Florida Gas Transmission Company

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

February 7, 2003

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

Reference: Facility Number: 0410004
Compressor Station No. 24, Gilchrist County

Dear Mr. Fancy:

Subject: Application for Air Construction Permit

Florida Gas Transmission Company (FGT) is proposing to install a new Cooper-Rolls 501-KC7 compressor turbine at the above referenced facility. This existing facility is a minor source under Title V and New Source Review regulations and the proposed modification is not significant; therefore, only a state construction permit is required.

Enclosed is an Application for an Air Construction Permit for the proposed modification. A check for $2,000.00 is attached for the application fee.

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 VI Project

ATTACHMENTS

CC: James Alexander, Phase VI w/o attachments
Rick Craig, w/o attachments
Frank Diemont
Jake Krautsch, Tallahassee
V. Duane Pierce, AQMcs

Florida Gas Transmission Company

Phase VI Expansion Project

Compressor Station No. 24

Trenton, Florida

APPLICATION
For
AIR CONSTRUCTION
PERMIT

February 2003

Prepared by AQMcs, LLC

Table of Contents

List of Tables

1.0 INTRODUCTION

Florida Gas Transmission Company (FGT), a Delaware Corporation and ENRON/EL PASO affiliate of Houston, Texas, is proposing to modify its existing natural gas pipeline facility near Trenton in Gilchrist County, Florida (Compressor Station No. 24). This proposed modification is part of FGT's Phase VI Expansion Project, aimed at increasing the supply capacity of FGT's network servicing domestic, commercial, and industrial customers in Florida. The scope of work for the Phase VI Expansion Project includes expansion through the addition of state-of-the-art compressor engines at existing compressor stations and the development of pipeline within the State of Florida. The basic project components include:

- Mainline loops, additions, and replacements;
- Lateral loops and additions;
- Meter station additions, modifications, and expansions;
- Regulator additions, modifications, and expansions; and
- Compressor station modifications.

Compressor Station No. 24 is located in Gilchrist County, Florida, approximately 4 miles north of Trenton on U. S. Highway 129. Figure 1-1 shows the location of the compressor station.

The proposed expansion at this location consists of the addition of one 7,222 ISO brake horsepower (bhp), natural-gas-fired, turbine compressor engine. The proposed compressor engine will be used solely for transporting natural gas by pipeline for distribution to markets in Florida. The proposed new engine is a Cooper-Rolls 501-KC7 DLE equipped with dry low NO_X (oxides of nitrogen) combustion. Under current federal and state air quality regulations, the proposed modification will constitute a minor modification of an existing minor source. Based on the projected annual emission rates, there will be no PSD (Prevention of Significant Deterioration) significant increase in any emissions.

Engineering designs for the proposed expansion project include selection of an engine incorporating dry low NO_X combustion technology. Dry low NO_X technology for control of NO_X emissions would represent Best Available Control Technology (BACT) for the proposed turbine engine under PSD requirements.

This application contains two additional sections. Descriptions of the existing operation at FGT's Compressor Station No. 24 and the proposed upgraded turbine are presented in Section 2.0. The air quality review requirements and applicability of state and federal regulations are discussed in Section 3.0.

FDEP permit application forms are provided in Attachment A. Attachment B contains a plot plan, Attachment C contains vendor information and Attachment D contains emission calculations.

