



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 29, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Clayton A. Roesler
Division Environmental Specialist
Florida Gas Transmission Company
Post Office Box 945100
Maitland, Florida 32794 5100

Dear Mr. Roesler:

RE: Approval of Custom Fuel Monitoring Schedule
Florida Gas Transmission Company (FGT)
AC62-229319 and 1230034-002-AC, (PSD-FL-202), Station 15, Taylor County
AC09-229441 and 0170035-001-AC, Station 26, Citrus County
AC29-228821 and 0570438-002-AC, Station 30, Hillsborough County

This is in response to your request dated April 12, 1996, regarding approval of FGT's proposed Custom Fuel Monitoring Schedule pursuant to 40 CFR 60, Subpart GG for the above mentioned turbines and sites. Attached please find EPA's approval of this request. The approved Custom Fuel Monitoring Schedule shall be attached to the above mentioned permits and shall become a part of each permit.

If you have any questions regarding this matter, please call Teresa Heron at (850) 921-9529 or David McNeal at (404)562-9102.

Sincerely,

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

AAL/th/kt

Enclosure

cc: Jerry Campbell, EPCHC
Jerry Kissel, SWD
Chris Kirts, NED
Barry Andrews, ENSR



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 15, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Clayton Roesler
Division Environmental Specialist
Florida Gas Transmission Company
P.O. Box 945100
Maitland, Florida 32794-5100

Re: Florida Gas Transmission Gas Turbines Permits
EPA Approval of Custom Fuel Monitoring Schedule
Station 30: 0570438-002-AC
Station 26: 0170035-001-AC
Station 15: 1230034-002-AC

Dear Mr. Roesler:

This letter is a reminder for you to send the Bureau of Air Regulation, the EPA Custom Fuel Monitoring Schedule approval for the above referenced gas turbines at the above mentioned FGT stations. If this request for approval has not been granted by EPA, please let us know.

As Teresa Heron has mentioned to you in previous telephone conversations, we need that information in order to update our ARMS database.

If you have any questions regarding this matter, please call Teresa Heron at (904) 488-1344.

Sincerely,

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

AAL/th/t

P 265 659 471

no green card 7/98

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>Christina Koesler</i>	
Street & Number <i>EGT</i>	
Post Office, State, & ZIP Code <i>Thailand, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date <i>Stat. 30</i> <i>" 26</i> <i>" 15</i>	<i>10-15-97</i>

PS Form 3800, April 1995



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

May 5, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Clayton Roesler
Division Environmental Specialist
Florida Gas Transmission Company
P.O. Box 945100
Maitland, Florida 32794-5100

Re: Florida Gas Transmission Permit Modifications
1230034-004-AC, (PSD-FL-202), Station 15, Taylor County
0990333-003-AC, Station 21, Palm Beach County
0170035-003-AC, Station 26, Citrus County
0570438-004-AC, Station 30, Hillsborough County

Dear Mr. Roesler:

This letter is to confirm your April 9, 1997 telephone conversation with Ms. Teresa Heron, concerning your letter dated April 2, 1997. Your letter essentially requested treatment of turbine replacements as routine replacements not requiring construction permits or modifications. Based on your observations, the turbines have been lasting only approximately 5000 hours or so making their replacement routine rather than life extension projects or modifications subject to construction permitting.

It was our understanding that only the new (Phase III) turbines were unreliable to the extent that routine (possibly annual) replacement is foreseen. However it is not clear that the replacement is just for the gas turbines permitted during Phase III that are defective. Your request implies all existing gas turbines in the Florida Gas Transmission system. Be advised that a replacement of an old unit (pre- NSPS) for a new unit will have to be accomplished by the permitting process. New units will be subject to 40 CFR 60, Subpart GG.

Based on our review of your request the following information is needed:

Provide reasonable assurance (e.g. a letter from the manufacturer of the turbine) that will indicate the limited life of the turbines and the need of routine repair, maintenance, or replacement for the affected turbines. Identify those FGT units that would be affected.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Submit a table identifying for both the existing and the replacement unit: the manufacturer, model number, serial number, capacity (bhp) and the allowable emissions levels.

