



Florida Gas Transmission Company

Capital Projects Field Office, 111 Kelsey Lane, Ste. A., Tampa, FL 33619
813.655.7441 / 800.381.1477

June 6, 2000

Ms. Patty Adams
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Compressor Station No. 31, Osceola County
Facility ID 0970076

Dear Ms. Adams:

Please find enclosed check number 93429 in the amount of \$4,500 for the processing of Florida Gas Transmission's Compressor Station No. 31 application.

Should additional information be necessary, please do not hesitate to contact me at (800) 381-1477.

Sincerely,

Jim Thompson
Environmental Consultant
For Florida Gas Transmission Company

RECEIVED

JUN 06 2001

BUREAU OF AIR REGULATION



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

May 30, 2001

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

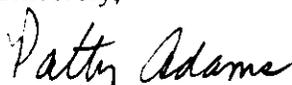
Mr. Jim Thompson
Environmental Project Manager
Florida Gas Transmission Company Phase V Project
111 Kelsey Lane, Suite A
Tampa, Florida 33619

RE: Compressor Station No. 31, Osceola County
Facility ID 0970076

Dear Mr. Thompson:

The Bureau of Air Regulation received your May 21, 2001, request to construct the above referenced facility. Since a construction permit application for a minor source requires a processing fee pursuant to Chapter 62-4.050(4)(a), F.A.C., you will need to submit a \$4,500 fee before we can begin reviewing your application. If you have any questions, please call me at (850)921-9505.

Sincerely,


Patty Adams
Bureau of Air Regulation

/pa

cc: J. Koerner

"More Protection. Less Process"

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Florida Gas Transmission Company

Capital Projects Field Office, 111 Kelsey Lane, Ste. A., Tampa, FL 33619
813.655.7441 / 800.381.1477

May 21, 2001

Mr. Clair H. Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Bldg.
2600 Blairstone
Tallahassee, FL 32399-2400

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MAY 24 2001

BUREAU OF AIR REGULATION

Reference: Facility: 0390029
Compressor Station No. 31, Osceola County

Dear Mr. Fancy:

Subject: Application for Air Construction Permit

Florida Gas Transmission Company (FGT) is proposing to construct a new natural gas pipeline compressor station. This facility will be located in Osceola County and designated as Compressor Station No. 31. The facility will consist of one 2,225 bhp reciprocating compressor engine and supporting equipment. The new facility will be a minor source under Title V and New Source Review regulations. Therefore, only a state construction permit is required.

Enclosed is an Application for an Air Construction Permit for the proposed facility.

If you have any questions or need additional information, please call me at (800) 381-1477.

Sincerely,

Jim Thompson
Environmental Project Manager
For Florida Gas Transmission Company Phase V Project

CC: James Alexander, Phase V w/o attachments
Dan Pribble, w/o attachments
Frank Diemont
V. Duane Pierce, AQMs

Florida Gas Transmission Company

Phase V Expansion Project

Compressor Station No. 31

**APPLICATION
For
AIR CONSTRUCTION
PERMIT**

May 2001

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1.0 INTRODUCTION

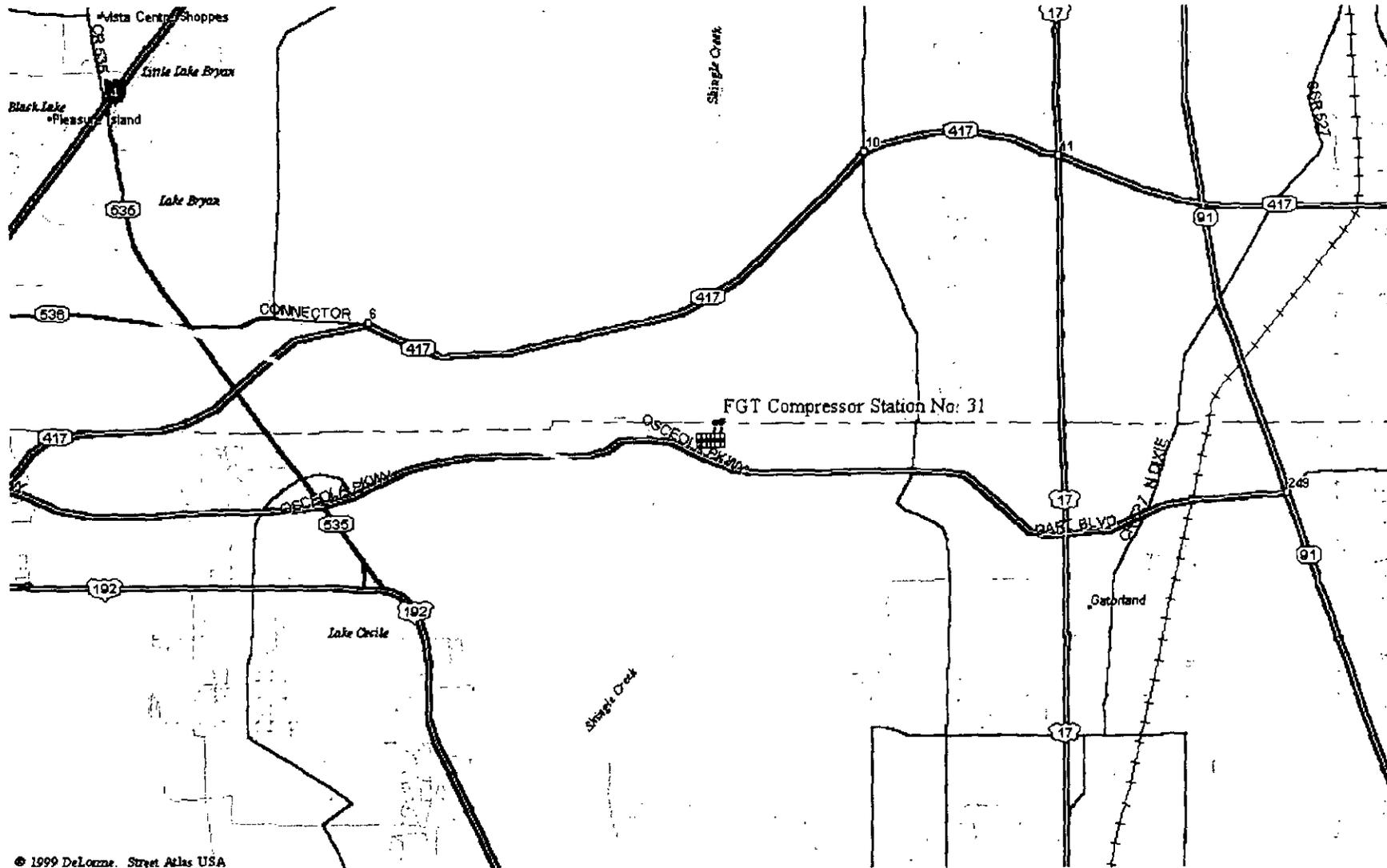
Florida Gas Transmission Company (FGT), a Delaware Corporation and an ENRON/EL PASO affiliate of Houston, Texas, is proposing to construct a new natural gas pipeline compression facility near Kissimmee, Florida (Compressor Station No. 31). This proposed facility is part of FGT's Phase V Expansion Project, aimed at increasing the supply capacity of FGT's network servicing domestic, commercial, and industrial customers. The scope of work for the Phase V Expansion Project includes expansion through the addition of a state-of-the-art compressor engine at this new compressor station. Compressor Station No. 31 is located in Osceola County on the Osceola Parkway approximately 2.5 miles west of U.S. Route 17. Figure 1-1 shows the proposed location of the new compressor station.