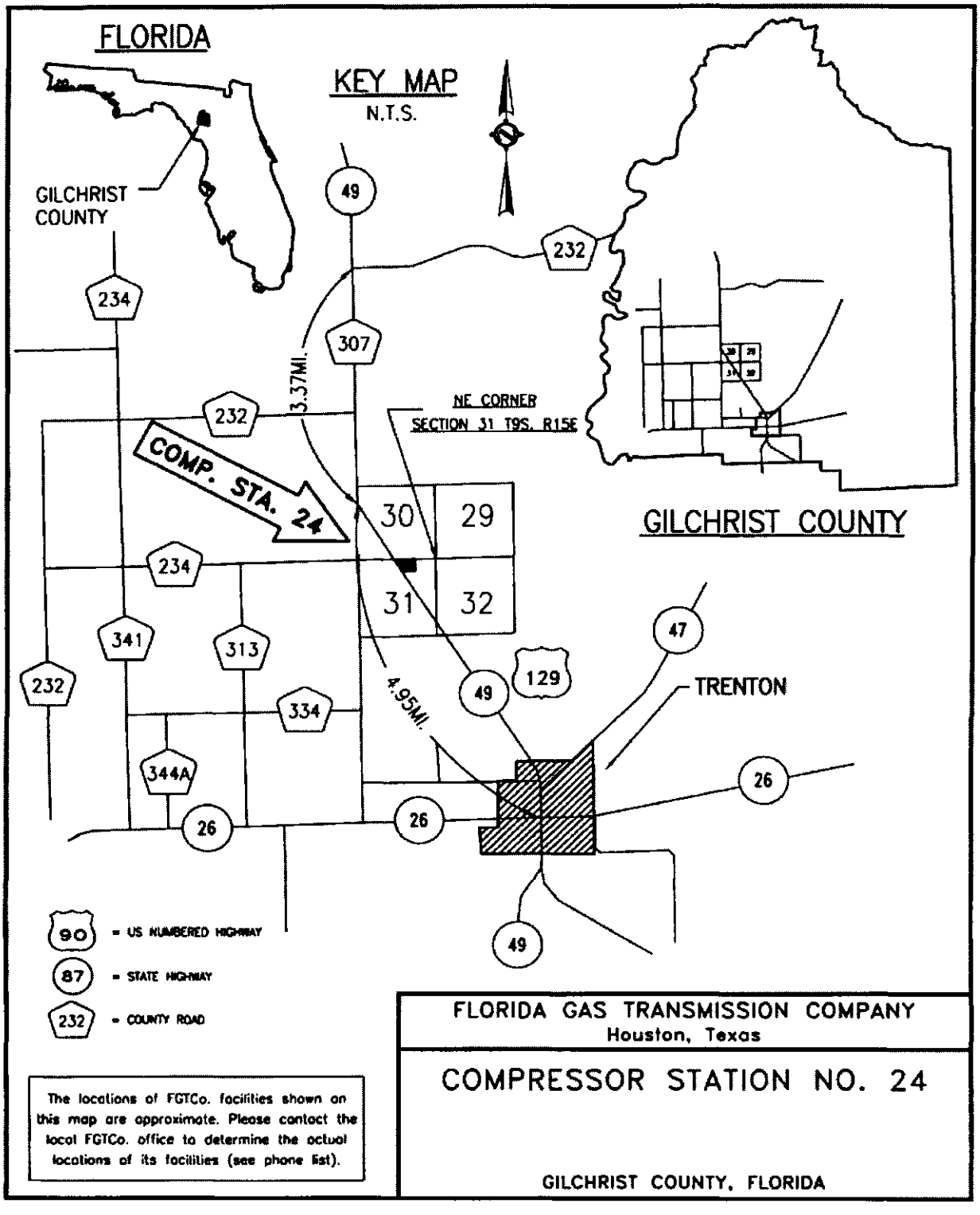

FLORIDA
KEY MAP
N.T.S.
GILCHRIST COUNTY
49
232
234
307
3.37MI.
NE CORNER
SECTION 31 T9S, R15E
COMP. STA. 24
30
29
31
32
GILCHRIST COUNTY
234
341
313
232
334
4.95MI.
49
129
47
TRENTON
344A
26
26
26
90 = US NUMBERED HIGHWAY
87 = STATE HIGHWAY
232 = COUNTY ROAD
The locations of FGTCo. facilities shown on this map are approximate. Please contact the local FGTCo. office to determine the actual locations of its facilities (see phone list).
FLORIDA GAS TRANSMISSION COMPANY
Houston, Texas
COMPRESSOR STATION NO. 24
GILCHRIST COUNTY, FLORIDA

Figure 1-1

2.0 PROJECT DESCRIPTION

A plot plan of FGT's Compressor Station No. 24, showing the location of the plant boundaries and the location of the proposed modified engine is presented in Attachment B. The following sections provide a description of the operations at this location.

2.1 Existing Operations

FGT's existing Compressor Station No. 24 consists of one 15,000 bhp (ISO) gas-fired turbine engine. Compressor Station No. 24 was built as a part of the Phase IV Expansion Project and was constructed in 2000-2001. The existing turbine (Compressor Engine 2401) was up rated in 2002 as part of the Phase V Expansion Project.

The existing facility also has supporting equipment including pipeline condensate and oily water storage tanks and an emergency generator.

2.2 Proposed Compressor Station Modification

FGT proposes to increase the horsepower capacity of Compressor Station No. 24, as part of the Phase VI Expansion Project. This will involve adding one new gas-fired turbine (Compressor Engine 2402). The proposed new engine will be used to increase the volumetric delivery capacity by driving a gas compressor that is a part of a gas transmission line that transports natural gas from source wells in Texas and Louisiana for delivery throughout Florida. Without the proposed modifications, it would not be possible to increase the volumetric delivery capacity necessary to meet both short and long-term demands for natural gas in Florida.

2.2.1 New Compressor Engine Addition

FGT proposes to install one natural gas-fired turbine engine compressor unit and associated support equipment at Compressor Station No. 24. The turbine engine will be a Cooper-Rolls 501-KC7 DLE engine compressor unit rated at 7,222 bhp ISO. 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.

Table 2-1 Proposed Upgraded Turbine (2402) Specifications and Stack Parameters

Parameter	Design
Compressor Engine	2402
Type	Gas Turbine
Manufacturer	Cooper-Rolls
Model	501-KC7 DLE
Unit Size (shaft)	7,222 bhp (ISO)
Specific Heat Input [a]	8,736 Btu/hp-hr
Heat Rate[b]	63.09 MM Btu/hr
Maximum Fuel Consumption [a]	0.0607 MMscf/hr
Speed (shaft)	13,600 rpm
Stack Parameters	
Stack Height	61.17 ft
Stack Diameter	88" x 66"
Exhaust Gas Flow	98,427 acfm
Exhaust Temperature	958 °F
Exhaust Gas Velocity	40.69 ft/sec

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.
ft/sec	=	feet per second.
MMscf/hr	=	million standard cubic feet per hour
rpm	=	revolutions per minute.

[a] Based on vendor provided lower heating value heat rate of 7942 Btu/hp-hr plus 10% and a higher heating value for natural gas of 1040 British thermal units per standard cubic foot (Btu/scf).

[b] While producing 7,222 bhp at ISO conditions and with gas with HHV of 1040

Hourly and annual emissions of regulated pollutants from the proposed engine under normal operating conditions are presented in Table 2-2. Emissions of NOX, CO and VOCs are based on the engine manufacturer's supplied data (See Attachment C).

Typically, turbine vendors do not provide information on emissions of particulate matter (PM), sulfur dioxide (SO_2) or hazardous air pollutants (HAP); therefore, particulate matter and HAP emissions are based upon USEPA publication AP-42 Sectio 3.1 (USEPA, 2000) and emissions of SO_2 are based on FGT's Federal Energy Regulatory Commission (FERC) certificate limit of 10 grains sulfur per 100 cubic feet of natural gas.

