet and exhaust losses of 4" of H2O.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 4.34 lb/hour 19.00 tons/year
5. Method of Compliance: Initial performance test	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60.4330(a)(2) limitsSO2 emissions to 9.06lb/hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1.04 lb/hour 4.56 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.0066 lb/MM Btu Reference: Table 3.1-2a, AP-42 4/00	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.0066 lb/MM Btu)(157.89 MM Btu/hr) = 1.042 lb/hr
(1.042 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 4.56 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Based on vendor's heat input data at ISO conditions with inlet and exhaust losses of 4" of H2O and fuel higher heat value of 1040 Btu/scf

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: HAPS	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.16 lb/hour 0.71 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.001027 lb/MM Btu Reference: AP-42, Table 3.1-2a	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.001027 lb/MM Btu)(157.89 MM Btu/hr) = 0.162 lb/hr
(0.162 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.71 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Based on vendor's heat input data at ISO conditions with inlet and exhaust losses of 4" of H2O and fuel higher heat value of 1040 Btu/scf

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
3. Method of Compliance: Annual testing with Method 9	
4. Visible Emissions Comment: Subject to 62-296-320(4)(b) General Visible Emissions Standards.	

Visible Emissions Limitation: Visible Emissions Limitation __ of ___

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION
Section [1] of [3]

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor NA of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION
Section [1] of [3]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. B* ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. G* ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: NA ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: *Narr. Sec. 3.0* ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☒ Attached, Document ID: *See Note Below* ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: NA
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

Supplemental information is provided in the narrative description accompanying these forms.

Specifications for the engine silencers/stacks have not been completed at this time. Final specifications will comply with USEPA and FDEP regulatory requirements.

EMISSIONS UNIT INFORMATION
Section [2] of [3]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.) NA

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

1. Description of Emissions Unit Addressed in this Section:

454 bhp natural gas fired, spark ignition, 4-stroke, rich-burn, internal combustion emergency generator engine, FGT Engine No. GEN04

3. Emissions Unit Identification Number: 005

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	NA	NA	49

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: Generac Model Number: SG300

10. Generator Nameplate Rating: 0.3 MW

11. Emissions Unit Comment:

Fuel will be exclusively natural gas from the FGT's gas pipeline.

EMISSIONS UNIT INFORMATION
Section [2] of [3]

Emissions Unit Control Equipment/Method: Control NA of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: NA	
2. Maximum Production Rate: NA	
3. Maximum Heat Input Rate: 4.26 million Btu/hr	
4. Maximum Incineration Rate: pounds/hr NA tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	 days/week 100 hours/year
6. Operating Capacity/Schedule Comment: Schedule is based on USEPA defined emergency generator usage of 100 hours per year for maintenance and testing (40 CFR 60.4243(d)). This does not include emergency operation.	

EMISSIONS UNIT INFORMATION
Section [2] of [3]

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: GEN04	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code: V	6. Stack Height: 7.0 Feet	7. Exit Diameter: 0.33 feet
8. Exit Temperature: 1490 °F	9. Actual Volumetric Flow Rate: 4335 acfm	10. Water Vapor: NA %
11. Maximum Dry Standard Flow Rate: NA dscfm	12. Nonstack Emission Point Height: NA feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 321.3 North (km): 3282.8	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

EMISSIONS UNIT INFORMATION
Section [2] of [3]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Natural gas fired 4-stroke, rich-burn engine driving an emergency generator.		
2. Source Classification Code (SCC): 2-02-002-53	3. SCC Units: million cubic feet burned	
4. Maximum Hourly Rate: 0.0041	5. Maximum Annual Rate: 0.41	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 1040
10. Segment Comment: Annual usage based on 100 hours per year operation.		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION
Section [2] of [3]

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			EL
SO_2			NS
PM			NS
NO_X			EL
CO			EL
PM_{10}			NS
HAP			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control: 5.7
3. Potential Emissions: 2.00 lb/hour 1.00 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 2.00 g/hp-hr at 5.7% control Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(2.00 g/hp-hr)(454 bhp)(1 lb/454 g) = 2.00 lb/hr
(2.00 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.10 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year and minimum control efficiency.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 2.00 g/hp-hr.	4. Equivalent Allowable Emissions: 2.00 lb/hour 0.10 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1limits NOX emissions to 2 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control: 96.6
3. Potential Emissions: 4.0 lb/hour 0.40 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 4.0 g/hp-hr at 96.6% control Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(4.00 g/hp-hr)(454 bhp)(1 lb/454 g) = 4.00 lb/hr
(4.00 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.40 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year and minimum control efficiency.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 4.00 g/hp-hr.	4. Equivalent Allowable Emissions: 4.00 lb/hour 0.20 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1limits CO emissions to 4 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control: 0
3. Potential Emissions: 0.29 lb/hour 0.01 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 2.91 g/hp-hr THC Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Assume VOC 10% of THC = 0.29 g/hp-hr
(0.29 g/hp-hr)(454 bhp)(1 lb/453.6 g) = 0.29 lb/hr
(0.29 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.01 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.29 g/hhp-hr.	4. Equivalent Allowable Emissions: 0.29 lb/hour 0.01 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1limits VOC emissions to 1 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.117 lb/hour 0.006 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 10 grains / 100 scf Reference: FERC limit	7. Emissions Method Code: 2
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(10 gr S/100 scf)(4100 scf/hr)(1 lb/7000 gr) = 0.059 lb S/hr
(0.059 lb S/hr)(2 lb SO2/lb S) = 0.117 lb SO2/hr
(0.117 lb SO2/hr)(100 hr/yr)(1 ton/2000 lb) = 0.006 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.083 lb/hour 0.004 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.01941 lb/MM Btu Reference: Table 3.2-3, AP-42 7/00	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.01941 lb/MM Btu)(4.26 MM Btu/hr) = 0.083 lb/hr
(0.083 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.004 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: HAPS	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.10 lb/hour 0.005 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.0234 lb/MM Btu Reference: AP-42, Table 3.2-3	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.0234 lb/MM Btu)(4.26 MM Btu/hr) = 0.10 lb/hr
(0.10 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.005 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [2] of [3]

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation NA of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
2. Method of Compliance:	
3. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation __ of ___

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor NA of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION
Section [2] of [3]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. B* ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. G* ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *See note below* ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: *Narr. Sec. 3.0* ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☒ Attached, Document ID: *See note below* ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: NA
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

Supplemental information is provided in the narrative description accompanying these forms.

The manufacturer has not completed design specifications and has not provided final emission rates at this time. Emissions will comply with applicable 40 CFR Subpart JJJJ requirements.