Pursuant to Rule 62-4.050 F.A.C., please submit the above requested information under a professional engineer seal. This is required to provide reasonable assurance that the units to be replaced are rated at the same capacity (brake horsepower) or less than the existing units and that the emissions levels will not exceed those of the already permitted turbine for that site or otherwise contravene a Department rule or permit condition.

Please direct a copy of your response to each of the individuals listed below. If you have any questions regarding this matter, please call Teresa Heron at (904) 488-1344.

Sincerely,



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

AAL/th/t

cc: Jerry Campbell, EPCHC
Jerry Kissel, SWD
Jeff Koerner, PBCPHU
Bob Leetch, NED

P 265 659 204

no green card 7/98

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Clyde Rooster	
Street & Number	
FLA. GAS TRANS.	
Post Office, State & ZIP Code	
Maitland, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	5-6-97
Oct-15	
21	
26	
30	

PS Form 3500, April 1995



8/27/96

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT AMENDMENT

In the Matter of an
Application for Permit by:

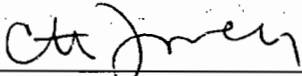
Mr. Allan Weatherford
Florida Gas Transmission Company
Post Office Box 945100
Maitland, Florida 32794-5100

DRAFT Permit Amendment Number:
AC 09-229441
AIRS ID 0170035-001 AC
Citrus County (Station No. 26)

Enclosed is the Permit Amendment for the above mentioned compressor station which will modify the permit specific conditions. This facility is located in Citrus County, Florida. This permit amendment will be issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.


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

Florida Gas Transmission
Station No. 26
Page Two

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT AMENDMENT (including FINAL permit amendment) was mailed by certified mail (*) and that copies were mailed by U.S. Mail before the close of business on 8-27-96 to the listed persons.

Allan Weatherford, FGT*
Bill Thomas, SWD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(11), Florida
Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

Kuni Joken 8-27-96
Clerk Date

Enclosure

FINAL DETERMINATION

FLORIDA GAS TRANSMISSION COMPANY

Permit Amendment Numbers:

AIRS ID 0570438-002 AC	AC29-228821,	Hillsborough County
AIRS ID 0170035-001 AC	AC09-229441,	Citrus County
AIRS ID 1230034-002 AC	AC62-229319,	Taylor County

The draft amendments to Florida Gas Transmission Company's construction permits for the above compressor stations were distributed on July 9, 1996. These permit amendments will eliminate emissions limitations and will revise testing requirements which exceed those specified by rule for its units located at Compressor Station No. 30, Northeast of Plant City on SR 582 in Hillsborough County, and Compressor Station No. 26, Northwest of Lecanto in Citrus County.

These emission units burn clean natural gas and, during initial compliance testing, demonstrated compliance with all of the required emission standards. These amendments will delete emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the the New Source Performance Standard (NSPS) for Gas Turbines or are not necessary for Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Deleting the requirements will not result in increased emissions of any of these pollutants, but will simplify the applicable permits and reduce annual testing costs.

The visible emissions requirements for these units will be revised from 10 percent opacity to 20 percent in accordance with the Rule 62-296.320, F.A.C. A Best Available Control Technology determination was not required. The custom fuel monitoring schedule will be incorporated by reference as soon as EPA approves it.

The Notice of Intent to Issue was published in the Tampa Tribune on July 24, 1996. Copies of the permit amendment evaluations were available for inspection at the office of the Hillsborough County Environmental Protection Commission and the Department of Environmental Protection offices in Tampa and Tallahassee.

No written comments were submitted during the public notice period. However, Mr. Clay Roesler, FGT Environmental Specialist, noted that the DEP Tampa office should also be included as a permitting authority for operating permits issuance.

The Department considered Mr Roesler's comment and will also include the DEP Tampa office as one of the permitting authorities for operating permit issuance. This was inadvertently omitted in the draft letter sent with the public notice package.

The final action of the Department is to issue the permit amendments as noted for the Hillsborough and Citrus County stations. The DEP Tampa office will be included as the permitting authority for operating permits issuance for the Hillsborough station. The Taylor County station will be affected only by the custom fuel monitoring schedule. Therefore that amendment will not be issued until EPA approves the revision.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 21, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Dear Mr. Weatherford:

RE: Request for Amendment to Air Construction Permit
AC09-229441 (Station No. 26) Citrus County
AIRS ID 0170035-001 AC

The Department is in receipt of your letters dated April 12 and May 10, 1996, requesting to amend the above permit to include the EPA custom fuel monitoring schedule and to modify specific conditions Nos. 1, 2 and 8.

