



Florida Gas Transmission Company

P. O. Box 945100 Maitland, Florida 32794-5100 (407) 875-5800

RECEIVED

May 9, 1996

OVERNIGHT MAY 10 1996

A. A. Linero, P.E.
Administrator
New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

BUREAU OF
AIR REGULATION

Dear Sir or Madam:

Enclosed please find our check in the amount of \$250.00 for processing fees for our amendment request for permits AC09-229441, AC62-229319, and AC29-228821.

If you have any questions or need additional information, please call me at (407)-875-5816.

Sincerely,


Allan Weatherford
Division Environmental Specialist

REMITTANCE STATEMENT

VOUCHER NO.	INVOICE DATE	INVOICE NO.	PURCHASE ORDER	AMOUNT		
				GROSS	DISCOUNT	NET
INV050696	5-6-96	INV050696		250.00		
					TOTAL	250.00

SPECIAL INSTRUCTIONS:

Permit AC29-228821/AC09-229441/AC62-229319 amendment application fee

DETACH AND RETAIN THIS STUB FOR YOUR RECORDS.



P. O. Box 1188
Houston, TX 77251-1188

62-20
311

CHECK NO. 0622510560

CHECK DATE 5-9-96

PAY EXACTLY Two hundred and fifty and no/100-----DOLLARS

THIS CHECK IS VOID UNLESS PRINTED ON BLUE BACKGROUND

\$ 250.00

NOT VALID AFTER 90 DAYS

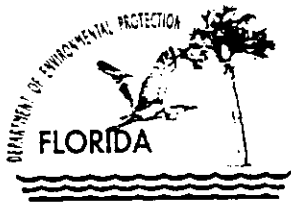
PAY TO THE ORDER OF Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

NOT VALID OVER \$5000.00 UNLESS COUNTERSIGNED

FIELD DISBURSEMENT ACCOUNT

⑈0622510560⑈ ⑆031100209⑆ 39110493⑈

0570438-002 AC - Link
0170035-001 AC
1330034-000 AC



Department of Environmental Protection

File

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

May 6, 1996

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Allan Wetherford,
Division Environmental Specialist
Florida Gas Transmission
Post Office Box 945100
Maitland, Florida 32794-5100

Dear Mr. Wetherford:

The Bureau of Air Regulation received your request to amend permit AC29-228821, Station 30: AC09-229441, Station 26: AC62-229319, Station 15. According to Rule 62-4.050(4) (q) 4., before we can begin processing your request, we will need a \$250 processing fee. If you have any questions, please call Kanani Winans at (904)488-1344.

Sincerely,

A. A. Linero, P. E.
Administrator
New Source Review Section

AAL/kw

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):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Allan Wetherford
 Division Environmental Specialist
 Florida Gas Transmission
 Post Office Box 945100
 Maitland, Florida 32794-5100

4a. Article Number

2127 633 206

4b. Service Type

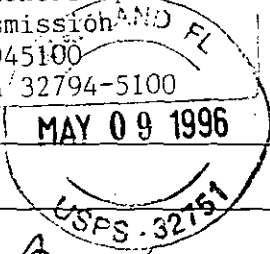
- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

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

5. Signature (Addressee)

6. Signature (Agent)



PS Form 3811, December 1991 U.S. GPO: 1993-352-714

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

2 127 633 206



Receipt for Certified Mail

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

PS Form 3800, March 1993

Sent to	Walter Wetherford
Street and No.	FLT
P.O., State and ZIP Code	PO Box 945100 32794
Postage	\$ 5.00
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 62-229317 5-6-96 AC 62-229441 AC 29-22821 229441

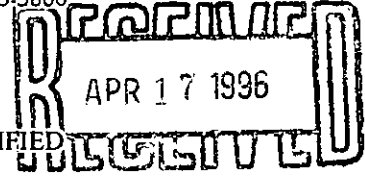
1230634-002-AC



Florida Gas Transmission Company

P. O. Box 945100 Maitland, Florida 32794-5100 (407) 875-5800

NORTHEAST DISTRICT



CERTIFIED

DEP - JACKSONVILLE

April 12, 1996

Ms. Rita Felton
Florida Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite B-200
Jacksonville, FL 32256-7577

Dear Ms. Felton:

Re: Florida Gas Transmission Company - Station 15
Turbine Compressor 1507, Air Permit No. AC62-229319

Florida Gas Transmission Company (FGT) requests approval for a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in the natural gas fuel for each of the referenced turbine units.

Pursuant to Specific Condition 13, FGT requests approval of a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in its fuel gas. The permitted gas turbine burns only highly regulated pipeline quality natural gas that contains negligible amounts of nitrogen and sulfur. The initial compliance tests (attached) show the nitrogen and sulfur concentrations in the gas to be much less than the respective permit limits. The nitrogen and sulfur content of the fuel gas, supplied through FGT's pipeline, has historically been and will remain relatively constant at levels far below those of regulatory interest.

If you have any questions or would like to arrange a meeting to discuss these changes, please call me at (407) 875-5816.