Specifications for the sampling facilities have not been completed at this time. Final specifications will comply with USEPA and FDEP regulatory requirements.

EMISSIONS UNIT INFORMATION
Section [3] of [3]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.) NA

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

1. Description of Emissions Unit Addressed in this Section:

454 bhp natural gas fired, spark ignition, 4-stroke, rich-burn, internal combustion emergency generator engine, FGT Engine No. GEN05

3. Emissions Unit Identification Number: 006

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	NA	NA	49

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: Generac Model Number: SG300

10. Generator Nameplate Rating: 0.3 MW

11. Emissions Unit Comment:

Fuel will be exclusively natural gas from the FGT's gas pipeline.

EMISSIONS UNIT INFORMATION
Section [3] of [3]

Emissions Unit Control Equipment/Method: Control NA of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control __ of __

1. Control Equipment/Method Description:
2. Control Device or Method Code:

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: NA	
2. Maximum Production Rate: NA	
3. Maximum Heat Input Rate: 4.26 million Btu/hr	
4. Maximum Incineration Rate: pounds/hr NA tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week 100 hours/year

6. Operating Capacity/Schedule Comment:

Schedule is based on USEPA defined emergency generator usage of 100 hours per year for maintenance and testing (40 CFR 60.4243(d)). This does not include emergency operation.

EMISSIONS UNIT INFORMATION
Section [3] of [3]

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: GEN04	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code: V	6. Stack Height: 7.0 Feet	7. Exit Diameter: 0.33 feet
8. Exit Temperature: 1490 °F	9. Actual Volumetric Flow Rate: 4335 acfm	10. Water Vapor: NA %
11. Maximum Dry Standard Flow Rate: NA dscfm	12. Nonstack Emission Point Height: NA feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 321.3 North (km): 3282.8	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

EMISSIONS UNIT INFORMATION
Section [3] of [3]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Natural gas fired 4-stroke, rich-burn engine driving an emergency generator.		
2. Source Classification Code (SCC): 2-02-002-53	3. SCC Units: million cubic feet burned	
4. Maximum Hourly Rate: 0.0041	5. Maximum Annual Rate: 0.41	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 1040
10. Segment Comment: Annual usage based on 100 hours per year operation.		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION
Section [3] of [3]

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			EL
SO_2			NS
PM			NS
NO_X			EL
CO			EL
PM_{10}			NS
HAPs			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control: 5.7
3. Potential Emissions: 2.00 lb/hour 0.20 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 2.00 g/hp-hr at 5.7% control Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(2.00 g/hp-hr)(454 bhp)(1lb/454 g) = 2.00 lb/hr
(2.00 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.10 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year and minimum control efficiency.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 2.0 g/hp-hr.	4. Equivalent Allowable Emissions: 2.00 lb/hour 0.10 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1 limits NOX emissions to 2 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control: 96.6
3. Potential Emissions: 4.00 lb/hour 0.20 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 4.0 g/hp-hr at 96.6% control Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

4.00 g/hp-hr)(454 bhp)(1 lb/454 g) = 4.00 lb/hr
(4.00 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.40 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year and minimum control efficiency.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 4.00 g/hp-hr.	4. Equivalent Allowable Emissions: 4.00 lb/hour 0.20 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1 limits CO emissions to 4 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control: 0
3. Potential Emissions: 0.29 lb/hour 0.01 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 2.91 g/hp-hr THC Reference: Vendor data	7. Emissions Method Code: 5
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

Assume VOC 10% of THC = 0.29 g/hp-hr
(0.29 g/hp-hr)(454 bhp)(1 lb/453.6 g) = 0.29 lb/hr
(0.29 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.01 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.29 g/hhp-hr.	4. Equivalent Allowable Emissions: 0.29 lb/hour 0.01 tons/year
5. Method of Compliance: Monitor hours of operation	
6. Allowable Emissions Comment (Description of Operating Method): 60.4230 Table 1limits VOC emissions to 1 g/hp-hr.	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.117 lb/hour 0.006 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 10 grains / 100 scf Reference: FERC limit	7. Emissions Method Code: 2
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(10 gr S/100 scf)(4100 scf/hr)(1 lb/7000 gr) = 0.059 lb S/hr
(0.059 lb S/hr)(2 lb SO2/lb S) = 0.117 lb SO2/hr
(0.117 lb SO2/hr)(100 hr/yr)(1 ton/2000 lb) = 0.006 ton/yr

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.083 lb/hour 0.004 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.01941 lb/MM Btu Reference: Table 3.2-3, AP-42 7/00	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.01941 lb/MM Btu)(4.26 MM Btu/hr) = 0.083 lb/hr
(0.083 lb/hr)(100 hr/yr)(1 ton/2000 lb) = 0.004 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: HAPS	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.10 lb/hour 0.005 tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.0234 lb/MM Btu Reference: AP-42, Table 3.2-3	7. Emissions Method Code: 3
8.a. Baseline Actual Emissions (if required): NA tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): NA tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:

(0.0234 lb/MM Btu)(4.26 MM Btu/hr) = 0.10 lb/hr
(0.10 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.005 ton/y

11. Potential, Fugitive, and Actual Emissions Comment:

Calculations based on emergency generator usage of 100 hours per year.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [3] of [3]

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation NA of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
2. Method of Compliance:	
3. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation __ of ___

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION
Section [3] of [3]

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor NA of __

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION
Section [3] of [3]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. B* ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *Attach. G* ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: *See note below* ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):
   ☒ Attached, Document ID: *Narr. Sec. 3.0* ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)
   ☒ Attached, Document ID: *See note below* ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements:
   ☐ Attached, Document ID: NA
2. Compliance Assurance Monitoring:
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation:
   ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading):
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

