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November 26, 2008

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RECEIVED

NOV 26 2008

BUREAU OF AIR REGULATION

Reference: Facility: 0390029
Compressor Station No. 14, Gadsden County

Project No. : 0390029-011-A2

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. 14 located in Gadsden County. The facility is a major source under New Source Review definitions, but the proposed modifications will have a NO_x emission increase of less than 40 tpy. Therefore, a state only construction permit is required. FGT is also installing two new emergency generators at the above referenced facility.

Enclosed is an Application with supporting documentation for an Air Construction Permit for the proposed modifications. FGT understands that no processing fee is required since this facility is operated under a Part 70 Permit.

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. 14



Application for Air Permit to Construct

**Florida Gas Transmission Company, LLC
Phase VIII Expansion Project
Quincy Compressor Station No. 14
Quincy, Gadsden County, Florida
Facility No. 0390029**

November 2008

AQMcs

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1.0 INTRODUCTION

Florida Gas Transmission Company (FGT) is proposing to expand its existing natural gas pipeline facility near Munson, in Gadsden County, Florida (Compressor Station No. 14). 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. 14 is located in Gadsden County, Florida, south of Quincy on Highway 65 S, approximately 11 miles south of Quincy. Figure 1-1 shows the location of the existing compressor station.

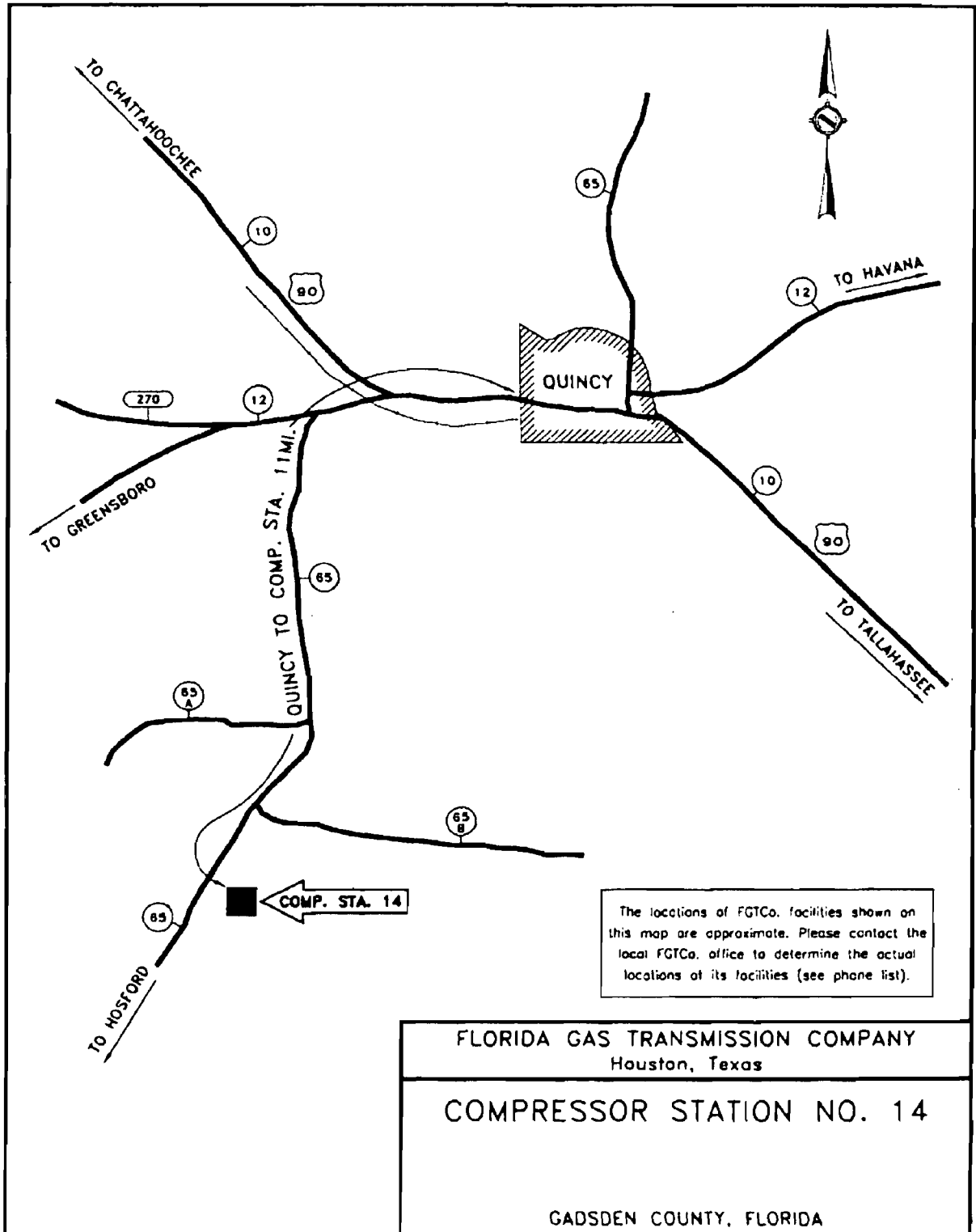
The proposed expansion consists of the installation of a 20,500 bhp natural gas-fired turbine. The turbine will be a Solar Titan 130-20502S unit and will be used solely for transporting natural gas by pipeline for distribution to markets in Florida.

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. 14, 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 process flow diagrams, Attachment C contains Precautions to Prevent Emissions of Unconfined Particulate Matter and Attachment D provides a plot plan of the facility. Attachment E contains vendor information, Attachment F contains emission calculations, Attachment G provides a recent fuel analysis and Attachment H contains an Exempt Unit list.

Figure 1-1 Location Map



2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 14, 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. 14 consists of five 2,000 bhp and one 2,700 bhp natural-gas-fired reciprocating internal combustion (IC) engines, and one 13,000 bhp (ISO) and one 15,700 bhp (ISO) natural gas-fired turbines. Table 2-1 summarizes engine manufacturer, model, and the date of installation for each of the existing engines. The original installation was made in 1958 (Compressor Engines 1401 through 1403). Engine 1404 was installed in 1966 and engine 1405 was installed in 1968. Reciprocating engine 1404 was later modified to reduce emissions in 2002. Compressor Engine 1406 was constructed in 1991 and was subject to PSD review. Compressor Engine 1407 was installed in 2001 and Compressor Engine 1408 was installed in 2002.

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. 14, as part of the Phase VIII Expansion Project. This will involve adding a new gas-fired turbine (Compressor Engine 1409). 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 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)
1401	1958	Reciprocating	Worthington	SEHG-8	2,000
1402	1958	Reciprocating	Worthington	LS-8-SG	2,000
1403	1958	Reciprocating	Worthington	LS-8-SG	2,000
1404	1966	Reciprocating	Worthington	LS-8-SG	2,000
1405	1968	Reciprocating	Worthington	LS-8-SG	2,000
1406	1991	Reciprocating	Cooper-Bessemer	GMVR-12C2	2,700
1407	2001	Turbine	Solar	Mars 90 T-13000S	13,000
1408	2002	Turbine	Nuovo Pignone	PGT-10B	15,700

2.2.1 New Compressor Turbine

FGT proposes to install one new natural gas-fired turbine engine compressor unit at Compressor Station No. 14. 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 (1409) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	1409
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
<p>NOTE:</p> <p>acfm = actual cubic feet per minute.</p> <p>bhp = brake horsepower.</p> <p>Btu/hp-hr = British thermal units per brake horsepower per hour.</p> <p>°F = degrees Fahrenheit.</p> <p>ft = feet.</p> <p>ft/sec = feet per second.</p> <p>MMscf/hr = million standard cubic feet per hour.</p> <p>rpm = revolutions per minute.</p> <p>^a Based on vendor provided lower heat rate value (LHV) of 7,326 Btu/hp-hr, a lower heating value of 939.2 Btu/scf and</p> <p>^b Based on natural gas with a HHV of 1040 British thermal units per standard cubic foot (Btu/scf).</p> <p>^c While producing 19,465 bhp at ISO conditions and with gas having HHV of 1040 Btu/scf</p>	

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 SO₂ 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 (1409) 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 ^{a,b} Compounds	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 H₂O.