The Department has reviewed this request and hereby amends the above mentioned permit as follows:

SPECIFIC CONDITION No. 1

This condition will be modified to exclude the emission limits standard for all pollutants except for NO_x and SO₂. The emissions expressed in units of mass (TPY) will remain as a condition of the permit. This facility has already demonstrated initial compliance with the permit limits.

FROM:

POLLUTANT	lbs/hr	tons/yr	Emission Factor
NOx *	3.95	17.3	1.49 g/bhp-hr
CO	5.88	25.75	2.22 g/bhp-hr
VOC(s) (non-methane)	0.25	1.10	0.95 g/bhp-hr
PM	0.077	0.34	5 lbs/MMscf
PM10	0.077	0.34	5 lbs/MMscf
S02	0.44	1.94	10 gr S/100scf

*NOx emission standard shall not exceed 42 ppmv at 15% oxygen on a dry basis.

TO:

Standard for Sulfur Dioxide [40 CFR 60.333(a)]

The owner or operator shall not cause to be discharge into the atmosphere from any gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis. Annual emissions shall not exceed 1.94 TPY.

Standard for Nitrogen Oxides

NOx emissions shall not exceed 42 ppmv at 15% oxygen on a dry basis. (Based on a 100% load conditions). Annual emissions shall not exceed 17.3 TPY.

SPECIFIC CONDITION No. 2

FROM:

Visible Emissions shall not exceed 10% opacity.

TO:

Visible emissions shall not exceed 20% opacity.

SPECIFIC CONDITION No. 8

FROM:

Compliance with the allowable emission limits shall be determined within 60 days after achieving the maximum production rate at which this facility will be operated, but not later than 180 days after initial start-up and annually thereafter except as provided in Specific Condition 10, below, by the following reference methods as described in 40 CFR 60, Appendix A (July 1992 version) and adopted by reference in Chapter 17-297, F.A.C.

Method 1	Sample and Velocity Traverses
Method 2	Volumetric Flow Rate
Method 3 or 3A	Gas Analysis
Method 9	Determination of the Opacity of the Emissions from Stationary Sources
Method 10	Determination of the Carbon Monoxide from Stationary Sources
Method 20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines
Method 18	Measurement of Gaseous Organic Compounds Emissions by Gas Chromatography
Method 25A	Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

TO:

Compliance with the allowable emission limits shall be determined by the following EPA reference methods as described in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297, F.A.C.

Method 1	Sample and Velocity Traverses
Method 2	Volumetric Flow Rate
Method 3 or 3A	Gas Analysis
Method 9	Determination of the Opacity of the Emissions from Stationary Sources
Method 20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Since this source already demonstrated initial compliance with permitted emission limits, subsequent testing frequency (in operating permits) shall be as determined by the Hillsborough County Environmental Protection Commission (EPCHC) office.

Mr. Allan Weatherford
Florida Gas Transmission
Station No. 30
Page 4

CUSTOM FUEL MONITORING SCHEDULE

The custom monitoring schedule, when approved by EPA, will be incorporated by reference. Currently, EPA is in the process of approving the FGT request.

This letter must be attached to the above mentioned permit and shall become a part of the permit.

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

Attachment to be Incorporated

Mr. Allan Weatherford's letters of April 12 and May 10, 1996.



Florida Gas Transmission Company

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

RECEIVED

May 9, 1996

OVERNIGHT MAY 10 1996

BUREAU OF
AIR REGULATION

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

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



Florida Gas Transmission Company

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

April 12, 1996

CERTIFIED

RECEIVED

APR 16 1996

BUREAU OF
AIR REGULATION

Mr. Clair Fancy
Florida Department of Environmental Protection
Northwest District Branch Office
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Re: Florida Gas Transmission Company - Station 30
Air Permit No. AC29-228821

Florida Gas Transmission Company (FGT) requests that certain modifications be made to the above referenced construction permit and also requests approval for a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in the natural gas.