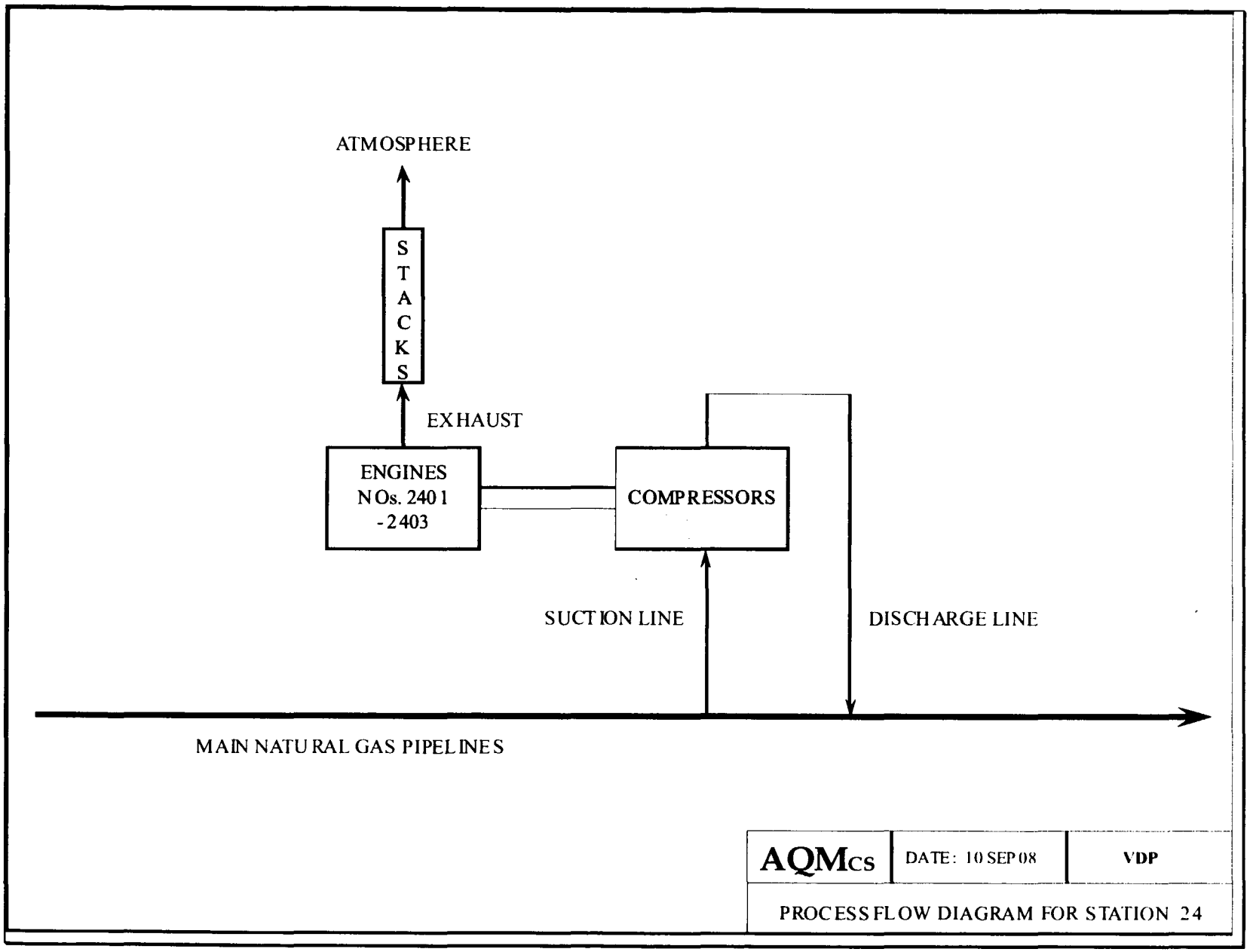
Supplemental information is provided in the narrative description accompanying these forms.

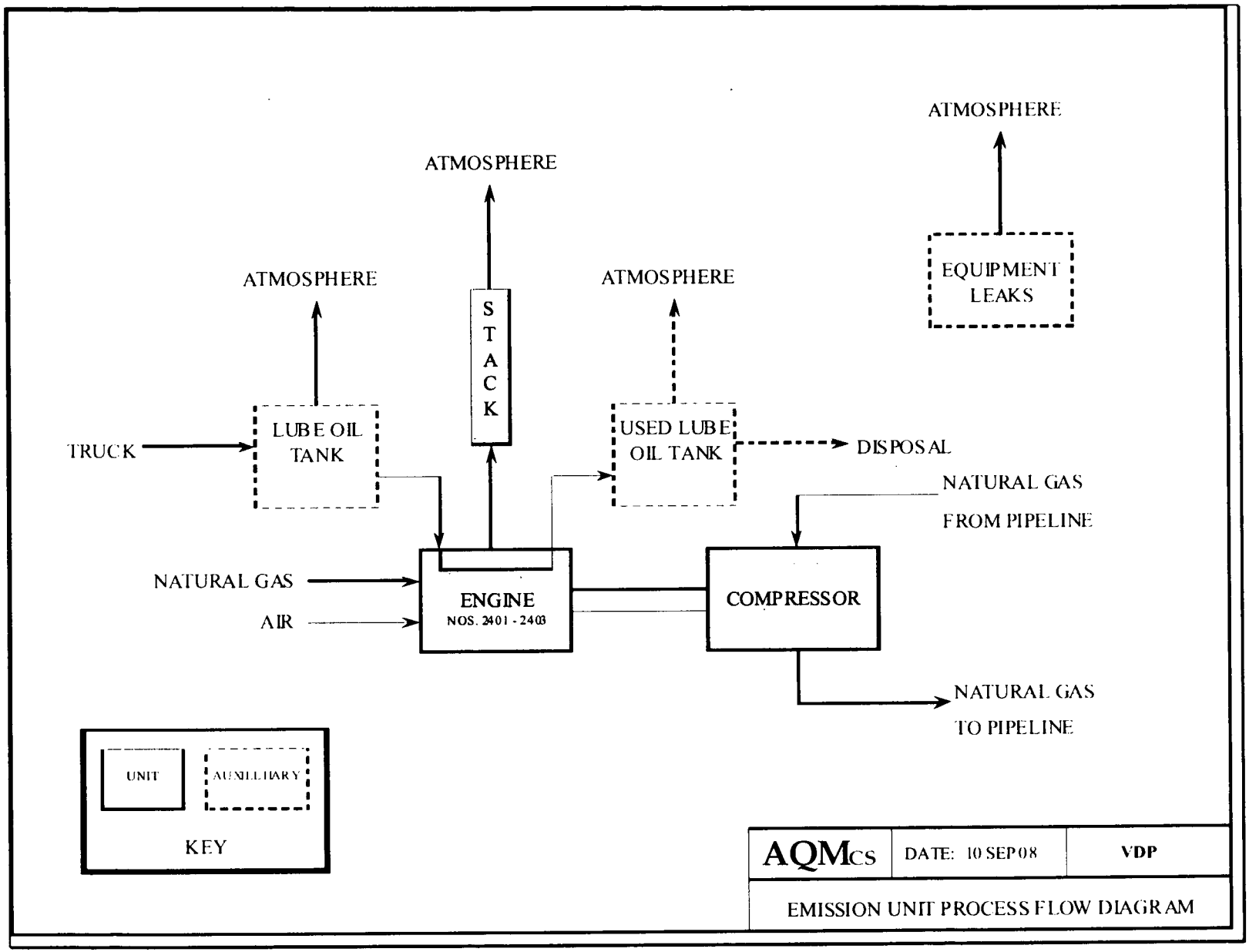
The manufacturer has not completed design specifications and has not provided final emission rates at this time. Emissions will comply with applicable 40 CFR Subpart JJJJ requirements.