^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 building
- A control building

The locations of the structures are shown on the facility plot plan contained in Attachment D. The compressor building, housing the new turbine, has approximate dimensions of 52 feet wide by 80 feet long by 26 feet high. 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. 14. 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. 14 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 Type Manufacturer Model Unit Size Heat Input Fuel Consumption ^a Speed	Gen 04/Gen 05 Natural Gas, Rich Burn Reciprocating Generac SG300 454 bhp 4.26 MM Btu/hr 0.00410 MMscf/h 2300 rpm
Stack Parameters Stack Height Stack Diameter Exhaust Gas Flow Exhaust Gas Flow Exhaust Temperature Exhaust Gas Velocity	20 ft 0.67 ft 5,300 lb/hr 2,911 acfm 1490 °F 138.85 ft/sec
<p>NOTE:</p> acfm = actual cubic feet 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	
<p>^a Based on heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).</p>	

Table 2-5 Emissions from Each Proposed Generator Engine

Pollutant	Uncontrolled			Controlled			Reference
	Emission Factor	lb/hr ^a	TPY ^{a,b}	Emission Factor	lb/hr ^a	TPY ^{a,b}	
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	0.40	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.

Table 2-6 New Storage Tanks for Compressor Station No. 14

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	Emissions *	NM/NE	Emissions
		Count	Factor (ton/yr)	Fraction	(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							
1401	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1402	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1403	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1404	2,000 bhp recip engine	177.8	15.3	1.8	2.2	0.9	5.2
1405	2,000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1406	2,700 bhp Recip. Engine	46.4	48.7	11.5	2.0	4.6	7.6
1407	13,000 bhp Turbine Engine	44.7	54.3	1.8	13.6	3.3	0.5
1408	15,700 bhp Turbine engine	61.8	38.0	6.6	16.2	3.9	0.6
GEN03	637 bhp Recip. Engine	0.7	0.6	0.2	0.0	0.0	0.0
	Other Sources: ^c	0.0	0.0	3.9	0.0	0.0	0.0
EXISTING ANNUAL POTENTIAL TOTALS:		1403.8	240.9	57.4	41.2	15.5	32.7

PROPOSED MODIFIED FACILITY							
1401	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1402	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1403	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1404	2,000 bhp recip engine	177.8	15.3	1.8	2.2	0.9	5.2
1405	2000 bhp Recip. Engine	268.1	21.0	7.9	1.8	0.7	4.7
1406	2700 bhp Recip. Engine	46.4	48.7	11.5	2.0	4.6	7.6
1407	13,000 bhp Turbine Engine	44.7	54.3	1.8	13.6	3.3	0.5
1408	15,700 bhp Turbine engine	61.8	38.0	6.6	16.2	3.9	0.6
1409	20,500 hp Turbine Engine – New	37.3	37.9	2.2	19.0	4.6	0.7
GEN03	637 bhp Recip. Engine	0.7	0.6	0.2	0.0	0.0	0.0
GEN04	454 bhp Recip. Engine - New	0.1	0.2	0.0	0.0	0.0	0.0
GEN05	454 bhp Recip. Engine - New	0.1	0.2	0.0	0.0	0.0	0.0
	Other Sources: ^b	0.0	0.0	4.1	0.0	0.0	0.0
PROPOSED ANNUAL POTENTIAL TOTALS:		1441.3	279.2	59.8	60.2	20.1	33.4

NET CHANGES IN POTENTIAL EMISSIONS:		37.5	38.3	2.4	19	4.6	0.7
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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. 14.

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. 14.

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. Gadsden County is 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 ($\mu\text{g}/\text{m}^3$)

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 Gadsden 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. 14 is not one of the 28 named source categories, but does emit >250 TPY of at least one regulated pollutant, it is considered a major source. However, the increase in emissions resulting from the proposed actions will not exceed the PSD significant rates; therefore, the compressor station is not subject to PSD pre-construction review as shown in Table 3.4.

Table 3-3 PSD Applicability

Regulated Pollutant:	NO_x	CO
Significance level as defined in 40 CFR 52.21(b)(23)	40	100
Total Emissions Change from Table 2-8 (tpy)	37.5	38.3
Is PSD review applicable?	No	No

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. 14 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. 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.

40 CFR 60 Subpart KKKK

The new turbine to be installed at Compressor Station No. 14 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 SO₂ 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% O₂. SO₂ emissions are limited to 0.060 lb SO₂/MMBtu heat input. For this turbine the limit will be 9.47 lb/hr.

Table 3-5 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 SO₂ 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 NOX, CO and VOC established in Table 1 of Subpart JJJJ. The proposed generator engines will comply with the applicable standards. FGT will also be required to comply with all recordkeeping and monitoring requirements of this regulation.

Table 3-6 summarizes the NSPS applicability for the proposed gas-fired emergency generator engines.

Table 3-4 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 3-5 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	1.80
60.4230 Table 1	Gas	CO	100 hp and higher	4.0	3.55
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 14 is a major source of HAPS and is, therefore, subject to any applicable NESHAPS. The new gas turbine is potentially subject to the MACT regulation at 40 CFR 63 Subpart YYYY - National Emission Standard for Hazardous Air Pollutants: Stationary Combustion Turbines. Turbines classified as lean pre-mix or diffusion flame gas-fired combustion turbines are exempt from this standard. The new turbines proposed for this project are classified as lean pre-mix turbines and are not subject to the requirements of 40 CFR 63 Subpart YYYY.

Additionally, the new emergency generator engines are subject to 40 CFR 63 Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants: Reciprocating Internal Combustion

Engines. Engines in compliance with the New Source Performance Standards at 40 CFR Subpart 60 Subpart JJJJ are considered to be in compliance with 40 CFR 63 Subpart ZZZZ. Since the proposed new emergency generator engines will meet the standards of 40 CFR 60 Subpart JJJJ, they will also comply with the requirements of 40 CFR 63 subpart ZZZZ.

The only other NESHAPS that is potentially applicable to this compressor station is 40 CFR 63 Subpart HHH. Compressor Station No. 14 has no affected sources as defined by 40 CFR 63 Subpart HHH and is, therefore, not subject to this subpart.

3.2 Florida state air Quality Regulations

Compressor Station No. 14 is currently operating under Permit No. 0390029-010-AV 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. 14 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.

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

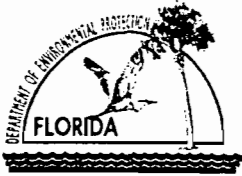
FGT is prohibited from allowing the new compressor engine to discharge into the atmosphere the emissions of air pollutants, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). The new engines will not violate this standard.

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

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

NOV 26 2008

BUREAU OF AIR REGULATION

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. 14	
3. Facility Identification Number: 0390029	
4. Facility Location... Street Address or Other Locator: Rt. 3 Box 3390, 3690 Hosford Highway, Highway 65 S City: Quincy County: Gadsden Zip Code: 32351-9803	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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): 0390029-011-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

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>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.</i>  Signature <u>on behalf of David Shellhouse</u>  Date

APPLICATION INFORMATION

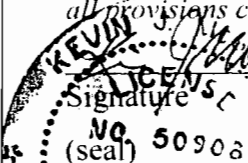
Application Responsible Official Certification

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): <input type="checkbox"/> 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. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> 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>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.</i> _____ 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>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , 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.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , 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 <input type="checkbox"/> , 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.</i> <i>(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 <input type="checkbox"/> , 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.</i> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  <p>Signature _____ (seal) No. 50908</p> </div> <div style="text-align: right;"> <p><u>Nov. 18, 2008</u> Date</p> </div> </div>

* Attach any exception to certification statement.