The proposed expansion consists of the installation of a new 2,225 brake horsepower (bhp), natural-gas-fired, reciprocating compressor engine. Under current federal and state air quality regulations, the proposed new facility will be a minor source under PSD definitions.

This application contains three additional sections. Descriptions of the proposed new engine and supporting facilities are presented in Section 2.0. The air quality review requirements and applicability of state and federal regulations are discussed in Section 3.0 and references are included in Section 4.0.

FDEP permit application forms are presented in Attachment A. Attachment B contains a plot plan of the new facility, Attachment C contains vendor information and Attachment D contains emission calculations.

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Figure 1-1 Location Map

2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 31, showing the location of the plant boundaries and the location of the modified engines, is presented in Attachment B. The following sections provide a description of the proposed project.

2.1 Proposed New Compressor Station

FGT's proposed Compressor Station No. 31 will consist of one 2,225 bhp natural-gas-fired reciprocating internal combustion (IC) compressor engine and associated support equipment. FGT proposes to construct this compressor station, as part of the Phase V Expansion Project. This facility is necessary to increase the volumetric delivery capacity necessary to meet both short and long-term demands for natural gas.

2.1.1 New Compressor Engine

The new engine will be a Caterpillar 3608 compressor engine rated at 2,225 bhp. Fuel will be exclusively natural gas from the FGT's natural gas pipeline. Engine specifications and stack parameters for the proposed engine are presented in Table 2-1.

Hourly and annual emissions of regulated pollutants from the proposed engine under normal operating conditions are presented in Table 2-2. Emissions of oxides of nitrogen (NO_x), carbon monoxide (CO) and non-methane hydrocarbons (NMHC) are based on the engine manufacturer's supplied data (See Attachment C).

Typically, engine vendors do not provide information on particulate matter (PM) or sulfur dioxide (SO₂) emissions; therefore, particulate matter emissions are based upon USEPA publication AP-42 Table 3.2-2 (USEPA, 2000) and 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. Hazardous air pollutant (HAP) emissions are based upon the Gas Research Institute's GRI HapCalc 3.1 software.

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Table 2-1 Proposed Compressor Engine 3101 Specifications and Stack Parameters

Parameter	Design
Compressor Engine	3101
Type	Gas Reciprocating Engine
Manufacturer	Caterpillar
Model	G3608
Unit Size	2,225 bhp
Specific Heat Input	6,810 Btu/bhp-hr
Maximum Fuel Consumption ^a	0.01457 MMscf/hr
Speed	1,000 rpm
Stack Parameters	
Stack Height	44.5 ft
Stack Diameter	1.625 ft ea
Exhaust Gas Flow	14,816 acfm
Exhaust Temperature	842 °F
Exhaust Gas Velocity	112.7 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 heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).</p>	

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Table 2-2 Emissions from FGT's Proposed 3101 Compressor Engine

Pollutant	Emission Factor	Reference	Emissions	
			lb/hr	TPY
Nitrogen Oxides	0.7 g/hp-hr	Manufacturer Data	3.43	15.0
Carbon Monoxide	2.6 g/hp-hr	Manufacturer Data	12.75	55.9
Volatile Organic Compounds (non methane)	0.9 g/hp-hr	Manufacturer Data	4.41	19.3
Particulate Matter*	0.00999 lb/MMBtu	AP-42, Table 3.2-2	0.15	0.7
Sulfur Dioxide*	10 grains/100 scf	FERC Limit	0.42	1.8
HAPs	Various see Attachment D	GRI HapCalc 3.0	0.84	3.7

* Emissions based on vendor provided fuel use value plus 10 per cent

2.1.2 Support Equipment

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

- A compressor building
- An auxiliary building
- One gas-fired emergency generator
- One 100 bbl hydrocarbon storage tank
- One 100 bbl oily water storage tank

The locations of the structures are shown on the facility plot plan contained in Attachment B. The compressor building, housing the Caterpillar 3608 engine, has approximate dimensions of 40 feet wide by 60 feet long by 29.5 feet high. The approximate dimensions of the auxiliary building will be 24 feet wide by 50 feet long by 17 feet high. Emission calculations for support equipment can be found in Attachment D.

2.1.2.1 New Emergency Generator

The emergency generator will be powered by a natural gas fired, Cummins Model GTA-12 rated at 120 kW (184 bhp). This is an existing emergency generator that is currently located at Compressor Station No. 26 and was originally installed at that location in 1991. Engine specifications and stack parameters for the proposed engine are presented in Table 2-3 and emissions are presented in Table 2-4.

2.1.2.2 New Storage Tanks

Two new storage tanks will be installed at Compressor Station No. 31. They are listed in Table 2-5 along with specifications. Emissions were calculated with the U.S EPA's (USEPA) Tank 3.0 program. Details of the calculations can be found in Attachment D.

2.1.2.3 Fugitive Emissions

Potential new emissions from Compressor Station No. 31 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

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Estimates"). Table 2-6 lists the quantities of existing and new components to be added as part of the Phase IV Expansion Project and an estimate of the fugitive emissions from these sources.

Table 2-3 Proposed Emergency Generator Engine Specifications and Stack Parameters

Parameter	Design
Compressor Engine	Gen01
Type	Natural Gas, Lean Burn Reciprocating
Manufacturer	Cummins-Onan
Model	GTA-12
Unit Size	120 kW
Specific Heat Input	Not Available
Stack Parameters	
Stack Height	33 ft
Stack Diameter	0.33 ft
Exhaust Gas Flow	1250 acfm
Exhaust Temperature	1150 °F
NOTE: acfm = actual cubic feet per minute. bhp = brake horsepower. Btu/bhp-hr = British thermal units per brake horsepower per hour. °F = degrees Fahrenheit. Ft = feet. KW = kilowatts scf/h = standard cubic feet per hour	

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Table 2-4 Emissions from FGT's Proposed Generator Engine

Pollutant	Emission Factor	Reference	Generator Emissions*	
			lb/hr	TPY
Nitrogen Oxides	1.78 lb/hr	Manufacturer Data	1.78	0.45
Carbon Monoxide	0.61 lb/hr	Manufacturer Data	0.61	0.15
Volatile Organic Compounds (non methane)	0.024 lb/hr	Manufacturer Data	0.024	0.01

* Based on 500 hours of operation per year

Table 2-5 New Storage Tanks for Compressor Station No. 31

Tank Name	Condensate Tank	Oily Water Tank
Type of Tank	Vertical, Cone Roof	Vertical, Cone Roof
Contents	Hydrocarbon Liquids	Drain water from washings; oily water
Dimensions	9'-6" dia x 8'-0" high	9'-6" dia x 8'-0" high
Capacity	4,200 Gallons	4,200 Gallons
Paint Color	White	White
Maximum Annual Throughput	3000 Gallons	3000 Gallons
VOC Emissions (tpy)	0.01	<0.001

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Table 2-6 VOC Fugitive Emission Calculations and Summary

Component	Service	Component Count	Emissions * Factor (ton/yr)	NM/NE Fraction	Emissions (ton/yr)
Valves	Gas	119	0.0434606	0.05	0.26
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	122	0.0037666	0.05	0.02
Open-Ended Line	Gas	47	0.0193158	0.05	0.05
Pumps	Gas	0	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	10	0.0241448	1.00	0.24
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	24	0.0010624	1.00	0.03
Open-Ended Line	Light Oil	4	0.0135211	1.00	0.05
Pumps	Light Oil	0	0.1255527	1.00	0.00
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	26	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	32	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	3	0.0013521	1.00	0.00
Other	Heavy Oil	5	0.0002994	1.00	0.00
				TOTAL:	0.66

*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 2-7. As can be seen from the table, the total new emissions are not significant under PSD regulations. The calculations used to estimate these emissions are presented in Attachment D.

