

P 360 185 701



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

To: Alan Weatherford	
FIA GAS Trans. Co	
Maitland, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date AC 57-188869, 2-17-93 20-189438, 67-189220, 04-189454 - 42-189455 48-189456 - 05-189665	

PS Form 3800, June 1991

56-189457

is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

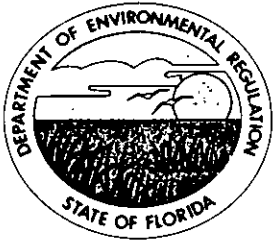
I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: Alan Weatherford Compliance Env FIA GAS Trans P O BOX 945100 Maitland, FL 32794-5100	4a. Article Number 0 360 185 701
5. Signature (Addressee) <i>M. Johnson</i>	4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature (Agent)	7. Date of Delivery
	8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 28, 1990

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA - Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Ms. Harper:

Re: Completeness Review

The enclosed information is being forwarded to you for completeness review.

1. Seminole Fertilizer Corp., Polk County, gas turbine cogeneration project, PSD-FL-157.

2. The following applications from Florida Gas Transmission Company:

Compressor Sta. No. 12, Santa Rosa County, PSD-FL-156
Compressor Sta. No. 13, Washington County, PSD-FL-158
Compressor Sta. No. 14, Gadsden County, PSD-FL-159
Compressor Sta. No. 15, Taylor County, PSD-FL-160
Compressor Sta. No. 16, Bradford County, PSD-FL-161
Compressor Sta. No. 17, Marion County, PSD-FL-162
Compressor Sta. No. 18, Orange County, PSD-FL-163
Compressor Sta. No. 20, St. Lucie County, PSD-FL-164

If there are any questions, please call Barry Andrews at (904)488-1344 or write to me at the above address. If it is convenient to FAX a response to us, the FAX number to use is (904)922-6979.

Sincerely,

Patricia G. Adams

for
C. H. Fancy, P.E.

Chief

Bureau of Air Regulation

CHF/pa

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS
123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314
(904) 222-7500
FAX (904) 224-8551

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPLÉ
GARY P. SAMS
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KATHLEEN BLIZZARD
THOMAS M. DE ROSE
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GARY V. PERKO
MICHAEL P. PETROVICH
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DOUGLAS S. ROBERTS
CECELIA C. SMITH
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OF COUNSEL
W. ROBERT FOXES

RECEIVED
NOV 21 1990
DER-BAQ

November 21, 1990

BY HAND-DELIVERY

Mr. Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road, Room 306F
Tallahassee, Florida 32399-2400

Re: Florida Gas Transmission Company

Dear Clair:

This letter will confirm that you and I conferred by telephone today, and you requested that Florida Gas Transmission Company withhold filing the signed Consent Order (OGC File No. 90-1225), compressor station permit applications, etc., until November 30, 1990. Based upon your request, we will not file the Consent Order or compressor station permit applications until that date.

I hope that you enjoy the Thanksgiving holiday.

Very truly yours,


James S. Alves

/kkm:Fancy3
cc: Teresa Heron



November 21, 1990

Ms. Theresa Heron
Florida Dept. of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399

VIA FAX

RECEIVED

NOV 28 1990

DER-BAQM

Re: ENRON/FGTC Compressor Station No. 12 PSD Permit Application

Dear Ms. Heron:

Per your request, please find the attached sheet of emission calculations for FGTC's Compressor Station No. 12. Also, there is a correction in the value calculated for particulate emissions, which now results in slightly lower hourly and annual emission values. Additional pages are attached for substituting three pages in the original submittal in order to update this change.

Please feel free to contact me at your convenience if you have further questions concerning this permit application.

Sincerely,

David A. Buff, P.E.
Principle Engineer

DAB/tt

cc: Alan Bowman, ENRON

*D. Heron
C. Tallent
S. L. Jones
C. Middleton, 110 West
J. Harper, P.E.*

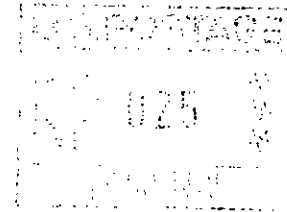
KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER



David A. Buff



Ms. Theresa Heron
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street

Gainesville, Florida 32605



90051

EMISSION CALCULATIONS
FGTC's COMPRESSOR STATION No. 12
SANTA ROSA COUNTY, FLORIDA

Fuel usage and emission calculations are presented below for the proposed Dresser-Rand 10-TCV reciprocating IC engine at Compressor Station No. 12.