II. FACILITY INFORMATION
A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 16 East (km) 719.97 North (km) 3377.39		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 30/30/38 Longitude (DD/MM/SS) 84/42/28	
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. 14 is an existing natural gas pipeline compressor station with six reciprocating compressor engines and two compressor turbines.			

Facility Contact

1. Facility Contact Name: Dustin Bradley
2. Facility Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 3690 Hosford Highway City: Quincy State: FL Zip Code: 32351-9803
3. Facility Contact Telephone Numbers: Telephone: (850) 350 - 5303 ext. Fax: (850) 350 - 5301
4. Facility Contact E-mail Address: Dustin.Bradley@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.	<input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2.	<input type="checkbox"/> Synthetic Non-Title V Source	
3.	<input checked="" type="checkbox"/> Title V Source	
4.	<input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5.	<input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6.	<input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7.	<input type="checkbox"/> Synthetic Minor Source of HAPs	
8.	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9.	<input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10.	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11.	<input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12.	Facility Regulatory Classifications Comment: New gas-fired compressor turbine (No. 1409) 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 and (NESHAP) 40 CFR 63 Subpart ZZZZ.	

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
HAPs	A	N

FACILITY INFORMATION

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) <input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. D</u> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. B</u> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID <u>Attach. C</u> <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

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

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

- | |
|---|
| 1. List of Exempt Emissions Units:
<input type="checkbox"/> Attached, Document ID: <u>NA</u> <input type="checkbox"/> 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)
<input type="checkbox"/> Attached, Document ID: <u>NA</u> <input type="checkbox"/> 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)
<input type="checkbox"/> Attached, Document ID: <u>NA</u>
<input type="checkbox"/> Not Applicable (revision application with no change in applicable requirements) |
| 3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
<input type="checkbox"/> Attached, Document ID: <u>NA</u>

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)
<input type="checkbox"/> Attached, Document ID: <u>NA</u>
<input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed
<input type="checkbox"/> Not Applicable |
| 5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
<input type="checkbox"/> Attached, Document ID: <u>NA</u> <input type="checkbox"/> Not Applicable |
| 6. Requested Changes to Current Title V Air Operation Permit:
<input type="checkbox"/> Attached, Document ID: <u>NA</u> <input type="checkbox"/> Not Applicable |

FACILITY INFORMATION

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. 1409

3. Emissions Unit Identification Number: 011

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

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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:

EMISSIONS UNIT INFORMATION

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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 151.82 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.

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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: 1409		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 16 East (km) 719.97 North (km) 3377.39			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.					

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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: 		

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 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):	

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**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 37.86 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(8.64 \text{ lb/hr})(1 \text{ ton}/2000 \text{ lb})(8760 \text{ hr}/1 \text{ yr}) = 37.84 \text{ tons/year}$			
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):	

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.495 \text{ lb/hr})(1 \text{ ton}/2000 \text{ lb})(8760\text{hr}/1 \text{ yr}) = 2.17 \text{ tons/year}$			
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):	

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(10 \text{ gr S}/100 \text{ scf})(151.800 \text{ scf/hr})(1 \text{ lb}/7000 \text{ gr}) = 2.17 \text{ lb S/hr}$ $(2.17 \text{ lb S/hr})(2 \text{ lb SO}_2/\text{lb S}) = 4.34 \text{ lb SO}_2/\text{hr}$ $(4.34 \text{ lb SO}_2/\text{hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 19.00 \text{ ton/yr}$			
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) limits SO ₂ 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):	

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.0066 \text{ lb/MM Btu})(157.89 \text{ MM Btu/hr}) = 1.042 \text{ lb/hr}$ $(1.042 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 4.56 \text{ ton/y}$			
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):	

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.001027 \text{ lb/MM Btu})(157.89 \text{ MM Btu/hr}) = 0.162 \text{ lb/hr}$ $(0.162 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.71 \text{ ton/y}$			
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			

EMISSIONS UNIT INFORMATIONSection **[1]** of **[3]****POLLUTANT DETAIL INFORMATION**Page **[6]** of **[6]****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

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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: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> 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: <input type="checkbox"/> Rule <input type="checkbox"/> 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

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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:	<input type="checkbox"/> Rule <input type="checkbox"/> 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:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

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I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>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)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. B</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. G</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: <u>NA</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input checked="" type="checkbox"/> Not Applicable (construction application)</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records:</p> <p><input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>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.</p>
<p>7. Other Information Required by Rule or Statute:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

EMISSIONS UNIT INFORMATION

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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)): <input checked="" type="checkbox"/> Attached, Document ID: <i>Narr. Sec. 3.0</i> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input checked="" type="checkbox"/> Attached, Document ID: <i>See Note Below</i> <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: NA _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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

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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: 012

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

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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:

EMISSIONS UNIT INFORMATION

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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: GEN05		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: 16 East (km): 719.97 North (km): 3377.39			14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)		
15. Emission Point Comment:					

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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: 		

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(2.00 \text{ g/hp-hr})(454 \text{ bhp})(1 \text{ lb}/454 \text{ g}) = 2.00 \text{ lb/hr}$ $(2.00 \text{ lb/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.10 \text{ ton/yr}$			
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):	

**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: 4.0 g/hp-hr.	4. Equivalent Allowable Emissions: 4.0 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 I 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):	

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**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 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 and minimum control efficiency.			

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**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/hp-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 1 limits 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):	

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(10 \text{ gr S}/100 \text{ scf})(4100 \text{ scf/hr})(1 \text{ lb}/7000 \text{ gr}) = 0.059 \text{ lb S/hr}$ $(0.059 \text{ lb S/hr})(2 \text{ lb SO}_2/\text{lb S}) = 0.117 \text{ lb SO}_2/\text{hr}$ $(0.117 \text{ lb SO}_2/\text{hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.006 \text{ ton/yr}$			
11. Potential, Fugitive, and Actual Emissions Comment: Calculations based on emergency generator usage of 100 hours per year.			

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.01941 \text{ lb/MM Btu})(4.26 \text{ MM Btu/hr}) = 0.083 \text{ lb/hr}$ $(0.083 \text{ lb/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.004 \text{ ton/y}$			
11. Potential, Fugitive, and Actual Emissions Comment: Calculations based on emergency generator usage of 100 hours per year.			

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**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):	

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.0234 \text{ lb/MM Btu})(4.26 \text{ MM Btu/hr}) = 0.10 \text{ lb/hr}$ $(0.10 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.005 \text{ ton/y}$			
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):	

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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:	<input type="checkbox"/> Rule <input type="checkbox"/> 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:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

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I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>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)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. B</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Attach. GI</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>See note below</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input checked="" type="checkbox"/> Not Applicable (construction application)</p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records:</p> <p><input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>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.</p>
<p>7. Other Information Required by Rule or Statute:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

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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)): <input checked="" type="checkbox"/> Attached, Document ID: <i>Narr. Sec. 3.0</i> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input checked="" type="checkbox"/> Attached, Document ID: <i>See note below</i> <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: <i>NA</i>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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

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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: 013

4. Emissions Unit Status Code: C	5. Commence Construction Date: NA	6. Initial Startup Date: NA	7. Emissions Unit Major Group SIC Code: 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. The proposed engine will have a three way catalytic converter.

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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:

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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 days/week weeks/year 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

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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: GEN05		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: 16 East (km): 719.97 North (km): 3377.39			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: 		

**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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 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: 2.0 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):	

EMISSIONS UNIT INFORMATION

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POLLUTANT DETAIL INFORMATION

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(4.00 \text{ g/hp-hr})(454 \text{ bhp})(1 \text{ lb}/454 \text{ g}) = 4.03 \text{ lb/hr}$ $(4.03 \text{ lb/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.20 \text{ ton/yr}$			
11. Potential, Fugitive, and Actual Emissions Comment: Calculations based on emergency generator usage of 100 hours per year and minimum control efficiency.			