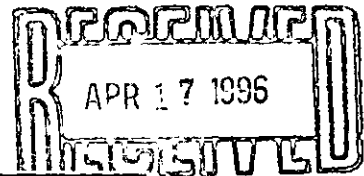
Sincerely,

Allan Weatherford
Division Environmental Specialist

- c Glenn Sellars
- Roy Smith
- Norman Tedder

TABLE 2
Summary of Results
Unit No. 1507

NORTHEAST DISTRICT



Florida Gas Transmission Company
 Compressor Station No. 15
 6 miles N of Perry on C-361 in Taylor County, FL
 Solar Mars Model 90S
 Technicians: CDC, LJB, DLD

Test Number	15C-4	15C-5	15C-6	GAINESVILLE	
Date	8/29/95	8/29/95	8/29/95		
Start Time	8:50	9:13	10:37		
Stop Time	9:00	10:21	11:50		
Turbine/Compressor Operation				<i>Averages</i>	FDEP Permit Limits
Power Turbine Speed (NPT, %)	94.6	94.2	93.3	94.0	
Gas Producer Speed (NGP, %)	100.9	100.8	100.5	100.7	
Estimated Horsepower (Solar Compressor Shaft, bhp)	11301	11326	11254	11294	11261*
Engine Compressor Discharge Pressure (PCD, psig)	180.6	179.4	176.3	178.8	
Combustor Air Inlet Temperature (T-1, °F)	84.0	85.9	88.5	86.1	
Power Turbine Exhaust Temperature (T-5, °F)	1290	1290	1291	1290	
Gas Compressor Suction Pressure (psig)	765.3	768.9	779.5	771.2	
Gas Compressor Suction Temperature (°F)	72.9	72.3	72.0	72.4	
Gas Compressor Discharge Pressure (psig)	1059.0	1065.8	1071.4	1065.4	
Gas Compressor Discharge Temperature (°F)	128.1	128.3	127.7	128.0	
Compressor Flow (MMSCFD)	580.3	574.0	572.2	575.5	
Turbine Fuel Data (Residue Gas)					
Fuel Heating Value (Btu/SCF, HHV)	1034	1034	1034	1034	
Fuel Specific Gravity	0.5840	0.5840	0.5840	0.5840	
O2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8674	8674	8674	8674	
CO2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1024	1024	1024	1024	
Total Sulfur in Fuel (grains Sulfur/100 SCF fuel)	0.059	0.059	0.059	0.059	10
Fuel Flow (MMSCFH)	0.0921	0.0915	0.0920	0.0919	0.1265
Heat Input (MMBtu/hr)	95.29	94.67	95.16	95.04	131.59
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.82	29.84	29.86	29.84	
Temperature (°F): Dry bulb	79	80	82	80	
(°F): Wet bulb	74	76	72	74	
Humidity (lbs moisture/lb of air)	0.0166	0.0180	0.0138	0.0161	
Measured Emissions					
NOx (ppmv, dry basis)	23.9	24.0	23.4	23.8	
NOx (ppmv @ 15% O2)	27.5	27.7	27.2	27.5	42.0
NOx (ppmv @ 15% O2, ISO Day)	31.2	32.0	28.8	30.7	81.2†
CO (ppmv, dry basis)	0.9	1.1	1.3	1.1	
O2 (% volume, dry basis)	15.78	15.79	15.82	15.80	
CO2 (% volume, dry basis)	2.92	2.97	2.96	2.95	
Visible Emissions (% opacity)	0	0	0	0	10
Fo (fuel factor, range = 1.600-1.834 for NG)	1.75	1.72	1.72	1.73	
Stack Volumetric Flow Rates					
via Pitot Tube Traverse (SCFH, dry basis)	4.17E+06	4.02E+06	3.80E+06	4.00E+06	
via O2 "F-factor" (SCFH, dry basis)	3.37E+06	3.36E+06	3.40E+06	3.38E+06	
via CO2 "F-factor" (SCFH, dry basis)	3.34E+06	3.26E+06	3.29E+06	3.30E+06	
Calculated Emission Rates (via pitot tube)					
NOx (lbs/hr)	11.9	11.5	10.6	11.3	16.14
CO (lbs/hr)	0.27	0.32	0.36	0.32	11.71
SO2 (lbs/hr, Based on fuel flow and fuel sulfur)	0.016	0.015	0.016	0.015	3.61
NOx (tons/yr)	52.2	50.5	46.5	49.7	70.70
CO (tons/yr)	1.2	1.4	1.6	1.4	51.30
SO2 (tons/yr, Based on fuel flow and fuel sulfur)	0.068	0.068	0.068	0.068	15.83
NOx (g/bhp-hr)	0.48	0.46	0.43	0.46	0.58
CO (g/bhp-hr)	0.011	0.013	0.014	0.013	0.42

* 100% of permitted output at ambient temperature of 80°F

† EPA NSPS Performance Standard

Gas Fuel F Factor & Heating Value Calculation

Client Florida Gas Transmission Company
 Sample ID pipeline natural gas (residue gas), St. 15
 Time 16:02
 Date 8/28/95