The permitted unit is a minor source at a minor facility. Changes are requested to eliminate requirements that exceed those specified by rule without significantly impacting reasonable compliance oversight.

Specifically, FGT requests the following changes to the referenced permit:

Change Specific Condition 1 so that all emissions limiting standards are omitted except for NO_x and SO₂ standards. The standards should be consistent with the standards that are applicable to the source in NSPS (40CFR61) and should be expressed in the units defined in the standard rather than in pounds per hour (lbs/hr) or tons per year (TPY).

Change Specific Condition 2 to read: "Visible emissions shall not exceed 20% opacity."

Revise Specific Condition 8 so that the test requirements are limited to:

-Annual Testing: for visible emissions by Method 9

-Initial and Prior to Renewal Testing: for No_x by Methods 1,2,3A, and 20

NOTE: The initial tests, as currently specified in the permit, were completed and showed compliance with all permit limits. FGT is requesting the change to affect only the "annual" and "prior to renewal" testing requirements.

Additionally, pursuant to Specific Condition 13, FGT requests approval of a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in its fuel gas (a copy of this request has also been sent to Hillsborough County EPC for their consideration). 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,

A handwritten signature in black ink, appearing to read "Allan Weatherford". The signature is fluid and cursive, with a large initial "A" and a long, sweeping underline.

Allan Weatherford
Division Environmental Specialist

c Charlie Thompson
 Roy Smith
 Curt Gavin
 Ray Glass
 Eric Peterson, Hillsborough County EPC

Table 2
Summary of Results Unit No. 3003

Company: Florida Gas Transmission Co.
 Plant: Compressor Station No. 30
 Location: 4 miles NE of Plant City
 Hillsborough Co., FL on SR 582
 Source: Solar Saturn T-1001S-312F
 Technicians: CDC, LJB, DD

Test Number	30C-1	30C-2	30C-3	Averages	FDEP Permit Limits
Date	7/25/95	7/25/95	7/25/95		
Start Time	8:30	10:10	11:35		
Stop Time	9:44	11:10	12:35		
Turbine/Compressor Operation					
Power Turbine Speed (% NPT)	80.9	79.9	80.5	80.4	
Gas Producer Speed (% NGP)	96.8	95.9	96.0	96.2	
Horsepower (site bhp, via FGT cmprssr thrupt calc.)	1057	1009.4	1010	1025	
PCD Observed (psig)	56.3	53.9	53.4	54.5	
Combustor Air Inlet Temperature (T-1, °F)	81.0	92.6	93.3	89.0	
Turbine Exhaust Stack Temperature (T-7, °F)	883	888	889	887	
Gas Compressor Suction Pressure (psig)	745.6	732.0	705.1	727.6	
Gas Compressor Suction Temperature (°F)	81.0	81.0	81.0	81.0	
Gas Compressor Discharge Pressure (psig)	917.6	898.6	867.3	894.5	
Gas Compressor Discharge Temperature (°F)	110.0	110.0	110.0	110.0	
Compressor Flow (MMSCFD)	596.1	603.0	613.0	604.0	
Turbine Fuel Data (Residue Gas)					
Fuel Heating Value (Btu/SCF, Gross)	1032	1032	1032	1032	
Fuel Specific Gravity	0.5838	0.5838	0.5838	0.5838	
O2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	8676	8676	8676	8676	
CO2 "F-factor" (DSCFex/MMBtu @ 0% excess air)	1024	1024	1024	1024	
Total Sulfur in Fuel (grains Sulfur/100 SCF fuel)	0.088	0.088	0.088	0.088	10
Fuel Flow (MMSCFH)	0.0107	0.0107	0.0107	0.0107	0.0156
Heat Input (MMBtu/hr)	11.01	11.05	11.07	11.04	15.76
Brake-specific Fuel Consumption (Btu/bhp-hr)	10418	10945	10957	10773	
Ambient Conditions					
Atmospheric Pressure ("Hg)	29.89	29.92	29.93	29.91	
Temperature (°F): Dry bulb	80.5	88.5	90	86	
(°F): Wet bulb	79.3	79.5	82	80	
Humidity (lbs moisture/lb of air)	0.0208	0.0191	0.0207	0.0202	
Measured Emissions					
NOx (ppmv, dry basis)	30.3	30.7	29.9	30.3	
NOx (ppmv @ 15% O2)	44.1	44.9	43.7	44.3	
NOx (ppmv @ 15% O2, ISO Day)	54.6	52.6	52.5	53.2	150†
CO (ppmv, dry basis)	40.2	41.3	42.0	41.2	
O2 (% volume, dry basis)	16.85	16.87	16.86	16.86	
CO2 (% volume, dry basis)	2.28	2.37	2.24	2.30	
Visible Emissions (% opacity)	0	0	0	0	10
Fo (fuel factor, range = 1.600-1.834 for NG)	1.78	1.70	1.80	1.76	
Stack Volumetric Flow Rates					
via Pitot Tube Traverse (SCFH, dry basis)	5.19E+05	5.11E+05	5.01E+05	5.11E+05	
via O2 "F-factor" (SCFH, dry basis)	4.93E+05	4.97E+05	4.97E+05	4.96E+05	
via CO2 "F-factor" (SCFH, dry basis)	4.95E+05	4.77E+05	5.06E+05	4.93E+05	
Calculated Emission Rates (via pitot tube)					
NOx (lbs/hr)	1.88	1.88	1.79	1.85	3.95
CO (lbs/hr)	1.52	1.54	1.53	1.53	5.88
SO2 (lbs/hr, Based on fuel flow and fuel sulfur)	0.003	0.003	0.003	0.003	0.44
NOx (tons/yr)	8.2	8.2	7.8	8.1	17.30
CO (tons/yr)	6.7	6.7	6.7	6.7	25.75
SO2 (tons/yr, Based on fuel flow and fuel sulfur)	0.012	0.012	0.012	0.012	1.94
NOx (g/bhp-hr)	0.81	0.84	0.80	0.82	1.49
CO (g/bhp-hr)	0.65	0.69	0.69	0.68	2.22