EMISSIONS UNIT INFORMATION

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POLLUTANT DETAIL INFORMATION

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**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):	

**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/hp-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 1 limits 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):	

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(10 \text{ gr S}/100 \text{ scf})(4100 \text{ scf/hr})(1 \text{ lb}/7000 \text{ gr}) = 0.059 \text{ lb S/hr}$ $(0.059 \text{ lb S/hr})(2 \text{ lb SO}_2/\text{lb S}) = 0.117 \text{ lb SO}_2/\text{hr}$ $(0.117 \text{ lb SO}_2/\text{hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.006 \text{ ton/yr}$			
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):	

EMISSIONS UNIT INFORMATION

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POLLUTANT DETAIL INFORMATION

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $(0.01941 \text{ lb/MM Btu})(4.26 \text{ MM Btu/hr}) = 0.083 \text{ lb/hr}$ $(0.083 \text{ lb/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.004 \text{ ton/y}$			
11. Potential, Fugitive, and Actual Emissions Comment: Calculations based on emergency generator usage of 100 hours per year.			

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**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

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POLLUTANT DETAIL INFORMATION

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**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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> 5 years <input type="checkbox"/> 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

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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: <input type="checkbox"/> Rule <input type="checkbox"/> 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: <input type="checkbox"/> Rule <input type="checkbox"/> 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

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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:	<input type="checkbox"/> Rule <input type="checkbox"/> 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:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

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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) <input checked="" type="checkbox"/> Attached, Document ID: <i>Attach. B</i> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <i>Attach. G</i> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <i>See note below</i> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

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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)): <input checked="" type="checkbox"/> Attached, Document ID: <u>Narr. Sec. 3.0</u> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input checked="" type="checkbox"/> Attached, Document ID: <u>See note below</u> <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: <u>NA</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

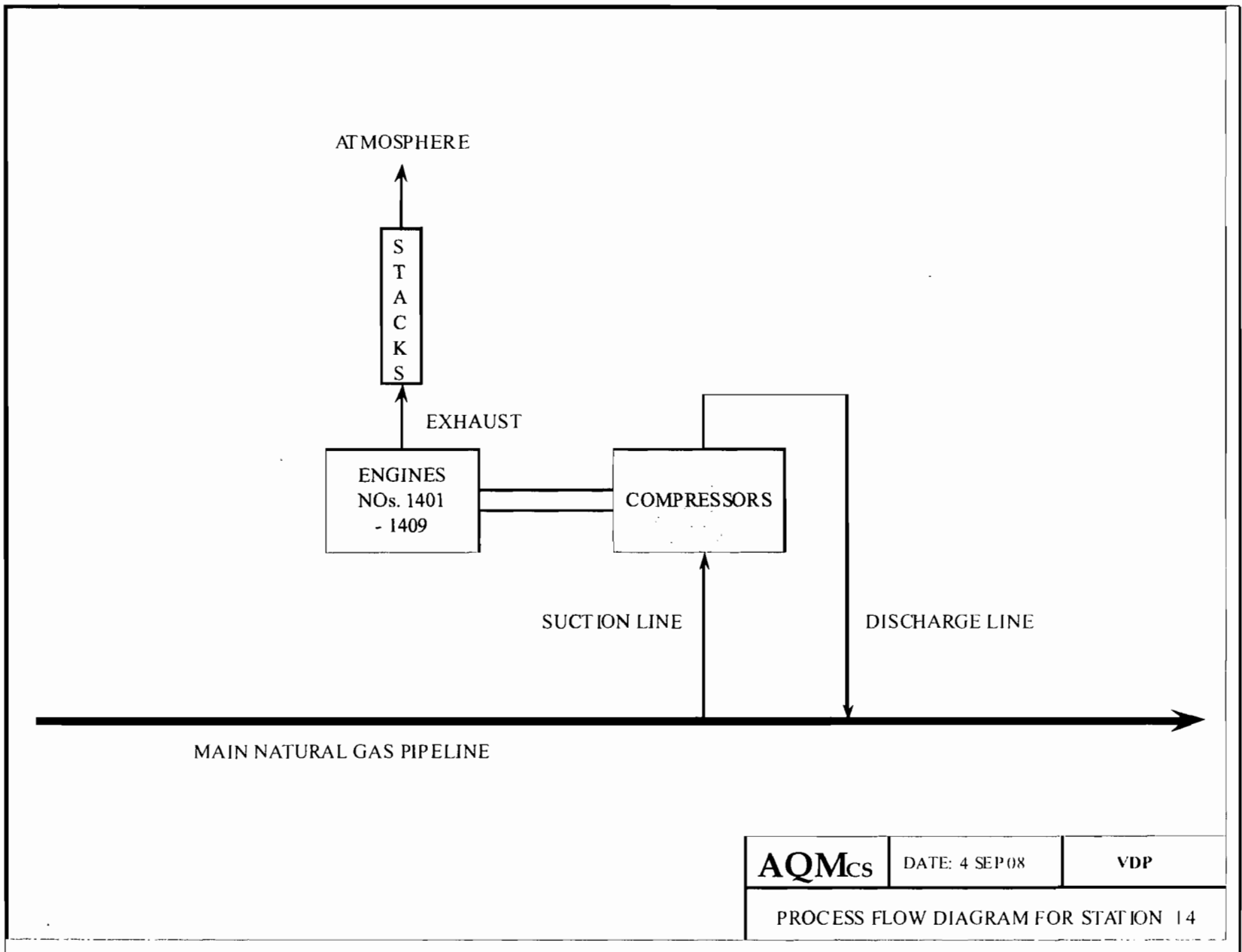
Additional Requirements Comment

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

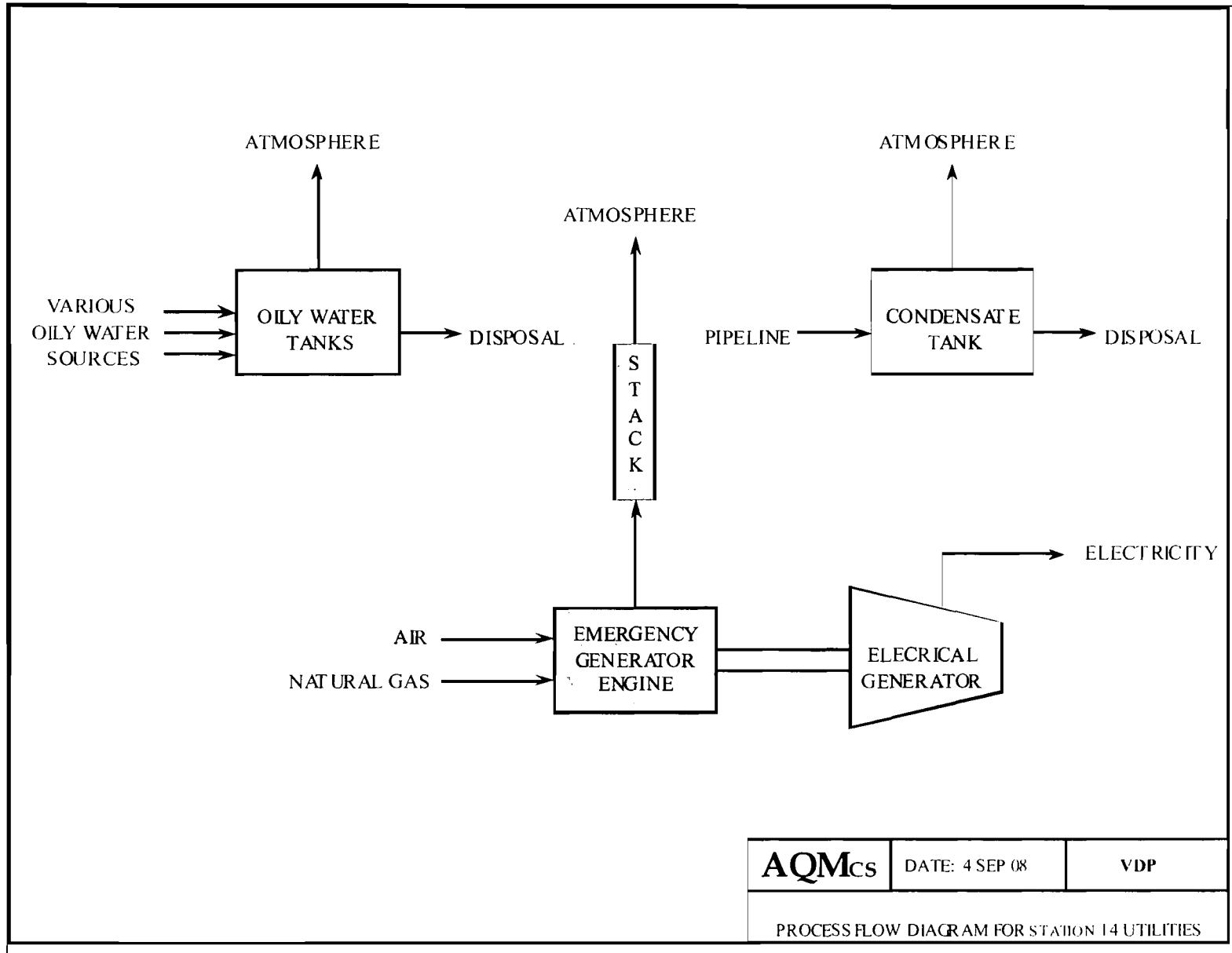
The manufacturer has not completed design specifications and has not provided final emission rates at this time. Emissions will comply with applicable 40 CFR Subpart JJJJ requirements.