Table 2-2 Proposed Upgraded Turbine (2402) Compressor Engine Emissions

Pollutant	Emission Factor	Reference	lb/hr	TPY
Nitrogen Oxides	5.7 lb/hr	Manufacturer Data	5.7	25.0
Carbon Monoxide	6.96 lb/hr	Manufacturer Data	6.96	30.5
Volatile Organic Compounds	1.49 lb/hr	Manufacturer Data	1.49	6.5
Particulate Matter*	0.0066 lb/MMBtu	AP-42, Table 3.1-2a	0.42	1.8
Sulfur Dioxide*	10 grains/100 scf	FERC Limit	1.73	7.6
HAPs	Various see Attachment C	AP-42, Table 3.1-3	0.065	0.28

* Emissions based on vendor provided heat rate plus 10 per cent

2.2.2 Fugitive Emissions

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

Table 2-3 VOC Fugitive Emission Calculations and Summary

Component	Service	Component Count	Emissions * Factor (ton/yr)	NM/NE Fraction	Emissions (ton/yr)
Valves	Gas	55	0.0434606	0.05	0.12
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	98	0.0037666	0.05	0.02
Open-Ended Line	Gas	9	0.0193158	0.05	0.01
Pumps/Compressors	Gas	1	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	0	0.0241448	1.00	0.00
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	0	0.0010624	1.00	0.00
Open-Ended Line	Light Oil	0	0.0135211	1.00	0.00
Pumps	Light Oil	1	0.1255527	1.00	0.13
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	6	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	33	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	0	0.0013521	1.00	0.00
Other	Heavy Oil	0	0.0002994	1.00	0.00
				TOTAL:	**0.2740**

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

2.2.3 Emissions Summary

The total new emissions resulting from the project are listed on Table 2-4. As can be seen from the table, the emission increases are not significant under PSD. The calculations used to estimate these emissions are presented in Attachment D.

Table 2-4 Potential Annual Emissions (tpy) Summary

SOURCE ID	DESCRIPTION	NO_x	CO	VOC[a]	SO_2	PM
EXISTING EMISSIONS						
2401	15,000 bhp Turbine Engine	49.5	60.0	1.8	14.9	3.5
GEN03	443 bhp Recip. Engine	2.2	0.6	0.01	0.2	0.2
FUGITIVE	Fugitive			0.32		
TANK 01	Oily Water Tank			<0.001		
TANK 02	Diesel Tank			<0.001		
TANK 03	Condensate Tank					
	CURRENT TOTALS:	**51.7**	**60.6**	**2.132**	**15.1**	**3.7**
ADDITIONAL NEW EMISSIONS						
2402	7,222 bhp Turbine Engine – new	25.0	30.5	6.5	7.6	1.8
FUGITIVE	Fugitive – new			0.27		
	PROPOSED NEW TOTALS:	**76.7**	**91.1**	**8.902**	**22.7**	**5.5**

(a) VOC = NM/NE HC

3.0 REGULATORY ANALYSIS

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

3.1 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 proposed operations at Compressor Station No. 24.

3.1.1 Classification of Ambient Air Quality

The 1970 Amendments to the CAA gave the USEPA specific authority to establish the minimum level of air quality that all states would be required to achieve. These minimum values or standards were developed in order to protect the public health (primary) and welfare (secondary).

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. The current classification of Gilchrist County is listed on Table 3-1 for each criteria pollutant. Gilchrist County in designated as either unclassifiable or attainment for all criteria pollutants. These designations were obtained from 40 CFR 81.310, as updated in the June 5, 1998 Federal Register (FR31036) and 62-204.340 F.A.C.

Table 3-1 Classification Of Gilchrist County For Each Criteria Pollutant

Carbon Monoxide	Attainment
Oxides of Nitrogen	Attainment
Sulfur Dioxide	Attainment
Particulate Matter (PM_{10})	Unclassifiable
Lead	Unclassifiable
Ozone	Attainment
Source 40 CFR 81.310 1998; 62-204.340 F.A.C.	

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 PSD Applicability

The 1977 CAA Amendments added Part C: Prevention of Significant Deterioration to the Act. This part required proposed new major stationary sources or existing sources planning a major modification in an area that has attained the National AAQS, to conduct a preconstruction review that includes a detailed analysis of the impacts from the source's emissions. Federal air quality permitting regulations for attainment areas are codified in the Code of Federal Regulations (CFR), Title 40- Protection of the Environment, Part 52.21 - Prevention of Significant Deterioration (40 CFR 52.21).

For the PSD regulations to apply to a given project, the proposed location must be in a PSD area, i.e., an area that has been classified as attainment or as unclassifiable for a particular pollutant. Gilchrist County is designated as attainment area for all criteria pollutants. A project's potential to emit is then reviewed to determine whether it constitutes a major stationary source or major modification to an existing 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.

According to the "Draft New Source Review Workshop (NSR) Manual (USEPA, October 1990),"

for a modification to be classified as major and therefore, subject to PSD review:

(1) The modification must occur at an existing major stationary source, and

(2) The net emissions increase of any pollutant emitted by the source, as a result of modification, is "significant", or

(3) The modification results in emissions increases, which if considered alone would constitute a major stationary source.

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

By these definitions, and based on the emissions presented in Section 2.0, the action proposed for Compressor Station No. 24 is modification of a minor stationary source, since Compressor Station No. 24 is not one of the 28 named source categories and emits <250 TPY of each regulated pollutant. Therefore, the compressor station is not subject to PSD pre-construction review.