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Table 2-7 Potential Annual Emissions (tpy) Summary

SOURCE ID	DESCRIPTION	NO _x	CO	VOC ^a	SO ₂	PM
NEW EMISSION SOURCES						
3101	2,225 bhp Recip. Engine	15.0	55.9	19.3	1.8	0.7
GEN01	184 bhp Recip. Engine	0.5	0.2	0.0	0.0	0.0
	OTHER SOURCES: ^b	0.0	0.0	0.7	0.0	0.0
NEW EMISSIONS TOTALS:		15.5	56.1	20	1.8	0.7
<p>(a) VOC = Non-methane HC (b) Other Sources Includes ancillary equipment, storage tanks and equipment leaks</p>						

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. 31.

3.1 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. 31.

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. Osceola County is designated as unclassifiable or attainment for all criteria pollutants. These designations were obtained from 40 CFR 81.310.

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

POLLUTANT	AVERAGING PERIOD	EPA STANDARDS	
		PRIMARY	SECONDARY
PM ₁₀	24-hour ¹	150	150
	Annual ²	50	50
SO ₂	3-hour ¹	---	1,300
	24-hour ¹	365	---
CO	Annual ²	80	---
	1-hour ¹	---	40,000
NO ₂	8-hour ¹	10,000	---
	Annual ²	100	100
O ₃	1-hour ³	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

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.

3.1.2 Prevention of Significant Deterioration (PSD) Applicability

The 1977 CAA Amendments 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. The 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).

For the PSD regulations to apply to a given project, the proposed location must be in an area that has been classified as attainment or as unclassifiable for a particular pollutant. Osceola County is considered an attainment area for all criteria pollutants. Additionally, a project's potential to emit must constitute a major stationary source or major modification to an existing

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major stationary source.

A major stationary source is defined as either one 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.

Since Compressor Station No. 31 is not one of the 28 named source categories, and will not emit >250 TPY of any regulated pollutant, it is considered a minor source and therefore a PSD permit is not required.

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)	

3.1.3 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. There are no new source performance standards applicable to the new engine at Compressor Station No. 31.

The new tanks at Compressor Station No. 31 are potentially subject to 40 CFR Subpart Kb for volatile organic liquid storage vessels. This Subpart is not applicable since both tanks are smaller (15.9 m³) than the minimum applicable size of 40 cubic meters.

3.1.4 Good Engineering Practice (GEP) Stack Height Analysis

The 1977 CAA Amendments require that the emission limitation required for control of any pollutant not be affected by a stack that exceeds GEP height. Further, no dispersion credit is given during air quality modeling for stacks that exceed GEP. GEP stack height is defined as the highest of:

- 65 meters; or
- a height established by applying the formula

$$HGEP = H + 1.5 L$$

Where:

- HGEP = GEP Stack Height,
- H = Height of the structure or nearby structure, and
- L = Lesser dimension (height or projected width) of the nearby structure; or

- a height demonstrated by fluid modeling or field study.

A structure or terrain feature is considered nearby if a stack is within a distance of five times the structure's height or maximum projected width. Only the smaller value of the height or projected width is used and the distance to the structure cannot be greater than 0.8 kilometers. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with National AAQS and PSD increments not exceed GEP stack height, the actual stack height may be greater.

The stack height regulations also increase GEP stack height beyond that resulting from the formula in cases where plume impaction occurs. Plume impaction is defined as concentrations

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measured or modeled to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain that exceeds the height calculated by the GEP stack height formula. Because terrain in the vicinity of the project site is generally flat, plume impaction was not considered in determining the GEP stack height.

The stacks at Compressor Station No. 31 for engine 3101 will be 44.5 feet (13.56 meters) tall. Based on the proposed building dimensions, the calculated GEP stack height is less than 65 meters; therefore, the default GEP stack height of 65 meters applies. Since the stack is less than GEP stack height, it complies with the regulatory requirement.

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

Compressor Station No. 31 is potentially subject to 40 CFR 63 Subpart HHH for Natural Gas Transmission and Storage Facilities; however, the only affected facilities are glycol dehydrators and Compressor Station No. 31 does not have any glycol dehydrators.

3.2 Florida State Air Quality Regulations

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. 31 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 construction of new emission units. 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. Potential NO_x emissions and impacts will be decreased.

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.

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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 and modified engines will not violate this standard.

3.2.5 Rule 62-210.300(3)(a) Exempt Emissions Units and/or Activities.

The emissions from the fugitive leak emissions are insignificant sources and are exempt from the permitting requirements of Chapter 62-210 Stationary Sources - General Requirements, 62-213 Operation Permits For Major Sources Of Air Pollution and 62-4 Permits.

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4.0 REFERENCES

Gas Research institute, 1999. GRI-HAPCalc Software Version 3.0, Radian International, LLC.

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

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 Resources Management

APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Florida Gas Transmission Company	
2. Site Name: Compressor Station No. 31	
3. Facility Identification Number: [X] Unknown	
4. Facility Location: Street Address or Other Locator: Osceola Parkway approximately 2.5 miles west of U.S. Route 17	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [] Yes [X] No

Application Contact

1. Name and Title of Application Contact: Jim Thompson, Environmental Project Manager for Florida Gas Transmission Co. - Phase V Expansion Project	
2. Application Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 111 Kelsey Lane, Ste. A City: Tampa State: FL Zip Code: 33619	
3. Application Contact Telephone Numbers: Telephone: (800) 381-1477 Fax: (813) 655-3951	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.

Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number: _____

Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number: _____

Operation permit number to be revised: _____

Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

Air construction permit to construct or modify one or more emissions units.

Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative

1. Name and Title of Owner/Authorized Representative or Responsible Official: Danny Pribble, Vice President, Operations
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: P.O. Box 1188 City: Houston State: TX Zip Code: 77251
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (713) 345-7162 - Fax: (713) 646-3201
4. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative* of the facility addressed in this 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. 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 any permitted emissions unit.</i> Signature: <u></u> Date: <u>5/21/01</u>

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kevin McGlynn Registration Number: 50908
2. Professional Engineer Mailing Address: Organization/Firm: McGlynn Consulting Company Street Address: 1967 Commonwealth Lane City: Tallahassee State: FL Zip Code: 32303
3. Professional Engineer Telephone Numbers: Telephone: (850)380-5035 Fax: (850) 350-5002

4. Professional Engineer Statement:

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

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

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

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], 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.

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

KEVIN
NO. 5062
PROFESSIONAL ENGINEER

Kevin M. Miley P.E.

Signature

May 17, 2001

Date

Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
	Caterpillar G3608 reciprocating compressor engine rated at 2,225 hp, Engine 3101	AC1C	\$4,500.00
	Emergency generator, 184 hp Cummins-Onan GTA-12, Reciprocating engine, GEN01		
	Fugitive emissions from equipment leaks		
	4200 gallon Oily Water Tank		
	4200 gallon Pipeline Condensate Tank		

Application Processing Fee

Check one: Attached - Amount: \$ 4,500.00 Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Construction of a new gas pipeline compressor station.