Fuel Usage:

(4,000 bhp) x (7,300 Btu/bhp-hr) = 29.20 x 10⁶ Btu/hr
 (29.20 x 10⁶ Btu/hr)/(1,050 Btu/scf) = 27,810 scf/hr

Emission Calculations:

NO_x: (2.0 g/bhp-hr)(4,000 bhp)(1 lb/453.593 g) = 17.63 lb/hr
 (17.63 lb/hr)(8,760 hr/yr)(1 ton/2,000 lb) = 77.2 TPY

CO: (2.5 g/bhp-hr)(4,000 bhp)(1 lb/453.593 g) = 22.05 lb/hr
 (22.05 lb/hr)(8,760 hr/yr)(1 ton/2,000 lb) = 96.6 TPY

VOCs(non-methane hydrocarbon):

(1.0 g/bhp-hr)(4,000 bhp)(1 lb/453.593 g) = 8.82 lb/hr
 (8.82 lb/hr)(8,760 hr/yr)(1 ton/2,000 lb) = 38.6 TPY

PM: (5 lb/10⁶ scf)(27,810 scf/hr) = 0.139 lb/hr¹
 (0.139 lb/hr)(8,760 hr/yr)(1 ton/2,000 lb) = 0.61 TPY¹

SO₂: (10 gr/100 scf)(27,810 scf/hr)(1 lb/7,000 gr) = 0.397 lb/hr of Sulfur
 (2 lb SO₂/lb Sulfur)(0.397 lb/hr Sulfur) = 0.794 lb/hr of SO₂
 (0.794 lb/hr)(8,760 hr/yr)(1 ton/2,000 lb) = 3.48 TPY

¹ Different value than shown in the original submittal. Corrections are concurrently being submitted to reflect this change on page 4 of the permit application form, and pages 2-5 and 3-14 in the PSD report.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Not applicable				

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): Not applicable

2. Product Weight (lbs/hr): Not applicable

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
NO _x	17.6	77.2	BACT	BACT	17.6	77.2	
CO	22.0	96.6	N/A	N/A	22.0	96.6	
VOCs	8.8	38.6	N/A	N/A	8.8	38.6	
Particulates	0.14	0.61	N/A	N/A	0.14	0.61	
SO ₂	0.80	3.48	N/A	N/A	0.80	3.48	

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

Table 2-2. Maximum Emissions From FGTC's Proposed Compressor Engine

Pollutant	Emission Factor	Reference	Maximum Emissions	
			lb/hr	TPY
Nitrogen Oxides	2.0 g/bhp-hr	Manufacturer's guarantee	17.6	77.2
Carbon Monoxide	2.5 g/bhp-hr	Manufacturer's guarantee	22.0	96.6
Volatile Organic Compounds (non-methane)	1.0 g/bhp-hr	Manufacturer's guarantee	8.8	38.6
Particulate Matter	5 lb/MMscf	AP-42, Table 1.4-1	0.14	0.61
Sulfur Dioxide	10 gr/100 scf	ENRON Specification	0.80	3.48

Note: Maximum natural gas consumption is 27,810 standard cubic feet per hour (scf/hr).

g/bhp-hr - grams per brake horsepower per hour.
gr/scf - grains per standard cubic feet.
lb/hr - pounds per hour.
TPY - tons per year.