† Sub part GG, NSPS NOx standard

Gas Fuel F Factor & Heating Value Calculation

Client **Florida Gas Transmission Company**
 Sample ID **pipeline natural gas (residue gas)**
 Time **6:23**
 Date **7/25/95**

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

Component	% Volume	Molecular Wt.	Density (lb/ft3)	% volume		Component Gross Btu/lb	Weight Fract. Btu	Gross Heating Value (Btu/SCF)	Volume Fract. Btu
				Density	x weight %				
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	0.3840	28.016	0.0744	0.00029	0.6397	0	0.00	0.0	0
CO2	0.8050	44.010	0.1170	0.00094	2.1090	0	0.00	0.0	0
CO		28.010	0.0740	0.00000	0.0000	4347	0.00	322.0	0
Methane	95.8620	16.041	0.0424	0.04065	91.0145	23879	21733.35	1013.0	971.082
Ethane	2.3000	30.067	0.0803	0.00185	4.1356	22320	923.07	1792.0	41.216
Ethylene		28.051	0.0746	0.00000	0.0000	21644	0.00	1614.0	0
Propane	0.3750	44.092	0.1196	0.00045	1.0043	21661	217.54	2590.0	9.7125
propylene		42.077	0.1110	0.00000	0.0000	21041	0.00	2336.0	0
Isobutane	0.0900	58.118	0.1582	0.00014	0.3188	21308	67.93	3363.0	3.0267
n-butane	0.0720	58.118	0.1582	0.00011	0.2551	21257	54.22	3370.0	2.4264
Isobutene		56.102	0.1480	0.00000	0.0000	20840	0.00	3068.0	0
Isopentane	0.0320	72.144	0.1904	0.00006	0.1364	21091	28.77	4008.0	1.28256
n-pentane	0.0190	72.144	0.1904	0.00004	0.0810	21052	17.05	4016.0	0.76304
n-hexane	0.0600	86.169	0.2274	0.00014	0.3055	20940	63.98	4762.0	2.8572
H2S		34.076	0.0911	0.00000	0.0000	7100	0.00	647.0	0

total	100.00	Average Density	0.04466	100.0000	Gross Heating Value	Gross Heating Value
		Specific Gravity	0.58377		Btu/lb	Btu/SCF
					23106	1032.4