CALCULATION OF DENSITY AND HEATING VALUE @ 60°F and 30 in Hg

Component	% Volume	Molecular Wt.	Density (lb/ft ³)	% volume		Component		Gross Heating Value (Btu/SCF)	Volume Fract. Btu
				x Density	weight %	Gross Btu/lb	Weight Fract. Btu		
Hydrogen		2.016	0.0053	0.00000	0.0000	61100	0.00	325.0	0
Oxygen		32.000	0.0846	0.00000	0.0000	0	0.00	0.0	0
Nitrogen	0.3630	28.016	0.0744	0.00027	0.6045	0	0.00	0.0	0
CO ₂	0.7530	44.010	0.1170	0.00088	1.9719	0	0.00	0.0	0
CO		28.010	0.0740	0.00000	0.0000	4347	0.00	322.0	0
Methane	95.8760	16.041	0.0424	0.04065	90.9870	23879	21726.77	1013.0	971.224
Ethane	2.3070	30.067	0.0803	0.00185	4.1464	22320	925.47	1792.0	41.3414
Ethylene		28.051	0.0746	0.00000	0.0000	21644	0.00	1614.0	0
Propane	0.3970	44.092	0.1196	0.00047	1.0627	21661	230.20	2590.0	10.2823
propylene		42.077	0.1110	0.00000	0.0000	21041	0.00	2336.0	0
Isobutane	0.0970	58.118	0.1582	0.00015	0.3435	21308	73.19	3363.0	3.26211
n-butane	0.0800	58.118	0.1582	0.00013	0.2833	21257	60.21	3370.0	2.696
Isobutene		56.102	0.1480	0.00000	0.0000	20840	0.00	3068.0	0
Isopentane	0.0340	72.144	0.1904	0.00006	0.1449	21091	30.56	4008.0	1.36272
n-pentane	0.0210	72.144	0.1904	0.00004	0.0895	21052	18.84	4016.0	0.84336
n-hexane	0.0720	86.169	0.2274	0.00016	0.3665	20940	76.74	4762.0	3.42864
H ₂ S		34.076	0.0911	0.00000	0.0000	7100	0.00	647.0	0
total	100.00								

	Average Density	0.04468	100.0000	Gross Heating Value	Gross Heating Value
	Specific Gravity	0.58403		Btu/lb	Btu/SCF
				23142	1034.4

CALCULATION OF F FACTORS

Component	Mol. Wt.	C Factor	H Factor	% volume	Fract. Wt.	Weight Percents			
						Carbon	Hydrogen	Nitrogen	Oxygen
Hydrogen	2.016	0	1	0.00	0.0000				
Oxygen	32.000	0	0	0.00	0.0000				0
Nitrogen	28.016	0	0	0.36	10.1698			0.602268295	
CO ₂	44.010	0.272273	0	0.75	33.1395	0.534352898			1.42678
CO	28.010	0.42587	0	0.00	0.0000	0			0
Methane	16.041	0.75	0.25	95.88	1537.9469	68.3093034	22.7697678		
Ethane	30.067	0.8	0.2	2.31	69.3646	3.286282746	0.82157069		
Ethylene	28.051	0.85714	0.14286	0.00	0.0000	0	0		
Propane	44.092	0.81818	0.181818	0.40	17.5045	0.848157315	0.18847963		
Propene	42.077	0.85714	0.14286	0.00	0.0000	0	0		
Isobutane	58.118	0.82759	0.17247	0.10	5.6374	0.276296178	0.0575802		
n-butane	58.118	0.82759	0.17247	0.08	4.6494	0.227873136	0.04748883		
Isobutene	56.102	0.85714	0.14286	0.00	0.0000	0	0		
Isopentane	72.144	0.83333	0.16667	0.03	2.4529	0.121052399	0.02421106		
n-pentane	72.144	0.83333	0.16667	0.02	1.5150	0.074767658	0.01495389		
n-hexane	86.169	0.83721	0.16279	0.07	6.2042	0.307606285	0.05981203		
H ₂ S	34.076	0	0.0586923	0.00	0.0000	0	0		
Totals				100.00000	1688.5843	73.98569201	23.98	0.602268295	1.42678

CALCULATED VALUES		
O ₂ F Factor (dry)	8674	DSCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
O ₂ F Factor (wet)	10654	SCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
Moisture F Factor	1980	SCF of Water/MM Btu of Fuel Burned @ 0% excess air
Combust. Moisture	18.59	volume % water in flue gas @ 0% excess air
CO ₂ F Factor	1024	DSCF of CO ₂ /MM Btu of Fuel Burned @ 0% excess air
Carbon Dioxide	11.81	volume % CO ₂ in flue gas @ 0% O ₂
Predicted Fo Factor	1.77	EPA Method 3a Fo value
Fuel VOC % (non-C1)	6.57%	non-methane fuel VOC content
Fuel VOC % (non-C1,C2)	2.36%	non-methane non-ethane fuel VOC content