Table 3-2 Applicability of PSD Significant Emission Rates

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

3.1.3 Non-Attainment New Source Review (NSR) Applicability

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

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

3.1.4 Applicability of New Source Performance Standards (NSPS)

The regulation of new sources through the development of standards applicable to a specific category of sources was a significant step taken by the 1970 CAA Amendments. The Administrator was directed to publish a proposed regulation establishing a Standard of Performance for any category of new sources that cause or contribute significantly to air pollution and which may reasonably be anticipated to endanger public health. All Standards apply to all sources within a given category, regardless of geographic location or ambient air quality at the location.

Performance standards are published in 40 CFR 60. The new turbine installed at Compressor Station No. 24 is subject to Subpart GG, Standards of Performance for Stationary Gas Turbines, because it will have a maximum heat input at peak load of >10.7 gigajoules/hour (10 MMBtu/hr) based on the lower heating value of the natural gas fuel. This regulation establishes emission limits for NO_X and SO_2 and requires performance testing and daily monitoring of fuel nitrogen and sulfur. The applicable emission standards are provided in Table 3-4.

The NO_x emission limit for Subpart GG is calculated as follows:

$$STD = 0.0150\ (14.4/Y) + F$$

STD = Allowable NO_x emissions

Y = Heat rate at peak load not to exceed 14.4 *KJwatt-hour*

F = NO_x emission allowance

The fuel bound nitrogen in natural gas is less than 0.015% by weight. Therefore, the value of F as defined in 40 CFR 60.332(3) is equal to zero.

$$Y = \textit{Btu/bhp-hr} \times 1.055\ \textit{Kj/Btu} \times \textit{hp-hr/745.7 watt-hour}$$

$$= \textit{7,942 Btu/bhp-hr} \times 1.055\ \textit{Kj/Btu} \times \textit{hp-hr/745.7 watt-hour}$$

$$= \textit{11.24 Kj/watt-hr}$$

$$STD = 0.0150\ (14.4/11.24) + 0$$

$$= \textit{0.0192 \%}$$

$$= 192\ ppm_v$$

Table 3-3 summarizes the NSPS applicability for the proposed gas engine.

The turbine at this facility will meet the NSPS for NO_X of 192 ppmv (i.e., manufacturer's estimation of 25 ppmv), and for SO_2 of 150 ppmv (estimated for this turbine to be about 10 ppmv).

Table 3-3 Applicability of New Source Performance Standards

NSPS Subpart	NSPS Regulations	Equipment	Fuel	Pollutant	Heat Input Applicability	Equipment Design Maximum*	NSPS Emission Limits	Equipment Emissions
GG	60.332(a)(2)	Engine No. 2402 Gas Turbine	Gas	NO_2	>10 MM Btu/hr	7,942 Btu/hp-hr	192 ppm_v	25 ppm_v
GG	60.333(a)	Engine No. 2402 Gas Turbine	Gas	SO_2	>10 MM Btu/hr	7,942 Btu/hp-hr	150 ppm_v	~10 ppm_v

* Design maximum based on vendor data for LHV.

3.2 Florida State Air Quality Regulations

Compressor Station No. 24 is currently operating under Permit No. 0390029-001-AV and is subject to the provisions of that permit. Rule 62, F.A.C., contains the air quality rules and regulations for the State of Florida. The primary federal regulations that affect Compressor Station No. 24 have been incorporated into or are referenced by these rules. The significant state regulations that are applicable to the new emission units are briefly listed below.

3.2.1 Rule 62-210.300 Permits Required

FGT is required to obtain a construction permit prior to 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.

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.

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).

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

The emissions from the emergency generator, storage tanks and 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.

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. 24	
3. Facility Identification Number: [X] Unknown	
4. Facility Location: Street Address or Other Locator: Intersection of U.S. Highway 129 and SW 50th Street City: Trenton County: Gilchrist Zip Code: 32693	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: Jim Thompson, Environmental Project Manager for Florida Gas Transmission Co. – Phase VI 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:	2-13-03
2. Permit Number:	0410004-006-AC

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)

[X] 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:
   Rick Craig, Vice President, Southeastern 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) 646-7227 - Fax: (713) 646-6128
4. Owner/Authorized Representative Statement:

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.*

Signature 03/07/03
Date

* 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)350-5035 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.

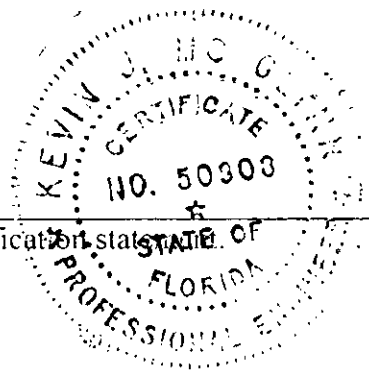
If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such 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 J. McElynn, P.E. — Feb. 11, 2003

Signature — Date

#50908

(seal)



* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
2402	Cooper-Rolls 501-KC7 DLE Turbine rated at 7,222 bhp, (ISO) Engine 2402	AC1D	$2,000.00

Application Processing Fee

Check one: [X] Attached - Amount: $__2,000.00_____ [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Cooper-Rolls 501-KC7 DLE Turbine rated at 7,222 bhp (ISO), Engine 2402

2. Projected or Actual Date of Commencement of Construction: 05/01/03

3. Projected Date of Completion of Construction: 09/14/03

Application Comment

This facility is part of FGT's Phase VI 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): 321.323 North (km): 3282.787			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 29/39/51 Longitude (DD/MM/SS): 82/50/46			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4922
7. Facility Comment (limit to 500 characters): Compressor Station No. 24 is a natural gas pipeline compressor station with one compressor engine. It is classified as a minor source under New Source Review and Title V definitions.			