Installation of a new gas fired Caterpillar G3608 reciprocating compressor engine rated at 2,225 horsepower.

Installation of a natural gas-fired emergency generator rated at 120 kW (184 hp) Cummins-Onan Model GTA-12.

Installation of a 4200 gallon tank for oily water storage and a 4200 gallon pipeline condensate storage tank.

2. Projected or Actual Date of Commencement of Construction: 10/17/01

3. Projected Date of Completion of Construction: 01/17/02

Application Comment

This proposed new facility is part of FGT's Phase IV expansion project, aimed at increasing the supply capacity of FGT's network servicing domestic, commercial, and industrial customers in Florida.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 456.543 North (km): 3135.476			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 28/20/48 Longitude (DD/MM/SS): 81/26/36			
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 (limit to 500 characters): Compressor Station No. 31 will be a natural gas pipeline compressor station with one compressor engine. It will be classified as a minor source under New Source Review and Title V definitions.			

Facility Contact

1. Name and Title of Application Contact: Jim Thompson, Environmental Project Manager for Florida Gas Transmission Co. – Phase V Expansion Project
2. Application Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 111 Kelsey Lane, Ste. A City: Tampa State: FL Zip Code: 33619
3. Application Contact Telephone Numbers: Telephone: (800) 381-1477 Fax: (813) 655-3951

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
5. <input type="checkbox"/> One or More Emissions Units Subject to NSPS?	
6. <input type="checkbox"/> One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters):	
Facility is a minor source for PSD and Title V purposes. The project is not subject to PSD since the emissions are less than the levels for a major source.	

Rule Applicability Analysis

FDEP Title V Core List

62-296.320(4)(b)1 General Visible Emissions Standards

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
NO _x	B				
CO	B				
VOC	B				
SO ₂	B				
PM	B				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID: <i>Narrative Fig 1-1</i> [] Not Applicable [] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: <i>Att. B</i> [] Not Applicable [] Waiver Requested
3. Process Flow Diagram(s): [] Attached, Document ID: _____ [X] Not Applicable [X] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested
5. Supplemental Information for Construction Permit Application: [X] Attached, Document ID: <i>Attach. C</i> [] Not Applicable
6. Supplemental Requirements Comment:

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>2,225 bhp natural gas fired reciprocating compressor engine</p>		
<p>3. Emissions Unit Identification Number:</p> <p>ID:</p>		<p><input checked="" type="checkbox"/> No ID</p> <p><input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code:</p> <p>C</p>	<p>5. Initial Startup Date:</p> <p>01/17/02</p>	<p>6. Emissions Unit Major Group SIC Code:</p> <p>49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The proposed compressor engine will be a Caterpillar model G3608 reciprocating engine compressor unit rated at 2,225 bhp. Fuel will be exclusively natural gas from the FGT's gas pipeline.</p>		

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

Emissions Unit Details

1. Package Unit:	
Manufacturer: Caterpillar	Model Number: G3608
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	15.2	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
24	hours/day	7 days/week
52	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Heat input is 15.2 MM Btu/hr based on vendor specifications of 6,810 Btu/hp-hr and 2,225 bhp.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? 3101 New Engine		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: V	6. Stack Height: 44.5 feet	7. Exit Diameter: 1.625 feet	
8. Exit Temperature: 842 °F	9. Actual Volumetric Flow Rate: 14.816 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 456.54 North (km): 3135.48			
14. Emission Point Comment (limit to 200 characters):			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas fired reciprocating engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-54		3. SCC Units: million cubic feet burned
4. Maximum Hourly Rate: 0.01457	5. Maximum Annual Rate: 127.63	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 1040
10. Segment Comment (limit to 200 characters): Based on vendor supplied fuel rate of 15.2 MMBtu/hr. Percent sulfur is base on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100 scf and gas density of 0.0455 lb/scf.		

Segment Description and Rate: Segment NA of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): 		
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 (limit to 200 characters): 		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**Potential Emissions**

1. Pollutant Emitted: NOX		2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code:	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 3.43 lb/hour 15.0 tons/year		7. Synthetically Limited? []	
8. Emission Factor: 0.7 g/bhp-hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): (0.7 g/bhp-hr)(2225 bhp)(1 lb/453.59 g) = 3.43 lb/hr (3.43 lb/hr)(8760 hr/yr)(1 ton/2000lb) = 15.04			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): Initial performance test.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**Potential Emissions**

1. Pollutant Emitted: CO		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 12.75 lb/hour 55.9 tons/year		7. Synthetically Limited? []	
8. Emission Factor: 2.6 g/bhp-hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): $(2.6 \text{ g/bhp-hr})(2225 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) = 12.75 \text{ lb/hr}$ $(12.75 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 55.86$			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 4.41 lb/hour 19.3 tons/year		7. Synthetically Limited? []	
8. Emission Factor: 0.9 g/bhp-hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): (0.9 g/bhp-hr)(2225 bhp)(1 lb/453.59 g) =4.41 lb/hr (4.41 lb/hr)(8760 hr/yr)(1 ton/2000lb) = 19.34			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**Potential Emissions**

1. Pollutant Emitted: SO ₂		2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA		5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.42 lb/hour 1.8 tons/year			7. Synthetically Limited? []
8. Emission Factor: 10 gr/100scf Reference: Vendor's fuel use data			9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): $(10 \text{ gr S}/100 \text{ scf})(0.01457 \text{ MMscf/hr})(1 \text{ lb}/7000 \text{ gr}) = 0.208 \text{ lb S/hr}$ $(0.208 \text{ lb S/hr})(2 \text{ lb SO}_2/\text{lb S}) = 0.42 \text{ lb SO}_2/\text{hr}$ $(0.42 \text{ lb SO}_2/\text{hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 1.82 \text{ ton/yr}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters): SO ₂ emission factor is based on maximum Federal Energy Regulatory Commission (FERC) limit of 10 gr S/100 scf and gas density of 0.0455 lb/scf.			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA		
3. Requested Allowable Emissions and Units: NA	4. Equivalent Allowable Emissions: lb/hour tons/year		
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: PM		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA		5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.15 lb/hour 0.7 tons/year			7. Synthetically Limited? []
8. Emission Factor: 0.00999 lb/MMBtu Reference: AP-42 Table 3.2-2, 4/00			9. Emissions Method Code: 4
10. Calculation of Emissions (limit to 600 characters): (0.00999 lb/MMBtu)(15.15 MMBtu/hr) = 0.151 lb/hr (0.151 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.66 ton/yr			
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's fuel use data.			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA		
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year		
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: HAPs		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.1721 g/hp-hr 0.843 lb/hour 3.69 tons/year		7. Synthetically Limited? []	
8. Emission Factor: 0.17211 g/bhp-hr Reference: GRI-HAPCalc 3.1		9. Emissions Method Code: 4	
10. Calculation of Emissions (limit to 600 characters): $(0.1721\text{g/hp-hr})(2,225\text{ hp})(1\text{ lb}/453.6\text{ g}) = 0.843\text{ lb/hr}$ $(0.843\text{lb/hr})(8760\text{ hr/yr})(1\text{ ton}/2000\text{ lb}) = 3.69\text{ ton/yr}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters): Detailed calculations provided in Attachment D. HAP emissions are also included in VOC emissions.			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>Narrative</u> _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description accompanying these forms.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Emergency generator Cummins-Onan emergency generator Model GTA-12 rated at 120 kW</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code: C</p>	<p>5. Initial Startup Date: 01/14/02</p>	<p>6. Emissions Unit Major Group SIC Code: 49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The proposed generator engine will be a Cummins-Onan Model GTA-12 reciprocating engine rated at 120 kW (184 bhp) and fueled by natural gas.</p> <p>The unit will be operated no more than 500 hours per year.</p> <p>This unit was originally installed at Compressor Station No. 26 6in Lecanto, Florida, in 1994 under permit No. AC 09-229441</p>		