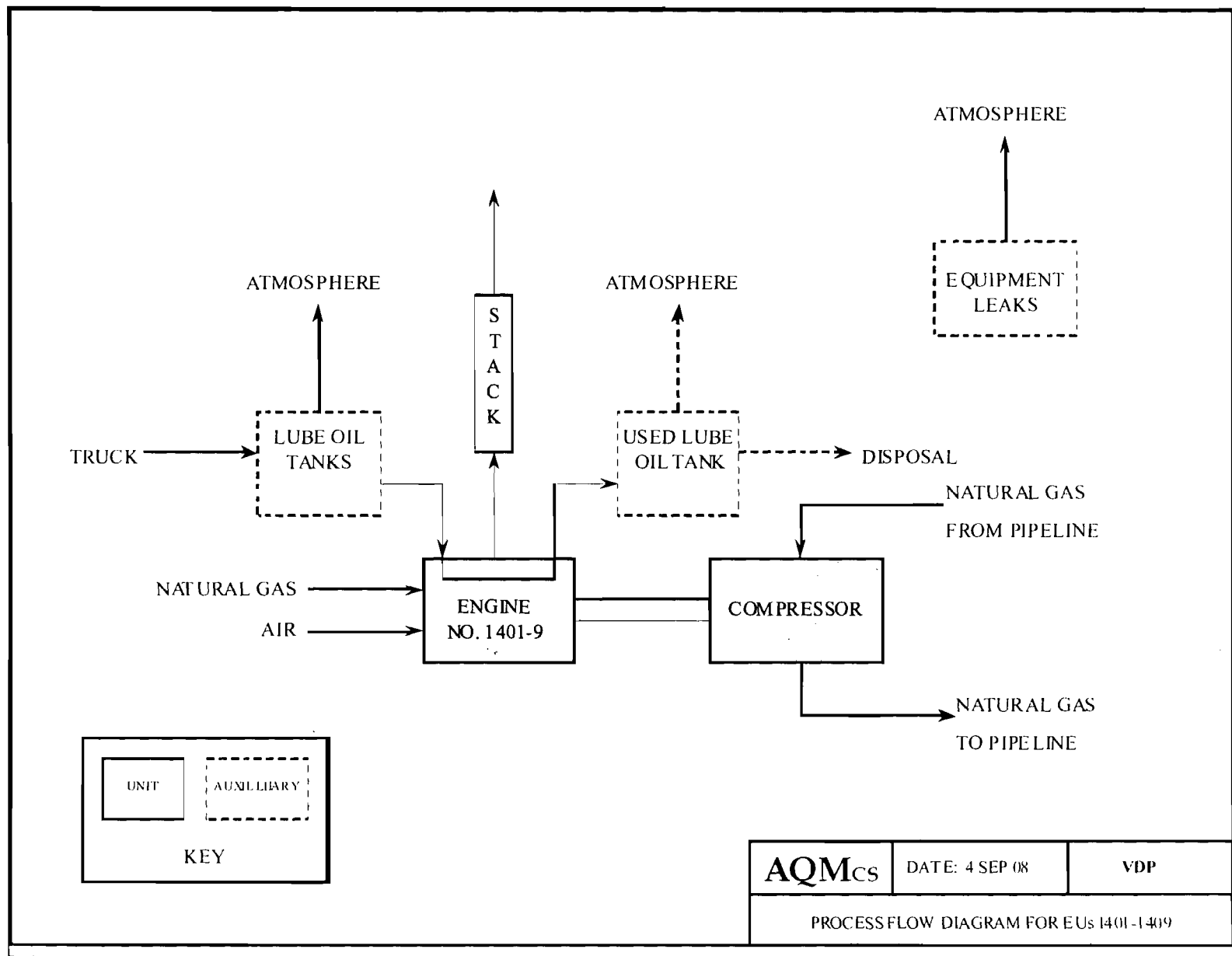
Specifications for the sampling facilities have not been completed at this time. Final specifications will comply with USEPA and FDEP regulatory requirements.