Facility Contact

1. Name and Title of Facility Contact: Abe Kattawar, Team Environmental Leader
2. Facility Contact Mailing Address: Organization/Firm: Florida Gas Transmission Company Street Address: 5030 N. U.S. 129 Hwy. 239 City: Trenton State: FL Zip Code: 32693
3. Facility Contact Telephone Numbers: Telephone: (850) 544-6961 Fax: (352)-463-0097

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [ ] Synthetic Non-Title V Source?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [ ] Synthetic Minor Source of HAPs?	
5. [X] One or More Emissions Units Subject to NSPS?	
6. [ ] 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. New turbine is subject to NSPS Subpart GG.	

Rule Applicability Analysis

FDEP Title V Core List

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

40 CFR 60, Subpart GG Standards of Performance for Stationary Gas-fired Turbines

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	3. Requested Emissions Cap tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
NO_X	B				
CO	B				
VOC	B				
SO_2	B				
PM	B				
HAP	B				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: Narrative Fig. 1-1[ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID:_Att. B_ [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [ ] Attached, Document ID:_____ [ ] 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:
   [ ] Attached, Document ID::_____ [X] Not Applicable

6. Supplemental Requirements Comment:

Area map is provided as Figure 1-1 in the narrative.

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

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

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

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

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

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

7,222 bhp (ISO) natural gas fired turbine compressor unit

3. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

4. Emissions Unit Status Code:	5. Initial Startup Date:	6. Emissions Unit Major Group SIC Code:
C	09/14/03	49

7. Emissions Unit Comment: (Limit to 500 Characters)

The proposed turbine engine will be a Cooper-Rolls 501-KC7 DLE engine compressor unit ISO rated at 7,222 bhp. Fuel will be exclusively natural gas from the FGT's gas pipeline. The proposed engine will incorporate dry, low NO_X combustion technology

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):

The proposed engine will incorporate dry, low NOX combustion technology.

2. Control Device or Method Code(s): NA

Emissions Unit Details

1. Package Unit:
   Manufacturer: Cooper-Rolls
   Model Number: 501-KC7 DLE
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: 63.09 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 63.09 MM Btu/hr at ISO conditions based on a vendor specified 7,222 bhp and a LHV heat rate of 7,942 Btu/bhp-hr plus 10% to adjust to HHV.

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? 2402	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: 61.17 feet	7. Exit Diameter: 88" x 66"
8. Exit Temperature: 958 °F	9. Actual Volumetric Flow Rate: 98,427 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): 321.323 North (km): 3282.787		

14. Emission Point Comment (limit to 200 characters):

40 CFR 60 Appendix A Method 1:

Equivalent diameter (D_e) = 2WL / W + L
= (2 x 7.333' x 5.5') / (7.333' + 5.5')
= 80.663 / 12.833 = 6.28'

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas fired turbine engine driving a natural gas compressor, operating full time.		
2. Source Classification Code (SCC): 2-02-002-01	3. SCC Units: million cubic feet burned	
4. Maximum Hourly Rate: 0.0607	5. Maximum Annual Rate: 531.41	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 fuel rate of 63.09 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: 099	4. Secondary Control Device Code: NA	5. Total Percent Efficiency of Control:
6. Potential Emissions: 5.7 lb/hour 25.0 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: 5.7 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (5.7 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 24.97 tons/year		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's data. See Attachment C.		

Allowable Emissions Allowable Emissions __1___ of __1___

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 25 ppmv	4. Equivalent Allowable Emissions: 5.7 lb/hour 25.0 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): 40 CFR 60.332(a)(2) NOX emissions to 196 ppmv.	

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: 6.96 lb/hour 30.5 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: 6.93 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (6.96 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 30.48 tons/year		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's data. See Attachment C.		

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: 1.49 lb/hour 6.5 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: 1.49 lb/hr Reference: Vendor's data		9. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (1.49 lb/hr)(1 ton/2000 lb)(8760 hr/1 yr) = 6.53 tons/year		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's data. See Attachment C.		

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: SO2	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: 1.73 lb/hour 7.6 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 gr S/100 scf)(0.0607 MMscf/hr)(1 lb/7000 gr) = 0.87 lb S/hr
(0.87 lb S/hr)(2 lb SO2/lb S) = 1.73 lb SO2/hr
(1.73 lb SO2/hr)(8760 hr/yr)(1 ton/2000 lb) = 7.60 ton/yr

11. Pollutant Potential Emissions Comment (limit to 200 characters):

Based on vendor's heat rate value plus 10% and 1040 Btu/scf.

Allowable Emissions Allowable Emissions __1__ of __1__

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions: NA
3. Requested Allowable Emissions and Units: 10 grains/100 scf	4. Equivalent Allowable Emissions: 1.73 lb/hour 7.6 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):

40 CFR 60.333(a) limits SO2 emissions to 150 ppmv.

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: 0.42 lb/hour 1.8 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: 0.0066 lb/MM Btu Reference: Table 3.1-2a, AP-42 4/00, Supplement E		9. Emissions Method Code: 4
10. Calculation of Emissions (limit to 600 characters): (0.0066 lb/MM Btu)(63.09 MM Btu/hr) = 0.42 lb/hr (0.42 lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 1.84 ton/yr		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Based on vendor's heat rate value plus 10% and 1040 Btu/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:	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: 0.065 lb/hour 0.28 tons/year		7. Synthetically Limited? [ ]
6. Emission Factor: 0.001027 lb/MM Btu Reference: Table 3.1-3, AP-42, 04/00		7. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): (0.001027 lb/MM Btu)(63.09 Btu/hr) = 0.0648b/hr (0.0648lb/hr)(8760 hr/yr)(1 ton/2000 lb) = 0.28 ton/yr		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Detailed calculations provided in Attachment C. 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):	

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

Visible Emissions Limitation: Visible Emissions Limitation __1____ of __1____

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: 20% Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: 40 CFR 60 Appendix A Method 9	
5. Visible Emissions Comment (limit to 200 characters): Subject to 62-296-320(4)(b)1 General Visible Emissions Standards.	