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

Emissions Unit Details

1. Package Unit:	
Manufacturer: Cummins-Onan	Model Number: GTA-12
2. Generator Nameplate Rating: 0.120	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	Unknown	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	500 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Schedule will be limited to 500 hours per year.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? GEN01		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: V	6. Stack Height: 33 feet	7. Exit Diameter: 0.33 feet	
8. Exit Temperature: 1150 °F	9. Actual Volumetric Flow Rate: 1,250 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 456.54 North (km): 3135.48			
14. Emission Point Comment (limit to 200 characters): This 184 bhp emergency generator will not be operated more than 500 hours per year.			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment of

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas fired reciprocating engine driving a 120 Kw generator, operating no more than 500 hours per year.		
2. Source Classification Code (SCC): 2-02-002-54		3. SCC Units: MM scf burned
4. Maximum Hourly Rate: Unknown	5. Maximum Annual Rate: Unknown	6. Estimated Annual Activity Factor: NA
7. Maximum % Sulfur: 0.03	8. Maximum % Ash: NA	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): 		

Segment Description and Rate: Segment NA of

1. Segment Description (Process/Fuel Type) (limit to 500 characters): NA		
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 (limit to 200 characters): 		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**Potential Emissions**

1. Pollutant Emitted: NOX		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 1.78 lb/hour 7.80 tons/year		7. Synthetically Limited? [X]	
8. Emission Factor: 1.78 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): $(1.78 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 7.80 \text{ tpy}$ $(1.78 \text{ lb/hr})(500 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.45 \text{ tpy}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's data.			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: NA	4. Equivalent Allowable Emissions: 1.78 lb/hour 0.45 tons/year
5. Method of Compliance (limit to 60 characters): Maintain record of hours of operation.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Operation to be limited to 500 hrs/yr.	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**Potential Emissions**

1. Pollutant Emitted: CO		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.61 lb/hour 2.7 tons/year		7. Synthetically Limited? [X]	
8. Emission Factor: 0.61 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): $(0.61 \text{ lb/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 2.67 \text{ tpy}$ $(0.61 \text{ lb/hr})(500 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) = 0.15 \text{ tpy}$			
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's data.			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 0.61 lb/hour 0.15
5. Method of Compliance (limit to 60 characters): Maintain record of hours of operation.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Operation to be limited to 500 hrs/yr.	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.024 lb/hour 0.11 tons/year		7. Synthetically Limited? [X]	
8. Emission Factor: 0.024 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): (0.024 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.105 tpy (0.024 lb/hr)(500 hr/yr)(1 ton/2000 lb) = 0.006 tpy			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: 0.024 lb/hour 0.01 tons/year
5. Method of Compliance (limit to 60 characters): Maintain record of hours of operation.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Operation to be limited to 500 hrs/yr.	

**E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)**

Visible Emissions Limitation: Visible Emissions Limitation NA of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)**

Continuous Monitoring System: Continuous Monitor NA of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [] Rule [] Other	
4. Monitor Information: Manufacturer: Serial Number: Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>Narrative</u> _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description accompanying these forms.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Fugitive emissions from component leaks</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code: C</p>	<p>5. Initial Startup Date: 01/14/02</p>	<p>6. Emissions Unit Major Group SIC Code: 49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>These are new fugitive leak emissions from new components (valves, flanges, etc.).</p>		

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

Emissions Unit Details

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day	
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	24	hours/day	7 days/week
	52	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? FUGITIVE		2. Emission Point Type Code: 4	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: F	6. Stack Height: NA	feet	7. Exit Diameter: NA
			feet
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: NA	acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: NA		dscfm	12. Nonstack Emission Point Height: 0
			feet
13. Emission Point UTM Coordinates: Zone: 17 East (km): 456.54 North (km): 3135.48			
14. Emission Point Comment (limit to 200 characters):			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fugitive emissions from component leaks.		
2. Source Classification Code (SCC): 3-10-888-11		3. SCC Units: MM cubic feet produced
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor: component count
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment (limit to 200 characters): Based on count of new components and USEPA emission factors provided in EPA publication EPA-453/R-95-017, November 1995, "Protocol for Equipment Leak Emission Estimates"		

Segment Description and Rate: Segment NA of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): NA		
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 (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.1530 lb/hour 0.67 tons/year		7. Synthetically Limited? []	
8. Emission Factor: lb/hr/component Reference: EPA-453/R-95-017, Protocol for Equipment Leak Emission Estimates"		9. Emissions Method Code: 5	
10. Calculation of Emissions (limit to 600 characters): (EPA factor for specific component type) (number of components of specific type) = tpy. Assume non-methane/non-ethane fraction is 5%. (tons/year)(2000 lb/ton)(1 yr/8760 hr) = lb/hr			
11. Pollutant Potential Emissions Comment (limit to 200 characters): Factors vary by component type. See Attachment D for specific factors and calculations.			

Allowable Emissions Allowable Emissions NA of

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: NA lb/hour NA tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE 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. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units 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 (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>Narrative</u> _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description accompanying these forms.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>4,200-gallon vertical fixed roof pipeline condensate storage tank.</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code: C</p>	<p>5. Initial Startup Date: 01/14/02</p>	<p>6. Emissions Unit Major Group SIC Code: 49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Tank is vertical and measures approximately 8 feet high by 9.5-foot diameter.</p>		

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

Emissions Unit Details

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr tons/day
3. Maximum Process or Throughput Rate:	3000 gallons per year
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24	hours/day 7 days/week
52	weeks/year 8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Condensate		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: F	6. Stack Height: NA	feet	7. Exit Diameter: NA
			feet
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: NA	acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: NA		dscfm	12. Nonstack Emission Point Height: 8
			feet
13. Emission Point UTM Coordinates: Zone: 17 East (km): 456.54 North (km): 3135.48			
14. Emission Point Comment (limit to 200 characters): 4200 gallon vertical tank			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC): 4-07-146-97 and 4-07-146-98		3. SCC Units: 3000 gallons throughput
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor: 0.7
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment NA of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): NA		
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 (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code: NA	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:	
6. Potential Emissions: 0.003 lb/hour 0.015 tons/year		7. Synthetically Limited? []	
8. Emission Factor: Reference: USEPA AP-42 Tanks3.1 Program		9. Emissions Method Code: 3	
10. Calculation of Emissions (limit to 600 characters): Calculated using USEPA Tanks program, version 3.1. See Attachment D for output.			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions NA of _____