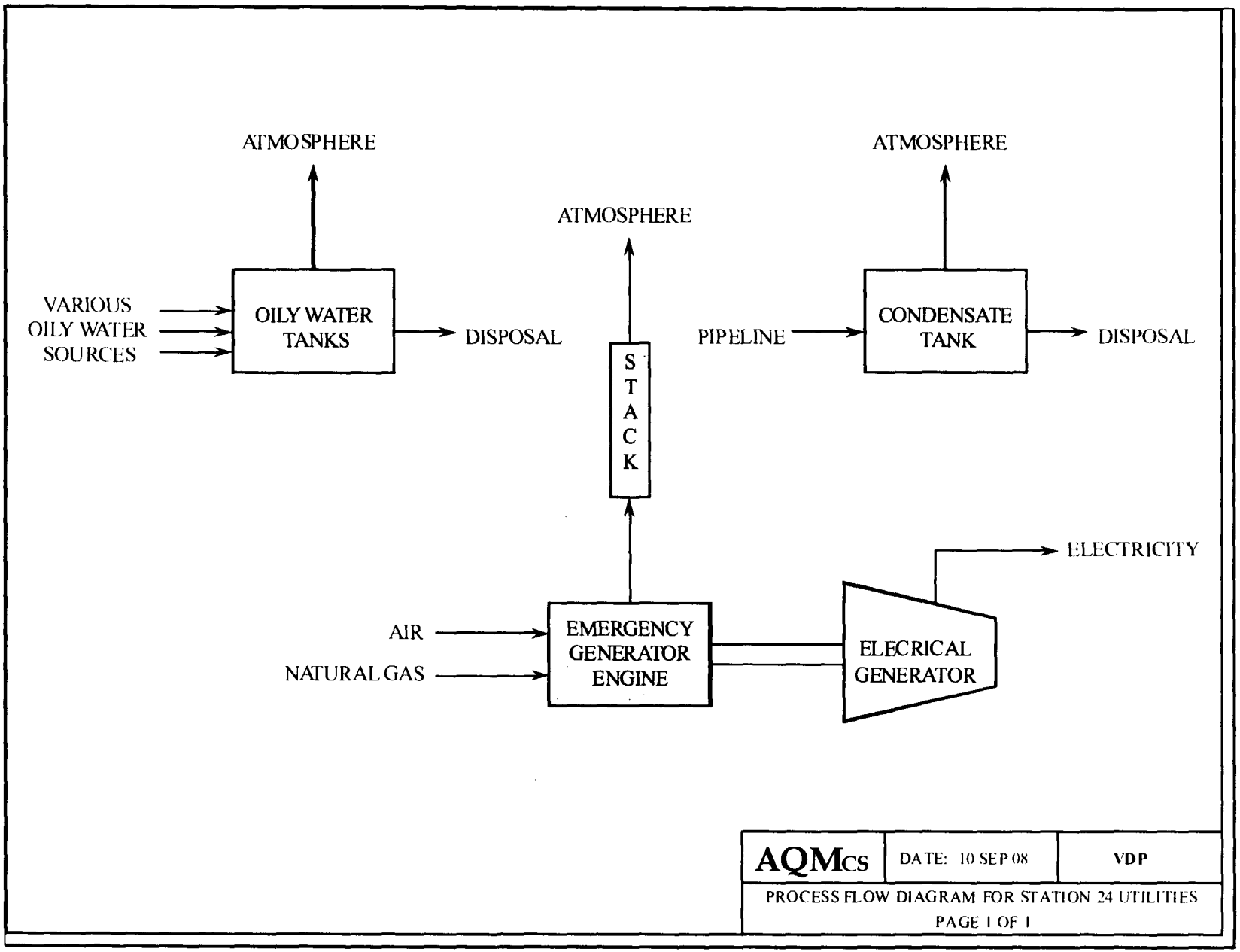
Specifications for the sampling facilities have not been completed at this time. Final specifications will comply with USEPA and FDEP regulatory requirements.

Attachment B

Process Flow Diagram


ATMOSPHERE
STACKS
EXHAUST
ENGINES
NOs. 2401
-2403
COMPRESSORS
SUCTION LINE
DISCHARGE LINE
MAIN NATURAL GAS PIPELINES
AQMcs
DATE: 10 SEP 08
VDP
PROCESS FLOW DIAGRAM FOR STATION 24


ATMOSPHERE
ATMOSPHERE
ATMOSPHERE
ATMOSPHERE
EQUIPMENT LEAKS
STACK
TRUCK
LUBE OIL TANK
USED LUBE OIL TANK
DISPOSAL
NATURAL GAS FROM PIPELINE
NATURAL GAS
AIR
ENGINE
NOS. 2401 - 2403
COMPRESSOR
NATURAL GAS TO PIPELINE
UNIT
AUXILLIARY
KEY
AQMCS
DATE: 10 SEP 08
VDP
EMISSION UNIT PROCESS FLOW DIAGRAM


ATMOSPHERE
ATMOSPHERE
ATMOSPHERE
VARIOUS
OILY WATER
SOURCES
OILY WATER
TANKS
DISPOSAL
STACK
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CONDENSATE
TANK
DISPOSAL
ELECTRICITY
AIR
NATURAL GAS
EMERGENCY
GENERATOR
ENGINE
ELECRICAL
GENERATOR
AQMCS
DATE: 10 SEP 08
VDP
PROCESS FLOW DIAGRAM FOR STATION 24 UTILITIES
PAGE 1 OF 1