Table 3-3. Maximum Potential Emissions Due to Proposed Engine at Compressor Station No. 12

Pollutant	Maximum Potential Emissions From Proposed Compressor Engine		Significant Emission Rate (TPY)	PSD Review Applies?
	(lb/hr)	(TPY)		
Particulate Matter (TSP)	0.14	0.61	25	No
Particulate Matter (PM10)	0.14	0.61	15	No
Sulfur Dioxide	0.80	3.48	40	No
Nitrogen Dioxide	17.6	77.2	40	Yes
Carbon Monoxide	22.0	96.6	100	No
Volatile Organic Compounds (non-methane)	8.8	38.6	40	No

P 230 524 391



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, June 1991

Sent to Mr. Allan Weatherford	
Street and No. P. O. Box 94500	
P. O. State and ZIP Code Maitland, FL 32794-5100	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 9/20/93 Request for Amendments and Extensions	

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Allan Weatherford
Compliance Environmentalist
Florida Gas Transmission Company
P. O. Box 94500
Maitland, Florida 32794-5100

4a. Article Number
P 230 524 391

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

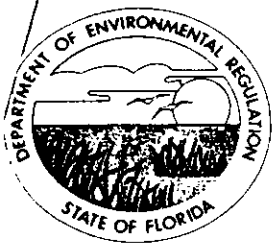
7. Date of Delivery

5. Signature (Addressee)
Allan Weatherford

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 20, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Alan Bowman
Project Environmentalist
Florida Gas Transmission Company
P. O. Box 1188
Houston, Texas 77251

Dear Mr. Bowman:

Re: Natural Gas Compressor Engine
AC 57-188869, PSD-FL-157

The Department has reviewed your application for a permit to construct a 4000 bhp natural gas compressor engine. The engine is to be located at the Florida Gas Transmission Company site, 5 miles north of Munson, Santa Rosa County, Florida.

Based on this review, we have determined that the following information is needed:

1. Attach a derivation of the emission calculations for this source (Unit No. 12). What is the correct air to fuel ratio (60.89)? State and justify all assumptions.
2. Submit complete air construction applications and -fees for each existing engine at this site.

We will resume processing your applications as soon as this information is received. If you have any questions about the data requested, please feel free to call Teresa Heron at 904-488-1344 or write to me at the above address.

Sincerely,

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/TH/plm

c: Jack Preece, NW Dist.
David Buff, P.E.
Jewell Harper, EPA



November 21, 1990

Ms. Theresa Heron
Florida Dept. of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399

VIA FAX

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NOV 20 1990

DER-BAQM

Re: ENRON/FGTC Compressor Station No. 12 PSD Permit Application

Dear Ms. Heron:

Per your request, please find the attached sheet of emission calculations for FGTC's Compressor Station No. 12. Also, there is a correction in the value calculated for particulate emissions, which now results in slightly lower hourly and annual emission values. Additional pages are attached for substituting three pages in the original submittal in order to update this change.

Please feel free to contact me at your convenience if you have further questions concerning this permit application.

Sincerely,

David A. Buff, P.E.
Principle Engineer

DAB/tt

cc: Alan Bowman, ENRON

J. Heron
C. Halladay
E. Andrews
C. Middlemist, W.W. Dietz
J. Harper, EPA

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER

EMISSION CALCULATIONS

FGTC's COMPRESSOR STATION No. 12
SANTA ROSA COUNTY, FLORIDA

Fuel usage and emission calculations are presented below for the proposed Dresser-Rand 10-TCV reciprocating IC engine at Compressor Station No. 12.

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$$(4,000 \text{ bhp}) \times (7,300 \text{ Btu/bhp-hr}) = 29.20 \times 10^6 \text{ Btu/hr}$$
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Emission Calculations:

$$\text{NO}_x: (2.0 \text{ g/bhp-hr})(4,000 \text{ bhp})(1 \text{ lb}/453.593 \text{ g}) = 17.63 \text{ lb/hr}$$
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$$\text{CO: } (2.5 \text{ g/bhp-hr})(4,000 \text{ bhp})(1 \text{ lb}/453.593 \text{ g}) = 22.05 \text{ lb/hr}$$
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$$\text{SO}_2: (10 \text{ gr}/100 \text{ scf})(27,810 \text{ scf/hr})(1 \text{ lb}/7,000 \text{ gr}) = 0.397 \text{ lb/hr of Sulfur}$$
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SO ₂	0.80	3.48	N/A	N/A	0.80	3.48	

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Volatile Organic Compounds (non-methane)	8.8	38.6	40	No