1. Basis for Allowable Emissions Code: NA	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: NA lb/hour NA tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): None	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>Narrative</u> _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description accompanying these forms.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>4,200-gallon vertical oily water storage tank.</p>		
<p>3. Emissions Unit Identification Number: ID:</p>		<p><input checked="" type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code: C</p>	<p>5. Initial Startup Date: 01/14/02</p>	<p>6. Emissions Unit Major Group SIC Code: 49</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Tank is vertical and measures approximately 8 feet high by 9.5-foot diameter.</p>		

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
NA	
2. Control Device or Method Code(s):	NA

Emissions Unit Details

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr tons/day
3. Maximum Process or Throughput Rate:	3000 gallons per year
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24	hours/day 7 days/week
52	weeks/year 8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Oily Water		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: F	6. Stack Height: NA	feet	7. Exit Diameter: NA
			feet
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: NA	acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: NA	dscfm	12. Nonstack Emission Point Height: 8	feet
13. Emission Point UTM Coordinates: Zone: 17 East (km): 456.54 North (km): 3135.48			
14. Emission Point Comment (limit to 200 characters): 4200 gallon vertical tank			

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC): 4-07-146-97 and 4-07-146-98		3. SCC Units: 1000 gallons throughput
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor: 2.5
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment (limit to 200 characters): None		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Breathing loss.		
2. Source Classification Code (SCC): 4-07-016-14		3. SCC Units: 1000 gallon capacity
4. Maximum Hourly Rate: 0	5. Maximum Annual Rate: 0	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment (limit to 200 characters):		

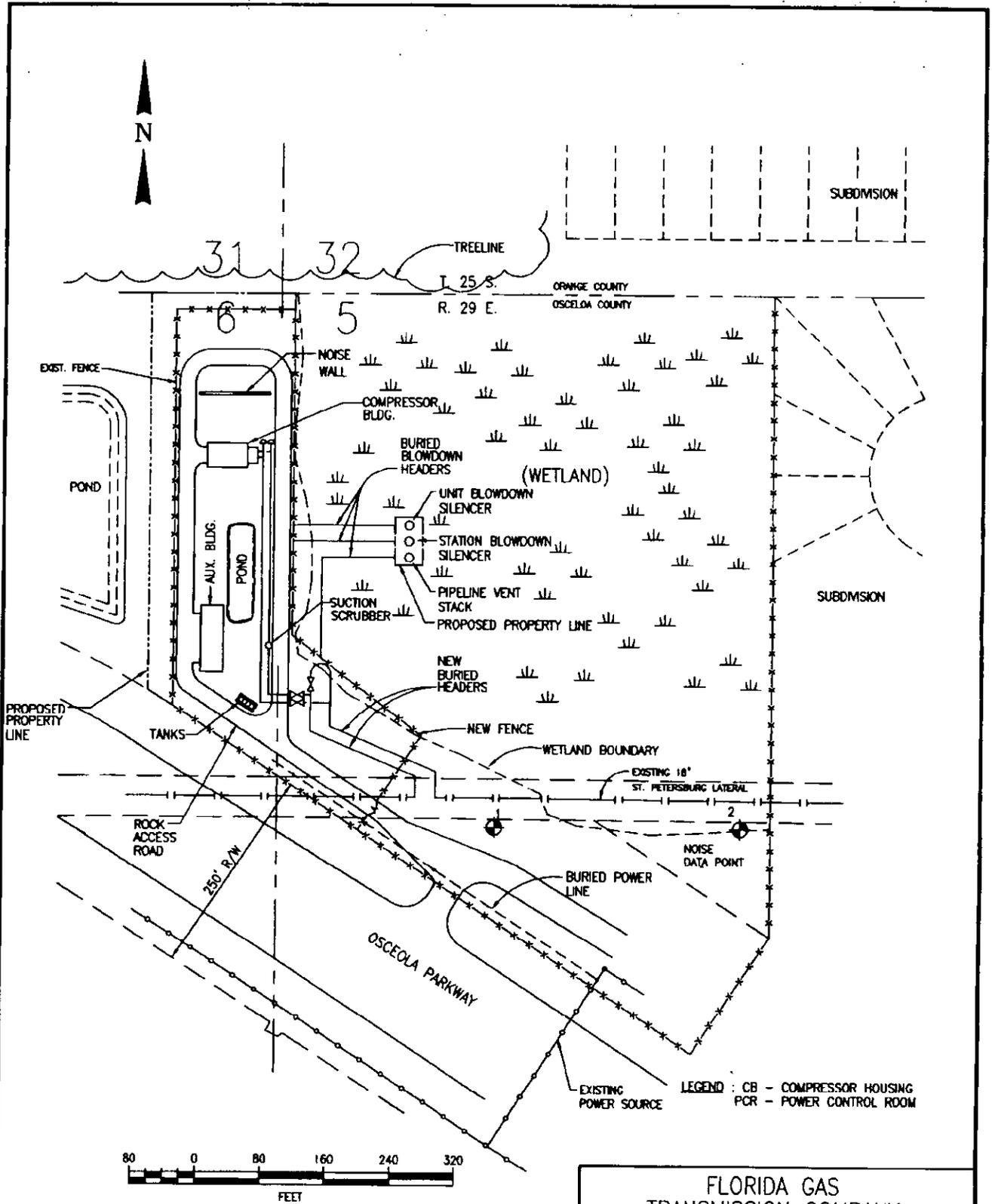
G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>Narrative</u> _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information is provided in the narrative description accompanying these forms.

Attachment B

Plot Plan



NOISE DATA:

Avg. 1 Hour
 LEQ taken 2 p.m. 10/21
 Temp. 68-85°F
 Wind: 3-5 MPH SW

FLORIDA GAS TRANSMISSION COMPANY

PROPOSED FGT PHASE V
 NEW COMPRESSOR STATION NO. 31
 PLOT PLAN

DRAW. NO.

NV-10

10/24/00

INFO.DWG - 07/25/2000 - 10.20

Attachment C

Vendor Information

Caterpillar Model 3608 Reciprocating Turbine

G3608

GAS ENGINE TECHNICAL DATA

CATERPILLAR

Custom

01/2000

ENGINE SPEED (rpm):	1000	FUEL TYPE:	Nat Gas
COMPRESSION RATIO:	9:1	MIN. FUEL PRESSURE (psig):	45
AFTERCOOLER WATER (°F)	129	MIN. RATED METHANE NUMBER:	60
JACKET WATER OUT (°F)	190	RATED ALTITUDE @ 77°F (ft):	4921
IGNITION SYSTEM:	CIS	FUEL LHV (Btu/ft ³):	903
EXHAUST MANIFOLD:	Dry		

RATING		100%	75%	50%	
ENGINE POWER	(1)	bhp	2225	1689	1113

ENGINE DATA					
FUEL CONSUMPTION		Btu/bhp-hr	6910	7035	7550
AIR FLOW (@ 77°F, 13.9 psia)		ft ³ /min	8,137	4,716	3,144
AIR MASS FLOW		lb/hr	23,785	19,798	13,187
COMPRESSOR OUTLET PRESSURE		psi (abs)	34.5	26.7	19.0
COMPRESSOR OUTLET TEMPERATURE		°F	289	237	154
INLET MANIFOLD PRESSURE		psi (abs)	34.2	26.4	18.7
INLET MANIFOLD TEMPERATURE		°F	141	137	133
LAMBDA			2.06	2.06	1.92
TIMING		°BTDC	20.2	20.2	19.0
EXHAUST STACK TEMPERATURE		°F	842	861	912
EXHAUST GAS FLOW (@ stack temp, 14.6 psia)		ft ³ /min	14,818	11,566	8,017
EXHAUST GAS MASS FLOW		lb/hr	26,546	20,402	13,630