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: 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 [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:___ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: NA

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

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

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

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

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

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Fugitive emissions from component leaks

3. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

4. Emissions Unit Status Code:	5. Initial Startup Date:	6. Emissions Unit Major Group SIC Code:
C	09/14/03	49

7. Emissions Unit Comment: (Limit to 500 Characters)

These are new fugitive leak emissions from new components (valves, flanges, etc.).

Emissions Unit Information Section __2___ of __2___

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: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °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): 321.323 North (km): 3282.787		
14. Emission Point Comment (limit to 200 characters):		

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _1___ of __1__

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: 0.0626 lb/hour 0.274 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: lb/hr/component Reference: EPA-453/R-95-017, Protocol for Equipment Leak EmissionEstimates"		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: [ ] 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: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

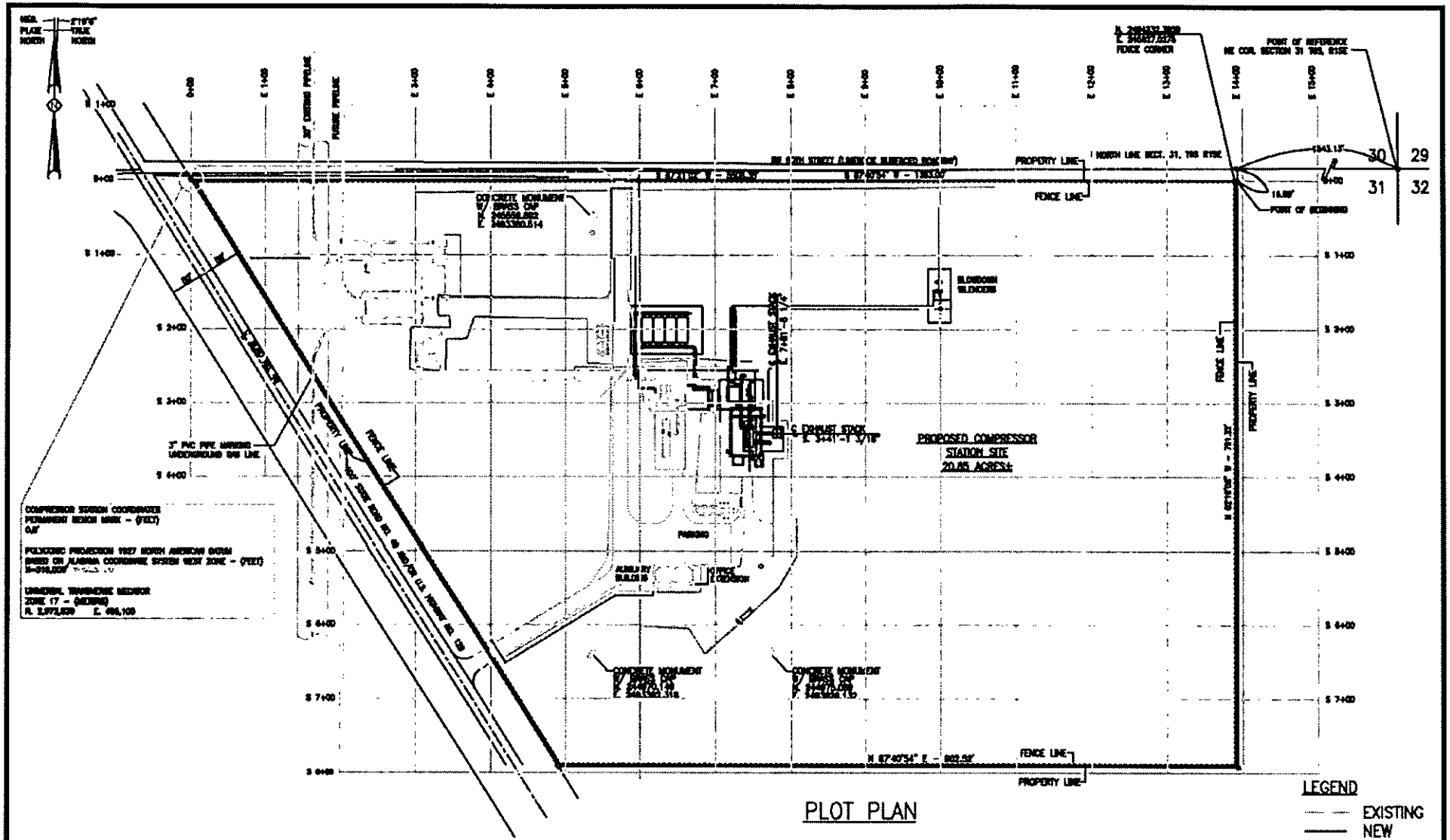
G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