Attachment B
Process Flow Diagram



AQM CS	DATE: 4 SEP 08	VDP
PROCESS FLOW DIAGRAM FOR STATION 14		





Attachment C

Precautions to Prevent Emissions of Unconfined Particulate Matter

Precautions to Prevent Emissions of Unconfined Particulate Matter

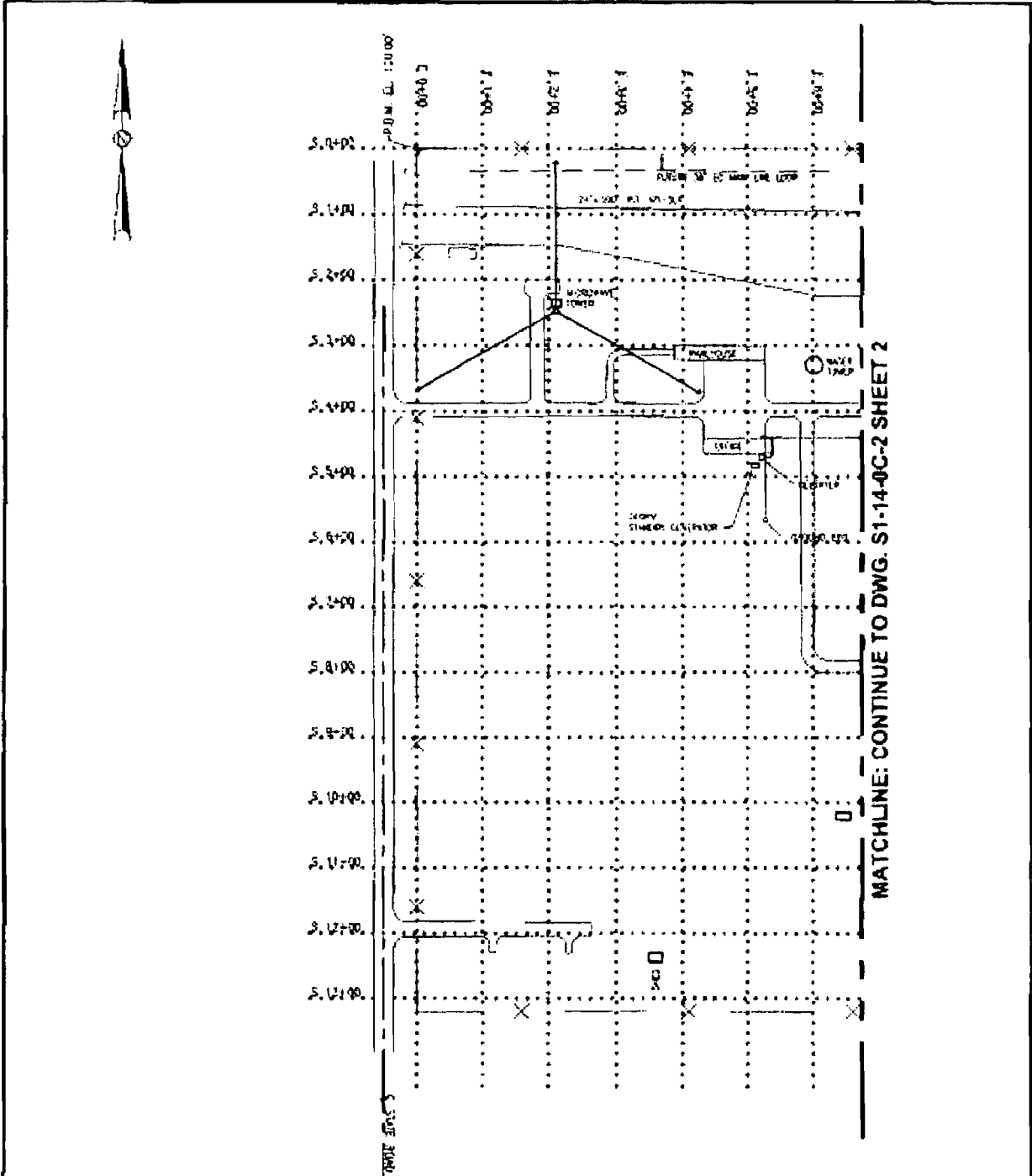
Precautions that will be taken to prevent unconfined emissions of unconfined particulate matter include:

- 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

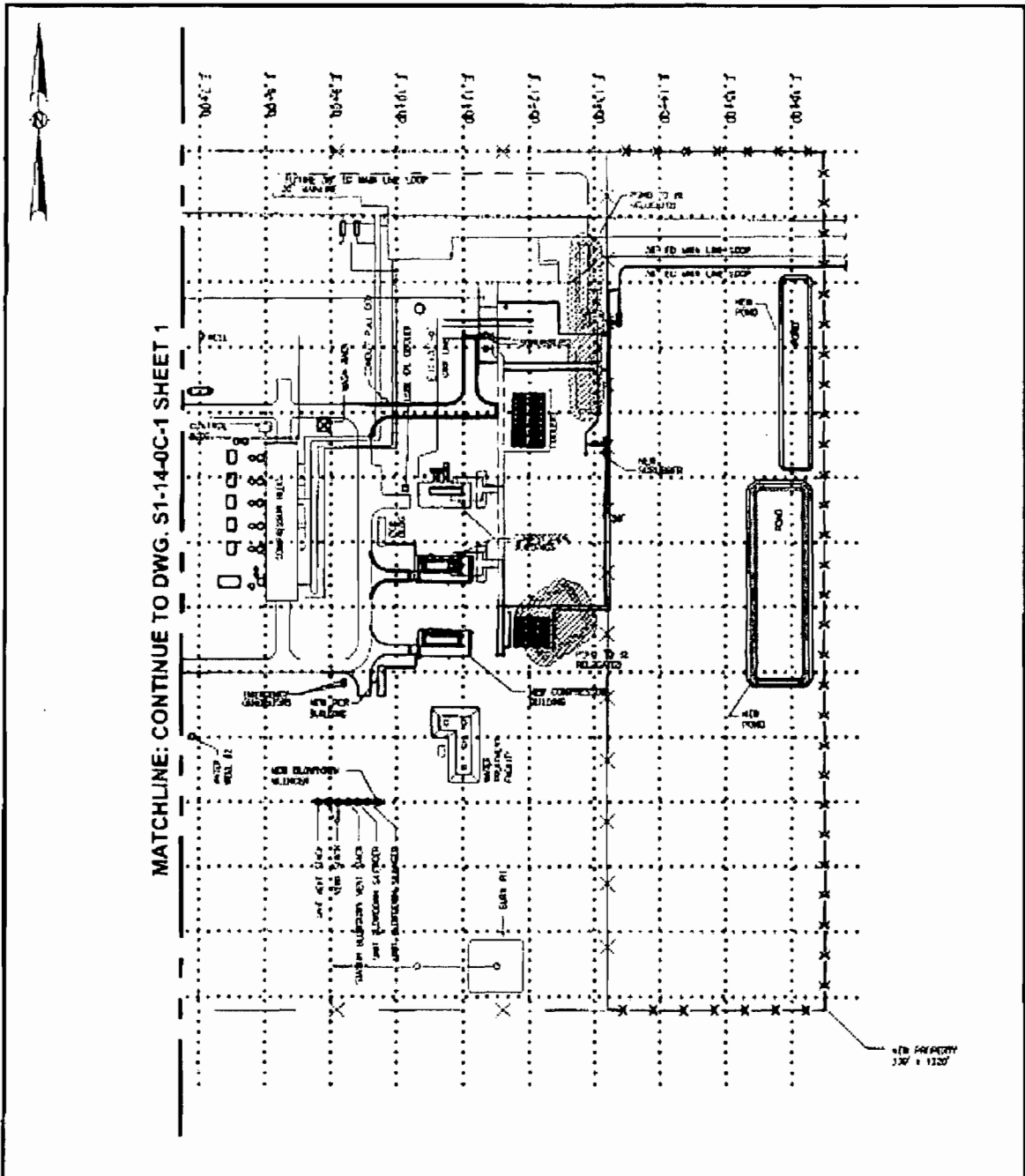
Plot Plan

FILE INFO: F:\AKRONIA\FLORENDA GAS TRANSMISSION\10877 STATION 14\DWG\STA 14A\10877-S1-14-0C-1.DWG 1=1.0000 SEPTEMBER 25, 2008 1:47 PM NORMA WRIGHT



REVISED, STATION, OR ACCOUNT NUMBER		SCALE	CONST. YR.	PROJECT NO.	
S1-14A-0C-1.DWG		1"=200'		622020	
REV. NO. - DESCRIPTION	BY	DATE	APP.	PREVIOUS DWG. NO.	
ISSUED FOR CLIENT REVIEW	N/W	09/25/08	RTS	SHE. 1 OF 2	
Florida Gas Transmission Company <small>A Southern Company Group Utility</small>				PHASE VIII EXPANSION STATION 14 PLOT PLAN	
				GADSDEN COUNTY, FLORIDA	
				DEC. NO. S1-14-0C-1 SHE. 1 OF 2	

FILE: W:\CADD\FLORIDA GAS TRANSMISSION\168177 STATION 14\GAS\ASIA 14A\168177-S1-14A-OC-2.DWG 1=1:5000 SEPTEMBER 26 2008 1:43 PM NORMA BRIGHT



PROJECT NO		DRAWN		DATE		PROJECT NAME		LOCATION	
622017		NLW		06/25/08		PHASE VIII EXPANSION STATION 14 PLOT PLAN		GADSDEN COUNTY, FLORIDA	
PREVIOUS DWG NO		DATE		BY		DESCRIPTION		REV. NO.	
SHEET 2 OF 2		06/26/08		NLW		ISSUE FOR CLIENT REVIEW		A	
DWG. NO		DATE		BY		DESCRIPTION		REV. NO.	
S1-14-OC-2		06/26/08		NLW		ISSUE FOR CLIENT REVIEW		A	
SHEET 2 OF 2		DATE		BY		DESCRIPTION		REV. NO.	
SHEET 2 OF 2		06/26/08		NLW		ISSUE FOR CLIENT REVIEW		A	