EMISSIONS					
NOx (as NO ₂)	(2)	g/bhp-hr	0.70	0.70	0.70
CARBON MONOXIDE	(2)	g/bhp-hr	2.50	2.50	2.50
TOTAL HYDROCARBONS	(2)	g/bhp-hr	5.00	6.30	6.50
NON-METHANE HYDROCARBONS	(2)	g/bhp-hr	0.90	0.95	0.98
EXHAUST OXYGEN		%	12.3	11.7	10.7

HEAT BALANCE DATA					
FUEL INPUT ENERGY (LHV)	(2)	Btu/min	232,538	186,081	139,990
HEAT REJ. TO EXH. (LHV to 77°F)	(4)	Btu/min	96,541	78,445	53,305
HEAT REJ. TO EXH. (360°F)	(4)	Btu/min	57,622	46,087	34,976
HEAT REJ. TO AFTERCOOLER	(5)	Btu/min	16,696	8,974	1,689
HEAT REJ. TO ATMOSPHERE	(6)	Btu/min	8,839	8,218	7,589
HEAT REJ. TO LUBE OIL	(7)	Btu/min	11,715	10,882	10,578
HEAT REJ. TO JACKET WATER	(8)	Btu/min	24,162	20,374	17,626

- NOTES** TYPICAL ENGINE EXHAUST $\phi = 1.8"$
- Continuous output and reference conditions according to ISO 3046/1 (77°F, 14.5 psia). No overload permitted at the rating shown.
 - Tolerances are included. Consult the factory for emissions for permitting purposes.
 - Tolerance +2.5, -3.0%
 - Tolerance +10, -20% jacket water heat rejection based on treated water as coolant
 - Tolerance +6, -25% heat rejection based on treated water as coolant
 - Tolerance +40, -25% engine only

Preliminary Deep Core A/C

Attachment D

Emission Calculations

Engine Emissions

Engine HAP Emissions

Fugitive Leak Emissions

Tank Emissions

Engine Emissions

Engine No. 3101

NOx Emissions: (Based on Vendor Data)

$$\begin{aligned}\text{lb NOx/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (0.7 \text{ g/bhp-hr})(2225 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 3.43\end{aligned}$$

$$\begin{aligned}\text{tons NOx/yr} &= (\text{lb NOx/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (3.43 \text{ lb NOx/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 15.04\end{aligned}$$

CO Emissions: (Based on Vendor Data)

$$\begin{aligned}\text{lb CO/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (2.6 \text{ g/bhp-hr})(2225 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 12.75\end{aligned}$$

$$\begin{aligned}\text{tons CO/yr} &= (\text{lb CO/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (12.75 \text{ lb CO/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 55.86\end{aligned}$$

VOC Emissions: (Based on Vendor Data)

$$\begin{aligned}\text{lb VOC/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= (0.9 \text{ g/bhp-hr})(2225 \text{ bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 4.41\end{aligned}$$

$$\begin{aligned}\text{tons VOC/yr} &= (\text{lb VOC/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (4.41 \text{ lb VOC/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 19.34\end{aligned}$$

SO2 Emissions: (Based on FERC Limits)

$$\begin{aligned}\text{lb S/hr} &= (\text{gr S}/100 \text{ scf})(\text{MMscf/hr})(1 \text{ lb}/7000 \text{ gr}) \\ &= (10 \text{ gr S}/100 \text{ scf})(0.0146 \text{ MMscf/hr})(1 \text{ lb}/7000 \text{ gr}) \\ &= 0.21\end{aligned}$$

$$\begin{aligned}\text{lb SO2/hr} &= (\text{lb S/hr})(2 \text{ lb SO2}/\text{lb S}) \\ &= (0.21 \text{ lb S/hr})(2 \text{ lb SO2}/\text{lb S}) \\ &= 0.42\end{aligned}$$

$$\begin{aligned}\text{tons SO2/yr} &= (\text{lb SO2/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.42 \text{ lb SO2/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 1.82\end{aligned}$$

PM Emissions: (Based on AP-42 Table 3.2-2, 4/00)

$$\begin{aligned}\text{lb PM/hr} &= (\text{lb PM/MMBtu})(\text{MMBtu/hr}) \\ &= (0.00999 \text{ MMBtu/hr})(0.0146 \text{ MMBtu/hr}) \\ &= 0.15\end{aligned}$$

$$\begin{aligned}\text{tons PM/yr} &= (\text{lb PM/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.15 \text{ lb PM/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.66\end{aligned}$$

Engine No. GEN01

NOx Emissions: (Based on Vendor Data)

$$\text{lb NOx/hr} = 1.78$$

$$\begin{aligned}\text{tons NOx/yr} &= (\text{lb NOx/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (1.78 \text{ lb NOx/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 7.80\end{aligned}$$

For 500 Hours

$$\begin{aligned}&= (1.78 \text{ lb NOx/hr})(500 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.45\end{aligned}$$

CO Emissions: (Based on Vendor Data)

$$\begin{aligned}\text{lb CO/hr} &= (\text{g/bhp-hr})(\text{bhp})(1 \text{ lb}/453.59 \text{ g}) \\ &= 0.61\end{aligned}$$

$$\begin{aligned}\text{tons CO} &= (\text{lb CO/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.61 \text{ lb CO/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 2.67\end{aligned}$$

For 500 Hours

$$\begin{aligned}&= (0.61 \text{ lb CO/hr})(500 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.15\end{aligned}$$

VOC Emissions: (Based on Vendor Data)

$$\text{lb VOC/hr} = 0.024$$

$$\begin{aligned}\text{tons VOC/yr} &= (\text{lb VOC/hr})(\text{hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= (0.024 \text{ lb VOC/hr})(8760 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.105\end{aligned}$$

For 500 Hours

$$\begin{aligned}&= (0.024 \text{ lb VOC/hr})(500 \text{ hr/yr})(1 \text{ ton}/2000 \text{ lb}) \\ &= 0.01\end{aligned}$$

Engine HAP Emissions

GRI-HAPCalc Version 3.1 is a personal computer-based database program that estimates emissions of hazardous air pollutants (HAPs) and criteria pollutants from natural gas industry operations. HAPCalc 3.1 estimates emissions from the following point sources: amine sweetening units, sulfur recovery units, reciprocating engines, combustion turbines, small external combustion devices, flares, liquid hydrocarbon storage tanks, truck loading, miscellaneous process vents, and fugitives.

Emissions are estimated with factors derived from data collected during various GRI Environment and Safety research programs or by the U.S. Environmental Protection Agency (EPA). The GRI Literature database, developed during Phase I of the Air Toxics Program (1990 to 1992), compiled available emission test results from 40 reciprocating engines, 2 gas turbines, and 1 steam generator. The GRI Field Test database, developed from 1994 to 1997, contains GRI test data from 26 engines, 9 gas turbines, and 8 external combustion devices operating at several natural gas transmission, storage, and processing facilities. EPA emission factors are obtained from AP-42, 5th Edition [U.S. Environmental Protection Agency].

Since data are not available for all pollutants for some of the emission factor sets, a hierarchical combination of EPA > GRI Field > GRI Literature was used. Emission factors are prioritized in the listed order.