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	0			
Oxygen	32.000	0	0	0.00	0.0000				0
Nitrogen	28.016	0	0	0.38	10.7581			0.637383014	
CO2	44.010	0.272273	0	0.81	35.4281	0.57149832			1.52597
CO	28.010	0.42587	0	0.00	0.0000	0			0
Methane	16.041	0.75	0.25	95.86	1537.7223	68.32856815	22.7761894		
Ethane	30.067	0.8	0.2	2.30	69.1541	3.277713975	0.81942849		
Ethylene	28.051	0.85714	0.14286	0.00	0.0000	0	0		
Propane	44.092	0.81818	0.181818	0.38	16.5345	0.801499135	0.17811114		
Propene	42.077	0.85714	0.14286	0.00	0.0000	0	0		
Isobutane	58.118	0.82759	0.17247	0.09	5.2306	0.256467027	0.0534478		
n-butane	58.118	0.82759	0.17247	0.07	4.1845	0.205173621	0.04275824		
Isobutene	56.102	0.85714	0.14286	0.00	0.0000	0	0		
Isopentane	72.144	0.83333	0.16667	0.03	2.3086	0.113980444	0.02279664		
n-pentane	72.144	0.83333	0.16667	0.02	1.3707	0.067675889	0.0135355		
n-hexane	86.169	0.83721	0.16279	0.06	5.1701	0.256448311	0.04986469		
H2S	34.076	0	0.058692	0.00	0.0000	0	0		

Totals	99.99900	1687.8617	73.87902487	23.96	0.637383014	1.52597
--------	----------	-----------	-------------	-------	-------------	---------

CALCULATED VALUES		
O2 F Factor (dry)	8676	DSCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
O2 F Factor (wet)	10657	SCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
Moisture F Factor	1981	SCF of Water/MM Btu of Fuel Burned @ 0% excess air
Combust. Moisture	18.59	volume % water in flue gas @ 0% excess air
CO2 F Factor	1024	DSCF of CO2/MM Btu of Fuel Burned @ 0% excess air
Carbon Dioxide	11.80	volume % CO2 in flue gas @ 0% O2
Predicted Fo Factor	1.77	EPA Method 3a Fo value
Fuel VOC % (non-C1)	6.38%	non-methane fuel VOC content
Fuel VOC % (non-C1,C2)	2.17%	non-methane non-ethane fuel VOC content

Memorandum

Florida Department of Environmental Protection


TO: Clair Fancy / Howard Rhodes
THROUGH: A. A. Linero 
FROM: Teresa Heron
DATE: August 21, 1996
SUBJECT: Florida Gas Transmission - Amendments
Hillsborough County, Citrus County, and Taylor County

Attached are two letters amending the construction permits for ^{2 of} the above mentioned compressor stations. These units burn clean natural gas and, during initial compliance testing, demonstrated compliance with all of the required emission standards. These amendments will delete emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the New Source Performance Standard (NSPS) for Gas Turbines or necessary for Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Deleting the requirements will not result in increased emissions of any of these pollutants, but will simplify the applicable permits and reduce annual testing costs.

The visible emissions requirements for these units will be revised from 10 percent opacity to 20 percent in accordance with the Rule 62-296.320, F.A.C. The Custom fuel monitoring schedule request is being reviewed by EPA Region IV. It will be incorporated by reference as soon as EPA approves it.

A letter amendment will be prepared for the Taylor County station when EPA approves the request. This unit did not require the other changes made to the permits for the other stations.

I recommend your approval and signature.

TH/hh

Memorandum

Florida Department of Environmental Protection

CH
TO: Clair Fancy / *Howard Rhodes*

THROUGH: A. A. Linero *A. A. Linero*

FROM: Teresa Heron

DATE: August 21, 1996

SUBJECT: Florida Gas Transmission - Amendments
Hillsborough County, Citrus County, and Taylor County

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A letter amendment will be prepared for the Taylor County station when EPA approves the request. This unit did not require the other changes made to the permits for the other stations.

I recommend your approval and signature.