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	
Job ID HO08-0024	
Inquiry Number	
Run By James Belmont	Date Run 10-Jul-08

Engine Model TITAN 130-20502S CS/MD 59F MATCH	
Fuel Type SD NATURAL GAS	Water Injection NO
Engine Emissions Data REV. 0.0	

NOx EMISSIONS

CO EMISSIONS

UHC EMISSIONS

1	19465 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	
Job ID HO08-0024	
Run By James Belmont	Date Run 10-Jul-08
Engine Performance Code REV. 3.40	Engine Performance Data REV. 1.0

Model TITAN 130-20502S
Package Type CS/MD
Match 59F MATCH
Fuel System GAS
Fuel Type SD NATURAL GAS

DATA FOR MINIMUM PERFORMANCE

Elevation	feet	0
Inlet Loss	in H2O	4.0
Exhaust Loss	in H2O	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
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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

The measured emission values provided here are proprietary to Generac and its' authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

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	NO _x	HC	THC + NO _x
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
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SSD, E6297W Rev Date 8-28-06

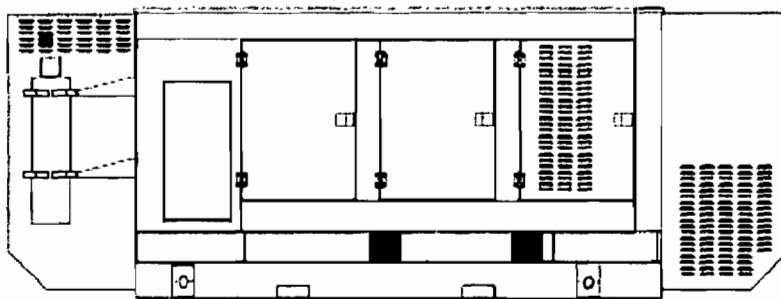
SG275 SG300

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 FUNCTIONAL 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.

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APPLICATION & ENGINEERING DATA

SG275/SG300

GENERATOR SPECIFICATIONS

TYPE Four-pole, revolving field
 ROTOR INSULATION Class H
 STATOR INSULATION Class H
 TOTAL HARMONIC DISTORTION <9.0%
 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 ISO6528-5, BS5514, SAE J1349, ISO2046 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
 - Overspeed
 - 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:
 - IT 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

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, ISO2046 and DIN6271). Prime: Unlimited Running Time; Applicable for supplying essential 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, ISO2046, BS5523 and DIN6271).

ENGINE SPECIFICATIONS

MAKE GENERAC
 MODEL 12.9GTA
 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 16.5:1
 INTAKE AIR Turbocharged/Air-cooled
 NUMBER OF MAIN BEARINGS 7
 CONNECTING RODS 6-Carbon Steel
 CYLINDER HEAD Cast Iron with Overhead Valve
 CYLINDER LINERS Wet/Replaceable
 IGNITION Atomic 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 Stainless Facet

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 (7.19 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 38 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" H₂O

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

SG275/SG300

OPERATING DATA	SG275		SG300	
	KW	Rated AMP	KW	Rated AMP
GENERATOR OUTPUT VOLTAGE/KW-60HZ 120/240V, 3-phase, 0.8 pf 120/240V, 3-phase, 0.8 pf 277/480V, 3-phase, 0.8 pf 600V, 3-phase, 0.8 pf	275 275 275 275	364 427 413 331	300 300 300 300	1041 902 451 361
MOTOR STARTING Maximum at 35% instantaneous voltage dip with standard alternator—60 Hz with optional alternator—60 Hz	<u>208/240V</u> 800 KVA 1000 KVA	<u>480V</u> 1060 KVA 1350 KVA	<u>208/240V</u> 900 KVA 1000 KVA	<u>480V</u> 1060 KVA 1350 KVA
FUEL Fuel consumption—60 Hz—100% Load ft. ³ /hr. No Load 25% 50% 75% 100%	<u>N.G.</u> 906 1557 2253 3000 3792		<u>N.G.</u> 906 1671 2376 3188 4100	
COOLING Coolant capacity System III (US gal.) Coolant flow/min. 60 Hz US gal. Heat rejection to coolant BTU/hr. Inlet air 60 Hz (cfm) Max. operating air temp. on radiator °C (°F) Max. operating ambient temp. °C (°F) Max. external pressure drop on rad. in. H ₂ O	56.9 (15) 138 1,046,600 19,200 60 (140) 50 (122) 0.5		56.9 (15) 138 1,048,250 19,200 60 (140) 50 (122) 0.5	
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz m ³ /min. (cfm)	31.1 (1100)		34 (1200)	
EXHAUST Exhaust flow at rated output 60 Hz m ³ /min. (cfm) Max. recommended back pressure Kpa (Hg) Exhaust temp. at rated output °F Exhaust outlet size (flange)	112 (3960) 5.0 (1.5") 1470 4" I.D.		122 (4335) 5.0 (1.5") 1490 4" I.D.	
ENGINE Rated RPM 60 Hz HP at rated KW 60 Hz Piston speed 60 Hz rev/min. (ft./min.) BMEP 60 Hz	2900 419 690 (2265) 178		2900 454 690 (2265) 183	
DERATION FACTORS Temperature 1.9% for every 10°C above - °C 1.1% for every 10°F above - °F Altitude 0.7% for every 100 m above - m 2.1% for every 1000 ft. above - ft.	40 104 1220 4000		40 104 1067 3500	

STANDARD ENGINE & SAFETY FEATURES

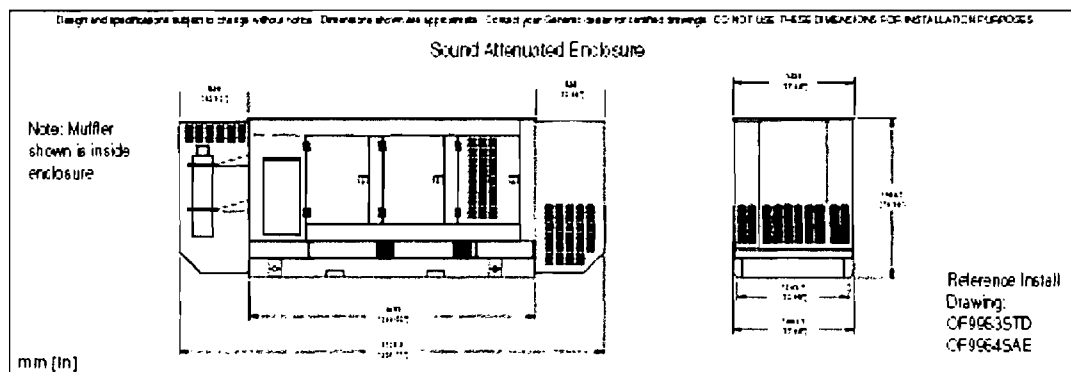
SG275/SG300

- 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 Dust Adapter
- **OPTIONAL FUEL ACCESSORIES**
 - Flexible Fuel Lines
- **OPTIONAL EXHAUST ACCESSORIES**
 - Critical Exhaust Stancer
- **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 01721705BY
- **ADDITIONAL OPTIONAL EQUIPMENT**
 - Automatic Transfer Switch (STS 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

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Attachment F
Emission Calculations

Compressor Station No. 14

Engine No. 1409 EPN: 011

NOx Emissions: (Based on Vendor Data)

$$\text{lb NOx/hr} = 8.52$$

$$\begin{aligned} \text{tons NOx/yr} &= (\text{lb NOx/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/1 yr}) \\ &= (8.52 \text{ lb/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/yr}) \\ &= 37.318 \end{aligned}$$