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

Attachment B

Plot Plan



PLOT PLAN

PIPELINE, STATION, OR ACCOUNT NUMBER	SCALE N.T.S.	CONST. YR. 2003			PROJECT NO. C.012612
FILENUMBER / CADD FILENAME		DRAWN MM	DATE 10/16/02		
REV. NO. – DESCRIPTION	BY	DATE	APP.	Florida Gas Transmission Company, An Enron/El Paso Affiliate	COMPRESSOR STATION NO. 24 FGT PHASE VI EXPANSION PLOT PLAN GILCHRIST COUNTY, FLORIDA	PREVIOUS DWG. NO. SHT. OF DWG. NO. S3-1AP SHT. 1 OF 1 (A)

Attachment C

Vendor Information

Allison Industrial Engine Performance & Emissions Estimate (EDR 18656)

Date: June 4, 2001

Project: Florida Gas Site Analyses

Engine Configuration: 501-KC7, DLE W/Diffuser Bleed

Parameter\Data Pt. No.	C/S 15 #1
Altitude (feet)	50
Ambient Press. (psia)	14.669
Relative Humidity	60
Specific Humidity	0.006366
Inlet Loss ("H2O)	0
Exhaust Loss ("H2O)	0
Inlet Pressure (CIP, psia)	14.669
Inlet Temperature (CIT, °F)	59
Inlet Flow (lb/sec)	45.24
MGT t/c (°F)	1375
Control Temp. (°F)	1935
Fuel Flow (MMBTU/hr)	57.3545
Fuel Flow (lb/hr)	2808.74
Output Shaft Speed (rpm)	13600
Gas Generator Speed (rpm)	14677
Shaft Power (hp)	7222.1
% of Full Load	100
SFC [lb/(hp*hr)]	0.3889
HeatRate[Shaft] BTU/(shp*hr)	7942
Exhaust Flow (lb/sec)	45.708
Exhaust Temp. (f/a, °F)	958
Exhaust P-static (psia)	14.67
Fuel	Ref Gas
Fuel LHV (BTU/lb)	20420
H/C (wt ratio)	0.3261
Fuel Molecular Weight	16.6303
Fuel Specific Gravity	0.5902
Expected Emissions @ 15% O2	
NOx ppm	25
CO ppm	50
UHC ppm	20
VOC ppm	10
Expected Emissions (lb/eng-hr)	
NOx	5.7
CO	6.96
UHC	1.59
VOC	1.49
Exhaust Gas (vol %)	
CO2	2.94
H2O	6.63
O2	14.43
N2	75.1
Ar	0.9

NOTE: This data was originally prepared for Engine No. 1508 at FGT CS 15. Engine 2402 is an identical unit and the elevation is the same.

Attachment D

Emissions Calculations

Engine No. 2402 EPN: 002

NOx Emissions: (Based on Vendor Data)

lb NOx/hr = 5.70

tons NOx/yr = (lb NOx/hr)(hr/yr)(1 ton/2000 lb)
= (5.7 lb NOx/hr)(8760 hr/yr)(1 ton/2000 lb)
= 24.97

CO Emissions: (Based on Vendor Data)

lb CO/hr = 6.96

tons CO/yr = (lb CO/hr)(hr/yr)(1 ton/2000 lb)
= (7.0 lb CO/hr)(8760 hr/yr)(1 ton/2000 lb)
= 30.48

VOC Emissions: (Based on Vendor Data)

lb VOC/hr = 1.49

tons VOC/yr = (lb VOC/hr)(hr/yr)(1 ton/2000 lb)
(1.490 lb VOC/hr)(8760 hr/yr)(1 ton/2000
= lb)
= 6.53

SO2 Emissions: (Based on FERC Limits)

lb S/hr = (gr S/100 scf)(MMscf/hr)(1 lb/7000 gr)
(10 gr S/100 scf)(0.0607 MMscf/hr)(1
= lb/7000 gr)
= 0.87

lb SO2/hr = (lb S/hr)(2 lb SO2/lb S)
= (0.87 lb S/hr)(2 lb SO2/lb S)
= 1.73

tons SO2/yr = (lb SO2/hr)(hr/yr)(1 ton/2000 lb)
(1.73 lb SO2/hr)(8760 hr/yr)(1 ton/2000
= lb)
= 7.60

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

lb PM/hr = (lb PM/MMscf)(MMBtu/hr)
= (0.0066 lb/MMBtu)(63.09 MMBtu/hr)
= 0.42

tons PM/yr = (lb PM/hr)(hr/yr)(1 ton/2000 lb)
(0.42 lb PM/hr)(8760 hr/yr)(1 ton/2000
= lb)
= 1.82

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

lb HAP/hr = (lb HAP/MMBtu)(MMBtu/hr)
(0.00102733 lb/MMBtu)(63.0900
= MMBtu/hr)
= 0.0648

tons HAP/yr = (lb HAP/hr)(hr/yr)(1 ton/2000 lb)
(0.065 lb PM/hr)(8760 hr/yr)(1 ton/2000
= lb)
= 0.28