Attachment C

Precautions to Prevent Emissions of Unconfined Particulate Matter

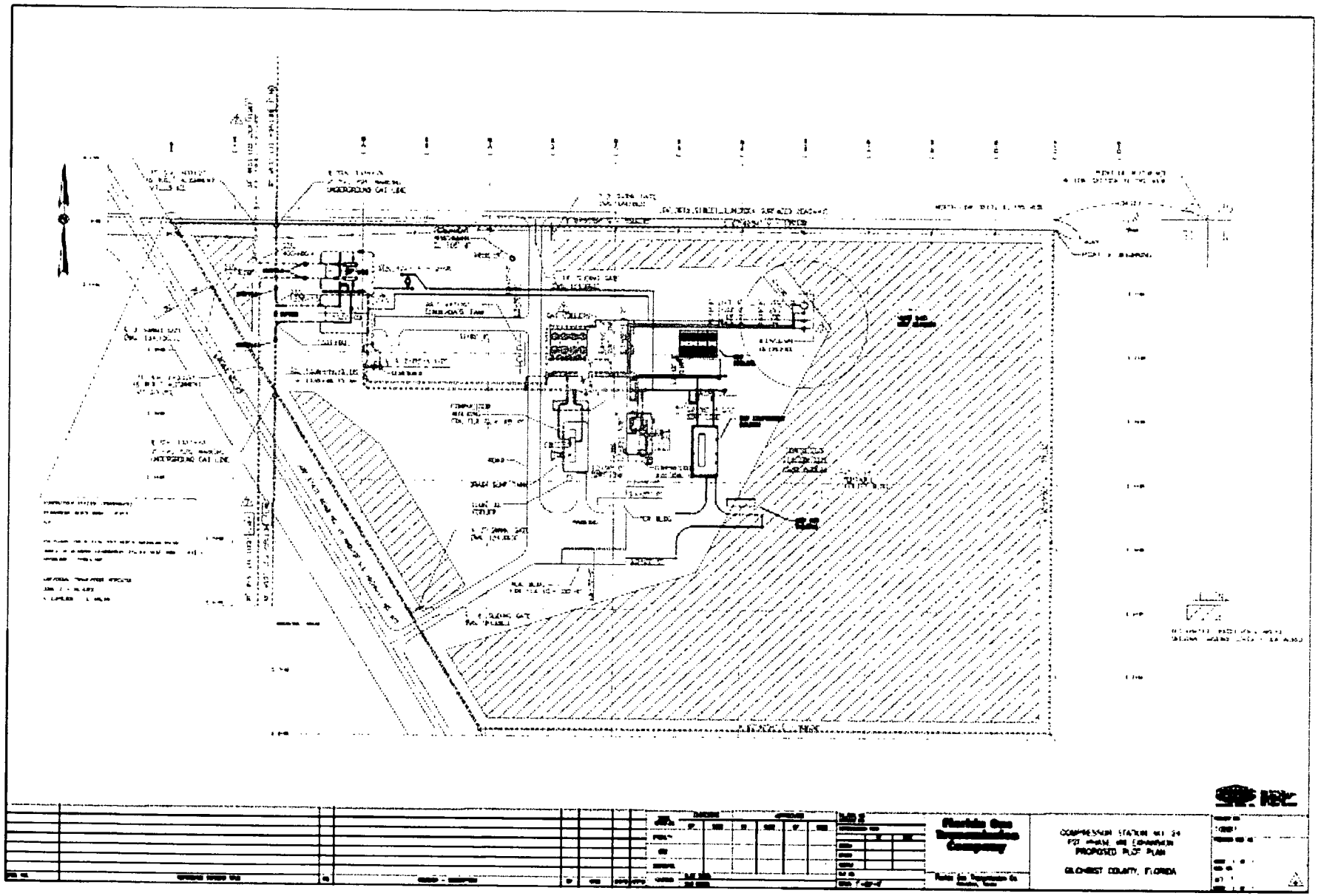
Precautions to Prevent Emissions of Unconfined Particulate Matter

Precautions that will be taken to prevent unconfined emissions of unconfined particulate matter include:

a) Chemical or water application to unpaved roads and unpaved yard areas;
b) Paving and maintenance of roads, parking areas and yards; Landscaping or planting of vegetation;
d) Other techniques, as necessary.

Attachment D

Plot Plan


Florida Gas Transmission Company
COMPRESSION STATION NO. 24
PROPOSED PLOT PLAN
GILCHRIST COUNTY, FLORIDA

Attachment E

Vendor Information

Solar Model Titan T-20500S Turbine

Generac SG300

Solar Model Titan T-20500S Turbine

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer: **FGT**	Engine Model: **TITAN 130-20502S CS/MD 59F MATCH**
Job ID: **HO08-0024**	
Inquiry Number:	Fuel Type: **SD NATURAL GAS** / Water Injection: **NO**
Run By: **James Belmont** / Date Run: **10-Jul-08**	Engine Emissions Data: **REV. 0.0**

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
1 — **19466 Hp 100.0% Load** — **Elev. 0 ft** — **Rel. Humidity 60.0%** — **Temperature 59.0 Deg. F**			
PPMvd at 15% O2	15.00	25.00	25.00
ton/yr	37.31	37.86	21.69
lbm/MMBtu (Fuel LHV)	0.060	0.061	0.035
lbm/(MW-hr)	0.59	0.60	0.34
(gas turbine shaft pwr) lbm/hr	8.52	8.64	4.95

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F, and between 50% and 100% load for gas fuel, and between 65% and 100% load for liquid fuel (except for the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F and between 80% and 100% load.
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
A Caterpillar Company

PREDICTED ENGINE PERFORMANCE

Customer: FGT	Model: TITAN 130-20502S
Job ID: HO08-0024	Package Type: CS/MD
Run By: James Belmont / Date Run: 10-Jul-08	Match: 59F MATCH
Engine Performance Code: REV. 3.40 / Engine Performance Data: REV. 1.0	Fuel System: GAS
	Fuel Type: SD NATURAL GAS

DATA FOR MINIMUM PERFORMANCE

Elevation	feet	0
Inlet Loss	in H20	4.0
Exhaust Loss	in H20	4.0
Engine Inlet Temperature	deg F	59.0
Relative Humidity	%	60.0
Driven Equipment Speed	RPM	8351
Specified Load	HP	FULL
Net Output Power	HP	19465
Fuel Flow	mmBtu/hr	142.59
Heat Rate	Btu/HP-hr	7326
Therm Eff	%	34.732
Engine Exhaust Flow	lbm/hr	393041
Exhaust Temperature	deg F	944

Fuel Gas Composition (Volume Percent)

Methane (CH4)	92.79
Ethane (C2H6)	4.16
Propane (C3H8)	0.84
N-Butane (C4H10)	0.18
N-Pentane (C5H12)	0.04
Hexane (C6H14)	0.04
Carbon Dioxide (CO2)	0.44
Hydrogen Sulfide (H2S)	0.0001
Nitrogen (N2)	1.51

Fuel Gas Properties

LHV (Btu/Scf)	939.2	Specific Gravity	0.5970	Wobbe Index at 60F	1215.6

This performance was calculated with a basic inlet and exhaust system. Special equipment such as low noise silencers, special filters, heat recovery systems or cooling devices will affect engine performance. Performance shown is "Expected" performance at the pressure drops stated, not guaranteed.

Generac SG300

GENERAC®
POWER SYSTEMS, INC.