CO Emissions: (Based on Vendor Data)

$$\text{lb CO/hr} = 8.64$$

$$\begin{aligned} \text{tons CO/yr} &= (\text{lb CO/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/1 yr}) \\ &= (8.64 \text{ lb/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/yr}) \\ &= 37.843 \end{aligned}$$

VOC Emissions: (Based on Vendor Data)

$$\text{lb UHC/hr} = 4.950$$

$$\begin{aligned} \text{lb VOC/yr} &= (0.495 \text{ UHC lb/hr}) * (\text{VOC fraction of } 0.1) \\ &= 0.495 \end{aligned}$$

$$\begin{aligned} \text{tons VOC/yr} &= (\text{lb VOC/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/1 yr}) \\ &= (0.50 \text{ lb/hr})(2000 \text{ lb/1 ton})(8760 \text{ hr/yr}) \\ &= 2.168 \end{aligned}$$

SO2 Emissions: (Based on FERC Limits)

$$\begin{aligned} \text{lb S/hr} &= (\text{gr S/100 scf})(\text{MMscf/hr})(1 \text{ lb/7000 gr}) \\ &= (10 \text{ gr S/100 scf})(0.1518 \text{ MMscf/hr})(1 \text{ lb/7000 gr}) \\ &= 2.169 \end{aligned}$$

$$\begin{aligned} \text{lb SO2/hr} &= (\text{lb S/hr})(2 \text{ lb SO2/lb S}) \\ &= (2.17 \text{ lb S/hr})(2 \text{ lb SO2/lb S}) \\ &= 4.338 \end{aligned}$$

$$\begin{aligned} \text{tons SO2/yr} &= (\text{lb SO2/hr})(\text{hr/yr})(1 \text{ ton/2000 lb}) \\ &= (4.34 \text{ lb SO2/hr})(8760 \text{ hr/yr})(1 \text{ ton/2000 lb}) \\ &= 18.999 \end{aligned}$$

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

$$\begin{aligned} \text{lb PM/hr} &= (\text{lb PM/MMBtu})(\text{MMBtu/hr}) \\ &= (0.0066 \text{ lb/MMBtu})(157.89 \text{ MMBtu/hr}) \\ &= 1.042 \end{aligned}$$

$$\begin{aligned} \text{tons PM/yr} &= (\text{lb PM/hr})(\text{hr/yr})(1 \text{ ton/2000 lb}) \\ &= (1.04 \text{ lb PM/hr})(8760 \text{ hr/yr})(1 \text{ ton/2000 lb}) \\ &= 4.564 \end{aligned}$$

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

$$\begin{aligned} \text{lb HAP/hr} &= (\text{lb HAP/MMBtu})(\text{MMBtu/hr}) \\ &= (0.00102700 \text{ lb/MMBtu})(157.890 \text{ MMBtu/hr}) \\ &= 0.162 \end{aligned}$$

$$\begin{aligned} \text{tons HAP/yr} &= (\text{lb HAP/hr})(\text{hr/yr})(1 \text{ ton/2000 lb}) \\ &= (0.162 \text{ lb HAP/hr})(8760 \text{ hr/yr})(1 \text{ ton/2000 lb}) \\ &= 0.710 \end{aligned}$$

Emergency Gen. Nos. 4 & 5 EPNs:

NOx Emissions: (Based on Vendor Data)

$$\begin{aligned} \text{lb NOx/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (2.12 \text{ g/bhp-hr})(454 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 2.12 \\ \text{Control Effic.} &= 5.7\% \\ \text{Controlled NOx lb/hr} &= 2.00 \\ \\ \text{tons NOx/yr} &= (\text{lb NOx/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (2.12 \text{ lb NOx/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.106 \\ \text{Control Effic.} &= 5.7\% \\ \text{Controlled NOx tpy} &= 0.10 \end{aligned}$$

CO Emissions: (Based on Vendor Data)

$$\begin{aligned} \text{lb CO/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (118.3 \text{ g/bhp-hr})(454 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 118.404 \\ \text{Control Effic.} &= 96.6\% \\ \text{Controlled CO lb/hr} &= 4.03 \\ \\ \text{tons CO/yr} &= (\text{lb CO/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (118.40 \text{ lb CO/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 5.92 \\ \text{Control Effic.} &= 96.6\% \\ \text{Controlled CO tpy} &= 0.20 \end{aligned}$$

VOC Emissions: (Based on Vendor Data)

$$\begin{aligned} \text{lb VOC/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (0.29 \text{ g/bhp-hr})(454 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 0.290 \\ \text{Control Effic.} &= 0\% \\ \text{Controlled VOC lb/hr} &= 0.290 \\ \\ \text{tons VOC/yr} &= (\text{lb VOC/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.29 \text{ lb VOC/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.0145 \\ \text{Control Effic.} &= 0\% \\ \text{Controlled CO tpy} &= 0.0145 \end{aligned}$$

SO2 Emissions: (Based on FERC Limits)

$$\begin{aligned} \text{lb S/hr} &= (\text{gr S}/100 \text{ scf})(\text{MMscf/hr})(1 \text{ lb}/7000 \text{ gr}) \\ &= (10 \text{ gr S}/100 \text{ scf})(0.0041 \text{ MMscf/hr})(1 \text{ lb}/7000 \text{ gr}) \\ &= 0.059 \\ \\ \text{lb SO2/hr} &= (\text{lb S/hr})(2 \text{ lb SO2}/\text{lb S}) \\ &= (0.06 \text{ lb S/hr})(2 \text{ lb SO2}/\text{lb S}) \\ &= 0.117 \\ \\ \text{tons SO2/yr} &= (\text{lb SO2/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.117 \text{ lb SO2/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.006 \end{aligned}$$

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

$$\begin{aligned} \text{lb PM/hr} &= (\text{lb PM/MMBtu})(\text{MMBtu/hr}) \\ &= (0.01941 \text{ MMBtu/hr})(4.26 \text{ MMBtu/hr}) \\ &= 0.083 \\ \\ \text{tons PM/yr} &= (\text{lb PM/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.083 \text{ lb PM/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.0041 \end{aligned}$$

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

$$\begin{aligned} \text{lb HAP/hr} &= (\text{lb HAP/MMBtu})(\text{MMBtu/hr}) \\ &= (0.0234 \text{ lb/MMBtu})(4.26 \text{ MMBtu/hr}) \\ &= 0.0997 \\ \\ \text{tons HAP/yr} &= (\text{lb HAP/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.10 \text{ lb HAP/hr})(100 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.005 \end{aligned}$$

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

Identification

User Identification: FGT CS 14 Oily Water
 City: Quincy
 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

Meteorological Data used in Emissions Calculations: Tallahassee, Florida (Avg Atmospheric Pressure = 14.73 psia)

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

FGT CS 14 Oily Water - Vertical Fixed Roof Tank
Quincy, Florida

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

Lube Oil All 69.13 62.98 75.28 67.14 0.0001 0.0000 0.0001 190.0000

190.00 Option 1: VP60 = .00004 VP70 = .00006

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

Emissions Report for: Annual

FGT CS 14 Oily Water - Vertical Fixed Roof Tank
Quincy, Florida

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

Attachment G
Fuel Analysis

FTWSCB1.ener	East System Chromatographs								01-Aug-2008 14:05:09
	Station 15 35"	Station 15 30"	Station 16	Station 18	Jacksonville Lat	Jacksonville Lat	Brandy Branch	Station 21	
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	99.91	99.78	100.08	99.91	99.85	99.40	
Specific Gravity	0.5869	0.5873	0.5868	0.5831	0.5759	0.5831	0.5750	0.5850	
BTU / cu. ft.	1030.2	1031.8	1030.4	1031.8	1043.2	1031.8	1045.2	1035.1	
	CR15		BRO1	CR18	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