HAP	4 cycle lean (a) Factor lb/MMBtu	4 cycle rich (b) Factor lb/MMBtu	2 cycle lean (c) Factor lb/MMBtu	Turbine (d) Factor lb/MMBtu
1,1,2,2-Tetrachloroethane	4.00E-05	2.53E-05	6.63E-05	
1,1,2-Trichloroethane	3.18E-05	1.53E-05	5.27E-05	
1,3-Butadiene	2.67E-04	6.63E-04	8.20E-04	4.30E-07
1,3-Dichloropropene	2.64E-05	1.27E-05	4.38E-05	
2,2,4-Trimethylpentane	2.50E-04		8.46E-04	
2-Methylnaphthalene	3.32E-05		2.14E-05	
Acenaphthene	1.25E-06		1.33E-06	
Acenaphthylene	5.53E-06		3.17E-06	
Acetaldehyde	8.36E-03	2.79E-03	7.76E-03	4.00E-05
Acrolein	5.14E-03	2.63E-03	7.78E-03	6.40E-06
Anthracene			7.18E-07	
Benz(a)anthracene			3.36E-07	
Benzene	4.40E-04	1.58E-03	1.94E-03	1.20E-05
Benzo(a)pyrene			5.68E-09	
Benzo(b)fluoranthene	1.66E-07		8.51E-09	
Benzo(e)pyrene	4.15E-07		2.34E-08	
Benzo(g,h,i)perylene	4.14E-07		2.48E-08	
Benzo(k)fluoranthene			4.26E-09	
Biphenyl	2.12E-04		3.95E-06	
Carbon Tetrachloride	3.67E-05	1.77E-05	6.07E-05	
Chlorobenzene	3.04E-05	1.29E-05	4.44E-05	
Chloroform	2.85E-05	1.37E-05	4.71E-05	
Chrysene	6.93E-07		6.72E-07	
Ethylbenzene	3.97E-05	2.48E-05	1.08E-04	3.20E-05
Ethylene Dibromide	4.43E-05	2.13E-05	7.34E-05	
Fluoranthene	1.11E-06		3.61E-07	
Fluorene	5.67E-06		1.69E-06	
Formaldehyde	5.28E-02	2.05E-02	5.52E-02	7.10E-04
Indeno(1,2,3-c,d)pyrene			9.93E-09	
Methanol	2.50E-03	3.06E-03	2.48E-03	
Methylene Chloride	2.00E-05	4.12E-05	1.47E-04	
n-Hexane	1.11E-03		4.45E-04	
Naphthalene	7.44E-05	9.71E-05	9.63E-05	1.30E-06
PAH	2.69E-05	1.41E-04	1.34E-04	2.20E-06
Perylene			4.97E-09	
Phenanthrene	1.04E-05		3.53E-06	
Phenol	2.40E-05		4.21E-05	
Propylene Oxide				2.90E-05
Pyrene	1.36E-06		5.84E-07	
Styrene	2.36E-05	1.19E-05	5.48E-05	
Tetrchloroethane	2.48E-06			
Toluene	4.08E-04	5.58E-04	9.63E-04	1.30E-04
Vinyl Chloride	1.49E-05	7.18E-06	2.47E-05	
Xylenes	1.84E-04	1.95E-04	2.68E-04	6.40E-05
Total Hazardous Cmpds	**7.22E-02**	**3.24E-02**	**7.95E-02**	**1.03E-03**

References:
a - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-2
b - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-3
c - AP-42, 5th Edition, Supplement F, 07/00, Table 3.2-1
d - AP-42, 5th Edition, Supplement F, 04/00, Table3.1-3

Fugitive Emissions Factors					
Component		Service	Emissions * Factor tpy	Factor lb/hr	Factor kg/hr
Valves		Gas	0.0434606	0.00992251	0.00450085
Connector		Gas	0.0019316	0.00044100	0.00020004
Flanges		Gas	0.0037666	0.00085995	0.00039008
Open-Ended Line		Gas	0.0193158	0.00441000	0.00200038
Pumps		Gas	0.023179	0.00529201	0.00240046
Other		Gas	0.0849895	0.01940400	0.00880165
Valves		Light Oil	0.0241448	0.00551251	0.00250048
Connector		Light Oil	0.0020282	0.00046306	0.00021004
Flanges		Light Oil	0.0010624	0.00024256	0.00011002
Open-Ended Line		Light Oil	0.0135211	0.00308701	0.00140027
Pumps		Light Oil	0.1255527	0.02866500	0.01300244
Other		Light Oil	0.0724343	0.01653751	0.00750142
Valves		Heavy Oil	0.0000811	0.00001852	0.00000840
Connector		Heavy Oil	0.0000724	0.00001653	0.00000750
Flanges		Heavy Oil	0.0000038	0.00000087	0.00000039
Open-Ended Line		Heavy Oil	0.0013521	0.00030870	0.00014003
Pumps		Heavy Oil	NA	0.00529	NA
Other		Heavy Oil	0.0002994	0.00006836	0.00003101

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

New Components

Component	Service	Component Count	Emissions * Factor (ton/yr)	NM/NE Fraction	Emissions (ton/yr)
Valves	Gas	55	0.0434606	0.05	0.12
Connector	Gas	0	0.0019316	0.05	0.00
Flanges	Gas	98	0.0037666	0.05	0.02
Open-Ended Line	Gas	9	0.0193158	0.05	0.01
Pumps/Compressors	Gas	1	0.023179	0.05	0.00
Other	Gas	0	0.0849895	0.05	0.00
Valves	Light Oil	0	0.0241448	1.00	0.00
Connector	Light Oil	0	0.0020282	1.00	0.00
Flanges	Light Oil	0	0.0010624	1.00	0.00
Open-Ended Line	Light Oil	0	0.0135211	1.00	0.00
Pumps	Light Oil	1	0.1255527	1.00	0.13
Other	Light Oil	0	0.0724343	1.00	0.00
Valves	Heavy Oil	6	0.0000811	1.00	0.00
Connector	Heavy Oil	0	0.0000724	1.00	0.00
Flanges	Heavy Oil	33	0.0000038	1.00	0.00
Open-Ended Line	Heavy Oil	0	0.0013521	1.00	0.00
Other	Heavy Oil	0	0.0002994	1.00	0.00
				TOTAL:	**0.2740**