STATEMENT OF EXHAUST EMISSIONS
NAT GAS FUELED GENERATOR

Generator Type: **SG300** kW_e Rating: **300**

Engine Size: **13.3 Liter** Maximum BHP: **454**

Engine Family: **Generac 13.3 Liter 6 Cylinder**

Aspiration: **Turbocharged-aftercooled**

Speed *(RPM)*: **2350 RPM**

Additional Equipment Description: **Commercial Natural Gas**

Emissions Test **5 mode** Engine Certification: **No Catalyst**

Measured Emissions ***(grams/brake horsepower-hour)*** based on parent engine @ **454** bhp

CO	NOx	HC	THC + NO_2
118.3	2.12	2.91	5.03

- The stated values are actual exhaust emission test measurements obtained from a unit representative of the generator type and engine described above
- Values based on 5-mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA & CARB protocols, which are typically accepted by SCAQMD and other regional authorities.
- Values based on full load testing are provided for reference only due to 5-mode test data being unavailable. Data may be based on testing performed by either the engine supplier or Generac Power Systems.
- No emission values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and must be consulted by the permit applicant/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

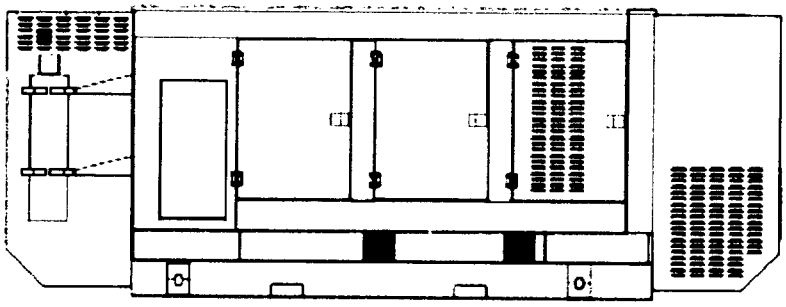
INDUSTRIAL SALES
P.O. BOX 8 • WAUKESHA, WI 53187 • 262-544-4800 • FAX 262-544-4854

SSD. E6297W Rev Date 8-28-06

SG275
SG300

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
275 KW 60 Hz / 275 KVA 50 Hz
300 KW 60 Hz / 300 KVA 50 Hz



Power Matched
GENERAC
13.3GTA ENGINE
Turbocharged/Aftercooled

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.

- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ ELECTRO-MAGNETIC INTERFERENCE
  - ✓ NEMA MG1 EVALUATION
  - ✓ MOTOR STARTING ABILITY
  - ✓ SHORT CIRCUIT TESTING
  - ✓ UL2200 COMPLIANCE AVAILABLE

- **SOLID-STATE, FREQUENCY COMPENSATED DIGITAL VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own a GENERAC POWER SYSTEM.

- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3.0%
TELEPHONE INFLUENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	2
COUPLING	Flexible Disc
LOAD CAPACITY (STANDBY)	100%

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

PERMANENT MAGNET PILOT EXCITER	Eighteen-pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION	H100 Controller Digital ✓
	3 Phase Sensing, ± 1% regulation ✓

GENERATOR FEATURES

- ❑ Revolving field heavy duty generator
- ❑ Directly connected to the engine
- ❑ Operating temperature rise 120 °C above a 40 °C ambient
- ❑ Insulation is Class H rated at 150 °C rise
- ❑ All prototype models have passed three phase short circuit testing
- ❑ PMG

CONTROL PANEL FEATURES

❑ TWO FOUR LINE LCD DISPLAYS READ:

- Voltage (all phases)
- Power factor
- KVAR
- Engine speed
- Run hours
- Fault history
- Coolant temperature
- Low oil pressure shutdown
- Overvoltage
- Low coolant level
- Not in auto position (flashing light)
- ATS selection
- Current (all phases)
- kW
- Transfer switch status
- Low fuel pressure
- Service reminders
- Oil pressure
- Time and date
- High coolant temperature shutdown
- Overspeed
- Low coolant level
- Exercise speed

❑ INTERNAL FUNCTIONS:

- HT function for alternator protection from line to neutral and line to line short circuits
- Emergency stop
- Programmable auto crank function
- 2 wire start for any transfer switch
- Communicates with the Generac HTS transfer switch
- Built-in 7 day exerciser
- Adjustable engine speed at exerciser
- RS232 port for GenLink® control
- RS485 port remote communication
- Canbus addressable
- Governor controller and voltage regulator are built into the master control board
- Temperature range -40 °C to 70 °C

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	13.9GTA
CYLINDERS	6 In-line
DISPLACEMENT	13.9 Liter (811 cu. in.)
BORE	137 mm (5.39 in.)
STROKE	150 mm (5.91 in.)
COMPRESSION RATIO	10.5:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	7
CONNECTING RODS	6-Carbon Steel
CYLINDER HEAD	Cast Iron with Overhead Valve
CYLINDER LINERS	Wet/Replaceable
IGNITION	Altronic CDI
PISTONS	Heat-Resistant Alloy with 4 Rings
CRANKSHAFT	Induction-Hardened, Die-Forged Carbon Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Special Heat Resistant Steel
EXHAUST VALVE MATERIAL	Inconel Alloy High Temp.
HARDENED VALVE SEATS	High Temp. Alloy Stellite Faced

ENGINE GOVERNOR

ELECTRONIC	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	Isochronous
STEADY STATE REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear Driven
OIL FILTER	Full flow, cartridge
CRANKCASE CAPACITY	27 Liters (7.13 gal.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP	Pre-lubed, self-sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	8
DIAMETER OF FAN	39 in.
COOLANT HEATER	240V, 2000 W

FUEL SYSTEM

FUEL	
❑ Natural Gas	Standard
CARBURETOR	Down draft
SECONDARY FUEL REGULATOR	Nat. Gas
AUTOMATIC FUEL LOCKOFF SOLENOID	Standard
OPERATING FUEL PRESSURE SYSTEMS	10" to 15" H_2O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 24 V
STARTER MOTOR	24 V
RECOMMENDED BATTERY	(2) - 12 V, 925 CCA, 31
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