Engine 3101 HAP Emission Factors and Emissions

Chemical	EF g/bhp-hr	tpy	lbs/hour	Factor Set
Formaldehyde	0.127006	2.72629289	0.6224413	EPA
Methanol	0.0044452	0.09542004	0.0217854	EPA
Acetaldehyde	0.0163293	0.35052245	0.08002796	EPA
Acrolein	0.0074	0.15884736	0.03626652	GRI Literature
Benzene	0.0034927	0.07497381	0.01711731	EPA
Toluene	0.0036287	0.07789316	0.01778383	EPA
Ethylbenzene	0.0003221	0.00691415	0.00157857	EPA
Xylenes(m,p,o)	0.0012701	0.02726379	0.00622461	EPA
2,2,4-Trimethylpentane	0.0013154	0.02823619	0.00644662	EPA
n-Hexane	0.0032205	0.0691308	0.01578329	EPA
Phenol	0.0000907	0.00194695	0.00044451	EPA
Styrene	0.0001724	0.00370071	0.00084491	EPA
Naphthalene	0.0000381	0.00081785	0.00018672	EPA
Biphenyl	0.0007711	0.01655232	0.00377907	EPA
Fluorene	0.0000367	0.0007878	0.00017986	EPA
Ethylene Dibromide	0.0003629	0.00778996	0.00177853	EPA
Vinyl Chloride	0.0001225	0.00262957	0.00060036	EPA
Methylene Chloride	0.000313	0.00671881	0.00153397	EPA
1,1-Dichloroethane	0.0001905	0.00408925	0.00093362	EPA
1,3-Dichloropropene	0.0002177	0.00467312	0.00106692	EPA
Chlorobenzene	0.0002177	0.00467312	0.00106692	EPA
Chloroform	0.0002313	0.00496505	0.00113357	EPA
1,1,2-Trichloroethane	0.0002087	0.00447992	0.00102281	EPA
1,1,2,2-Tetrachloroethane	0.0004082	0.00876236	0.00200054	EPA
Carbon Tetrachloride	0.0002994	0.00642688	0.00146732	EPA
TOTALS:	0.1721109	3.69	0.843	

Fugitive Leak Emissions

Component	Service	Component	Emissions *	NM/NE	Emissions
		Count	Factor (ton/yr)	Fraction	(ton/yr)
Valves	Gas	119	0.0434606	0.05	0.26
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	122	0.0037666	0.05	0.02
Open-Ended Line	Gas	47	0.0193158	0.05	0.05
Pumps	Gas	0	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	10	0.0241448	1.00	0.24
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	24	0.0010624	1.00	0.03
Open-Ended Line	Light Oil	4	0.0135211	1.00	0.05
Pumps	Light Oil	0	0.1255527	1.00	0.00
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	26	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	32	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	3	0.0013521	1.00	0.00
Other	Heavy Oil	5	0.0002994	1.00	0.00
				TOTAL:	0.66

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

Tank Emission Calculations

TANKS PROGRAM 3.1
EMISSIONS REPORT - SUMMARY FORMAT
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS

05/03/01
PAGE 1

Identification

Identification No.: 31/Cond01
City: Kissimee
State: FL
Company: FGT
Type of Tank: Vertical Fixed Roof
Description: Condensate Tank

Tank Dimensions

Shell Height (ft): 8.0
Diameter (ft): 9.5
Liquid Height (ft): 8.0
Avg. Liquid Height (ft): 4.5
Volume (gallons): 4242
Turnovers: 0.7
Net Throughput (gal/yr): 3000

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
Radius (ft) (Dome Roof): 0.00
Slope (ft/ft) (Cone Roof): 0.0625

Breather Vent Settings

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

Meteorological Data Used in Emission Calculations: Orlando, Florida

(Avg Atmospheric Pressure = 14.7 psia)

TANKS PROGRAM 3.1
 EMISSIONS REPORT - SUMMARY FORMAT
 LIQUID CONTENTS OF STORAGE TANK

05/03/01
 PAGE 2

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F)			Liquid Bulk Temp. (deg F)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Pipeline Condensate	All	74.41	68.90	79.92	72.42	0.7152	0.6256	0.8154	53.075			53.00	Option 4: RVP=1.40
Benzene						1.7190	1.4871	1.9798		0.0008	0.0019	78.11	Option 2: A=6.9050,
B=1211.033, C=220.790													
Ethylbenzene						0.1762	0.1470	0.2103		0.0006	0.0001	106.17	Option 2: A=6.9750,
B=1424.255, C=213.210													
Pipeline Condensate						0.7156	0.6259	0.8158		0.9950	0.9963	53.00	Option 4: RVP=1.40
Toluene						0.5095	0.4331	0.5971		0.0016	0.0011	92.13	Option 2: A=6.9540,
B=1344.800, C=219.480													
Xylene (-m)						0.2087	0.1745	0.2485		0.0010	0.0003	106.17	Option 2: A=7.0090,
B=1426.266, C=215.110													
Xylene (-o)						0.1171	0.0971	0.1406		0.0010	0.0002	106.17	Option 2: A=6.9980,
B=1474.679, C=213.690													

TANKS PROGRAM 3.1
 EMISSIONS REPORT - SUMMARY FORMAT
 INDIVIDUAL TANK EMISSION TOTALS

05/03/01
 PAGE 3

Annual Emissions Report

Liquid Contents	Losses (lbs.):		Total
	Standing	Working	
Pipeline Condensate	27.44	2.03	29.48
Benzene	0.05	0.00	0.06
Ethylbenzene	0.00	0.00	0.00
Pipeline Condensate	27.34	2.03	29.37
Toluene	0.03	0.00	0.03
Xylene (-m)	0.01	0.00	0.01
Xylene (-o)	0.00	0.00	0.00
Total:	27.44	2.03	29.48

TANKS PROGRAM 3.1
EMISSIONS REPORT - SUMMARY FORMAT
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS

05/03/01
PAGE 1

Identification

Identification No.: 31/oily01
City: Kissimee
State: FL
Company: FGT
Type of Tank: Vertical Fixed Roof
Description: Oily Water Tank

Tank Dimensions

Shell Height (ft): 8.0
Diameter (ft): 9.5
Liquid Height (ft): 8.0
Avg. Liquid Height (ft): 4.5
Volume (gallons): 4242
Turnovers: 0.7
Net Throughput (gal/yr): 3000

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
Radius (ft) (Dome Roof): 0.00
Slope (ft/ft) (Cone Roof): 0.0625

Breather Vent Settings

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

Meteorological Data Used in Emission Calculations: Orlando, Florida

(Avg Atmospheric Pressure = 14.7 psia)

TANKS PROGRAM 3.1
 EMISSIONS REPORT - SUMMARY FORMAT
 LIQUID CONTENTS OF STORAGE TANK

05/03/01
 PAGE 2

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F)			Liquid Bulk Temp. (deg F)	Vapor Pressures (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	74.41	68.90	79.92	72.42	0.0033	0.0026	0.0040	190.000			190.00	Option 1

TANKS PROGRAM 3.1
 EMISSIONS REPORT - SUMMARY FORMAT
 INDIVIDUAL TANK EMISSION TOTALS

05/03/01
 PAGE 3

Annual Emissions Report

Liquid Contents	Losses (lbs.):		Total
	Standing	Working	
Lube Oil	0.38	0.04	0.42
Total:	0.38	0.04	0.42