OPERATING DATA	SG275		SG300	
GENERATOR OUTPUT VOLTAGE/KW-60Hz	KW	Rated HP	KW	Rated HP
120/208V, 3-phase, 0.8 pf (NOTE: Consult your Generac dealer for additional voltages.)	275	464	300	1041
120/240V, 3-phase, 0.8 pf	275	827	300	902
277/480V, 3-phase, 0.8 pf	275	413	300	451
600V, 3-phase, 0.8 pf	275	331	300	361
MOTOR STARTING				
Maximum at 35% instantaneous voltage dip	208/240V	480V	208/240V	480V
with standard alternator—60 Hz	800 KVA	1050 KVA	800 KVA	1050 KVA
with optional alternator—60 Hz	1000 KVA	1350 KVA	1000 KVA	1350 KVA
FUEL	N.G.		N.G.	
Fuel consumption—60 Hz—100% Load ft³/hr.				
No Load	906		906	
25%	1557		1671	
50%	2259		2376	
75%	3000		3189	
100%	3792		4100	
COOLING				
Coolant capacity System ltr. (US gal.)	56.8 (15)		56.8 (15)	
Coolant flow/min. 60 Hz US gal.	138		139	
Heat rejection to coolant BTU/hr.	1,046,600		1,048,250	
Inlet air 60 Hz (cfm)	19,200		19,200	
Max. operating air temp. into radiator* °C (°F)	60 (140)		60 (140)	
Max. operating ambient temp.* °C (°F)	50 (122)		50 (122)	
Max. external pressure drop on rad. In. H_2O	0.5		0.5	
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz m³/min. (cfm)	31.1 (1100)		34 (1200)	
EXHAUST				
Exhaust flow at rated output 60 Hz m³/min. (cfm)	112 (3960)		122 (4335)	
Max. recommended back pressure Kpa (Hg)	5.0 (1.5")		5.0 (1.5")	
Exhaust temp. at rated output °F	1470		1490	
Exhaust outlet size (flange)	4" I.D.		4" I.D.	
ENGINE				
Rated RPM 60 Hz	2300		2300	
HP at rated KW 60 Hz	419		454	
Piston speed 60 Hz m/min. (ft./min.)	690 (2265)		690 (2265)	
BMEP 60 Hz	178		193	
DERATION FACTORS				
Temperature				
1.9% for every 10°C above - °C	40		40	
1.1% for every 10°F above - °F	104		104	
Altitude				
0.7% for every 100 m above - m	1220		1067	
2.1% for every 1000 ft. above - ft.	4000		3500	

STANDARD ENGINE & SAFETY FEATURES

SG275/SG300

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Isochronous Governor
- Fuel Lockoff Solenoid
- Secondary Fuel Regulator (N.G.)
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 24 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console (H100)

OPTIONS

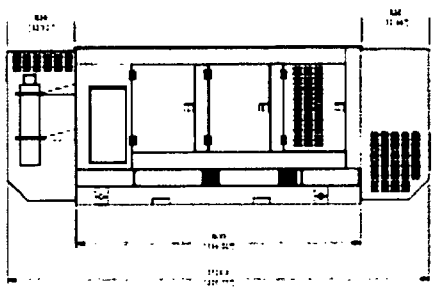
- **OPTIONAL COOLING SYSTEM ACCESSORIES**
  - ○ Radiator Duct Adapter
- **OPTIONAL FUEL ACCESSORIES**
  - ○ Flexible Fuel Lines
- **OPTIONAL EXHAUST ACCESSORIES**
  - ○ Critical Exhaust Silencer
- **OPTIONAL ELECTRICAL ACCESSORIES**
  - ○ Battery, (2) - 12 Volt, 135 A.H., 4DLT
  - ○ Battery, (2) - 12 Volt, 225 A.H., 8D
  - ○ Battery Heater
  - ○ 2A Battery Charger
  - ○ 10A Dual Rate Battery Charger
- **OPTIONAL ALTERNATOR ACCESSORIES**
  - ○ Alternator Strip Heater
  - ○ Alternator Tropicalization
  - ○ Main Line Circuit Breaker
- **CONTROL CONSOLE OPTIONS**
  - ○ Digital Controller H100 see specification *0172110SBY*
- **ADDITIONAL OPTIONAL EQUIPMENT**
  - ○ Automatic Transfer Switch (GTS or HTS)
  - ○ 20 Light Remote Annunciator
  - ○ Remote Relay Panels
  - ○ Unit Vibration Isolators
  - ○ Oil Make-Up System
  - ○ Oil Heater
  - ○ 5 Year Warranties
  - ○ Export Boxing
  - ○ GenLink® Communications Software
- **OPTIONAL ENCLOSURES**
  - ○ Weather Protective
  - ○ Sound Attenuated
  - ○ Aluminum and Stainless Steel
  - ○ Enclosed Muffler

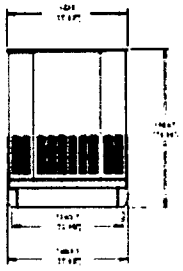
Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

Sound Attenuated Enclosure

Note: Muffler shown is inside enclosure





Reference Install Drawing:
0F9963STD
0F9964SAE

mm [in]

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262/544-4811 • FAX 262/544-4851

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Attachment F

Emission Calculations

Compressor Station No. 24
Engine No. 2403 EPN: 004

NOx Emissions: (Based on Vendor Data)

lb NOx/hr = 8.52

tons NOx/yr = (lb NOx/hr)(2000 lb/1 ton)(8760 hr/1 yr)
= (8.52 lb/hr)(2000 lb/1 ton)(8760 hr/yr)
= 37.318

CO Emissions: (Based on Vendor Data)

lb CO/hr = 8.64

tons CO/yr = (lb CO/hr)(2000 lb/1 ton)(8760 hr/1 yr)
= (8.64 lb/hr)(2000 lb/1 ton)(8760 hr/yr)
= 37.843

VOC Emissions: (Based on Vendor Data)

lb UHC/hr = 4.950
lb VOC/yr = (0.495 UHC lb/hr) * (VOC fraction of 0.1)
= 0.495

tons VOC/yr = (lb VOC/hr)(2000 lb/1 ton)(8760 hr/1 yr)
= (0.50 lb/hr)(2000 lb/1 ton)(8760 hr/yr)
= 2.168

SO2 Emissions: (Based on FERC Limits)

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)
= (10 gr S/100 scf)(0.1518 MMscf/hr)(1 lb/7000 gr)
= 2.169

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)
= (2.17 lb S/hr)(2 lb SO2/lb S)
= 4.338

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)
= (4.34 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb)
= 18.999

PM 10/2.5 Emissions: (Based on AP-42 Table 3.1-2a, 4/00)

lb PM/hr = (lb PM/MMBtu)(MMBtu/hr)
= (0.0066 lb/MMBtu)(157.89 MMBtu/hr)
= 1.042

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
= (1.04 lb PM/hr)(8760 hr/yr)(1 ton/2000 lb)
= 4.564

HAPs Emissions: (Based on AP-42 Table 3.1-3, 4/00)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
= (0.00102700 lb/MMBtu)(157.890 MMBtu/hr)
= 0.162

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)
= (0.162 lb HAP/hr)(8760 hr/yr)(1 ton/2000 lb)
= 0.710

Emergency Gen. Nos. 4 & 5 EPNs:

NOx Emissions: (Based on Vendor Data)

lb NOx/hr = (g/bhp-hr)(bhp)(1 lb/453.59 g)

= (2.12 g/bhp-hr)(454 bhp)(1 lb/453.59 g)

= 2.12

Control Effic. = 5.7%

Controlled NOx lb/hr = 2.00

tons NOx/yr = (lb NOx/hr)(hr/yr)(1 ton/2000 lb)

= (2.12 lb NOx/hr)(100 hr/yr)(1 ton/2000 lb)

= 0.1060

Control Effic. = 5.7%

Controlled NOx tpy = 0.10

CO Emissions: (Based on Vendor Data)

lb CO/hr = (g/bhp-hr)(bhp)(1 lb/453.59 g)

= (118.3 g/bhp-hr)(454 bhp)(1 lb/453.59 g)

= 118.404

Control Effic. = 96.6%

Controlled CO lb/hr = 4.03

tons CO/yr = (lb CO/hr)(hr/yr)(1 ton/2000 lb)

= (118.40 lb CO/hr)(100 hr/yr)(1 ton/2000 lb)

= 5.92

Control Effic. = 96.6%

Controlled CO tpy = 0.20

VOC Emissions: (Based on Vendor Data)

lb VOC/hr = (g/bhp-hr)(bhp)(1 lb/453.59 g)

= (0.29 g/bhp-hr)(454 bhp)(1 lb/453.59 g)

= 0.290

Control Effic. = 0%

Controlled VOC lb/hr = 0.290

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)

= (0.29 lb VOC/hr)(100 hr/yr)(1 ton/2000 lb)

= 0.0145

Control Effic. = 0%

Controlled CO tpy = 0.0145

SO2 Emissions: (Based on FERC Limits)

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)
(10 gr S/100 scf)(0.0041 MMscf/hr)(1 lb/7000
= gr)

= 0.059

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)

= (0.06 lb S/hr)(2 lb SO2/lb S)

= 0.117

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)

= (0.117 lb SO2/hr)(100 hr/yr)(1 ton/2000 lb)

= 0.006

PM Emissions: (Based on AP-42 Table 3.2-3, 7/00)

lb PM/hr = (lb PM/MMBtu)(MMBtu/hr)

= (0.01941 MMBtu/hr)(4.26 MMBtu/hr)

= 0.083

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)

= (0.083 lb PM/hr)(100 hr/yr)(1 ton/2000 lb)

= 0.0041

HAPs Emissions: (Based on AP-42 Table 3.2-3, 7/00)

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)

= (0.0234 lb/MMBtu)(4.26 MMBtu/hr)

= 0.0997

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)

= (0.10 lb HAP/hr)(100 hr/yr)(1 ton/2000 lb)

= 0.005

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	FGT CS 24 Oily Water
City:	Trenton
State:	Florida
Company:	Florida Gas Transmission
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	6.00
Diameter (ft):	4.00
Liquid Height (ft) :	6.00
Avg. Liquid Height (ft):	3.00
Volume (gallons):	564.02
Turnovers:	0.89
Net Throughput(gal/yr):	500.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Gainesville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

FGT CS 24 Oily Water - Vertical Fixed Roof Tank
Trenton, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations

Lube Oil	All	70.52	64.81	76.23	68.60	0.0001	0.0000	0.0001	190.0000	190.00	Option 1 VP70 = .00006 VP80 = .00009

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

FGT CS 24 Oily Water - Vertical Fixed Roof Tank
Trenton, Florida

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Lube Oil	0.00	0.00	0.00

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	FGT CS 24 Condensate	
City:	Trenton	
State:	Florida	
Company:	Florida Gas Transmission	
Type of Tank:	Vertical Fixed Roof Tank	
Description:		
Tank Dimensions		
Shell Height (ft):		12.00
Diameter (ft):		8.00
Liquid Height (ft) :		12.00
Avg. Liquid Height (ft):		6.00
Volume (gallons):		4,512.16
Turnovers:		0.11
Net Throughput(gal/yr):		500.00
Is Tank Heated (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) (Cone Roof)		0.06
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig)		0.03

Meterological Data used in Emissions Calculations: Gainesville, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

FGT CS 24 Condensate - Vertical Fixed Roof Tank
Trenton, Florida

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Pipeline Condensate	All	70.52	64.81	76.23	68.60	0.6513	0.5658	0.7473	53.0000			53.00	Option 4: RVP=1.4

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

FGT CS 24 Condensate - Vertical Fixed Roof Tank
Lecanto, Florida

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Pipeline Condensate	0.31	28.92	29.23

Attachment G

Fuel Analysis

FTWSCB1.ener

East System Chromatographs

01-Aug-2008 14:05:09

n-Hexanes +	0.0698	0.0706	0.0627	0.0199	0.0058	0.0638	0.0013	0.0453
Nitrogen	0.5661	0.5581	0.5374	0.4067	0.0616	0.5267	0.0184	0.4515
Methane	95.5536	95.5834	95.5528	95.9043	96.5431	95.6856	96.6087	95.6529
Carbon Dioxide	0.9859	0.9896	0.9931	0.7936	0.1266	1.0224	0.0153	0.7481
Ethane	2.2210	2.2010	2.2452	2.3074	2.6850	2.1642	2.7702	2.4459
Propane	0.3579	0.3530	0.3637	0.3569	0.4396	0.3325	0.4590	0.4177
Iso Butane	0.0806	0.0796	0.0814	0.0710	0.0704	0.0728	0.0702	0.0854
n-Butane	0.0944	0.0933	0.0947	0.0716	0.0563	0.0757	0.0515	0.0923
Iso-Pentane	0.0406	0.0411	0.0395	0.0270	0.0076	0.0333	0.0039	0.0356
n-Pentane	0.0301	0.0304	0.0295	0.0187	0.0038	0.0229	0.0016	0.0253
Un-normalized Totals	100.03		99.91	99.78	100.08		99.85	99.40
Specific Gravity	0.5869	0.5873	0.5868	0.5831	0.5759		0.5750	0.5850
BTU / cu ft	1030.2		1030.4	1031.8	1043.2		1045.2	1035.1
	CR15		BRO1	CR16	CRJX	GLAB	CRBB	CR21

Dew Point and H2S | Recall | West Chromatographs | East On Line Chromatographs

Attachment H

List of Exempt Emissions Units

List of Exempt Emissions Units

1. 500 gallon Oily Water Storage Tank, vertical, 4' x 6'

2. Fugitive emissions from component leaks