TH/hh



Florida Gas Transmission Company

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

August 1, 1996

Teresa Herron
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

AUG 6 1996

**BUREAU OF
AIR REGULATION**

Dear Ms. Herron:

Enclosed please find the publication affidavit from the Tampa Tribune for the proposed permit amendment, Intent to Issue for permits 0170035-001-AC, 0570438-002-AC, and 1230034-002-AC.

If you have any questions or need any additional information, please call me at (407)-875-5865.

Sincerely,

Clay Roesler
Division Environmental Specialist

CR/wlb

cc: Air Permit File
Compressor Stations 15, 26, and 30

enclosure

THE TAMPA TRIBUNE

Published Daily

Tampa, Hillsborough County, Florida

State of Florida

County of Hillsborough } ss.

Before the undersigned authority personally appeared R. Putney, who on oath says that he is Accounting Manager of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of _____

PUBLIC NOTICE

was published in said newspaper in the issues of
JULY 24, 1996

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

R. Putney

Sworn to and subscribed before me, this 29 day
of JULY, A.D. 1996

Personally Known _____ or Produced Identification _____
Type of Identification Produced _____

(SEAL)

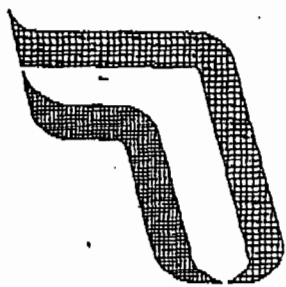
Ima S Kennedy

INA S. KENNEDY
Notary Public, State of Florida
My comm. expires April 21, 2000
No. CC548841


TO ISSUE
AIR CONSTRUCTION PERMIT AMENDMENTS
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRAFT Permit Nos.: 0170035-001-AC-Hillsborough County 0570438-002-AC-Citrus County
The Department of Environmental Protection gives notice of its intent to issue an air construction permit amendments to Florida Gas Transmission Company (FGT) for permit revisions to eliminate emissions limitations and revise testing requirements which exceed those specified by rule for its units located at Compressor Station No. 30, Northeast of Plant City on SR 582 in Hillsborough County, and Compressor Station No. 26, Northwest of Lecanto in Citrus County.
These facilities burn clean natural gas and, during initial compliance testing, demonstrated compliance with all of the required emission standards. This amendment will delete emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the New Source Performance Standard (NSPS) for Gas Turbines, or necessary for Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Deleting the requirements will not result in increased emissions of any of these pollutants, but will simplify the applicable permits and reduce annual testing costs.
The visible emissions requirements for these units will be revised from 10 percent capacity to 20 percent in accordance with the Rule 62-296.320, F.A.C. A Best Available Control Technology determination was not required. The applicant's name and address is Florida Gas Transmission Company, Post Office Box 945100, Maitland, Florida.
The Department will issue the FINAL Permit Amendment, in accordance with the conditions of the enclosed DRAFT Permit Amendment unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.
The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department of Environmental Protection, Bureau of Air Regulation, 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Amendment, the Department shall issue a Revised DRAFT Permit Amendment and require, if applicable, another Public Notice.

In addition, any person whose substantial interests are affected by this proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000 within 14 days of publication of this Notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.
The Petition shall contain the following information: (a) The name, address, and the telephone number of each petitioner, the applicant's name and address, the Department Permit File Number, and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this DRAFT Permit Amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice. In the Office of General Counsel of the Department. Failure to petition within the allotted time frame constitutes a waiver of any rights such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 60Q-2.010, Florida Administrative Code.
A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department offices listed below. The complete project file includes the Draft Permit Amendment, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section at the Department's Tallahassee address and at (904)488-1344.
Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8219
(813)744-6100
Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605
(813)272-5530
3166 7/23/96



FLORIDA GAS TRANSMISSION

Division of

ENRON CORP

*Kim - Please update
socket & advise*

*Teresa. Copy is
acceptable but we
would want original
Al*

TECHNICAL OPERATIONS
MAITLAND, FLORIDA
PHONE 407-875-5800
FAX 407-875-5896

for record.

F A X

(ARE FRIENDLY)

To: TERESA HERRON
From: CLAY ROESLER /wrb
Date: 7-30-96
Time:
No. Pages to Follow: 2

Comments:

*Thank you for your patience. Please give me a
call if you need any further information.
Wendy (407) - 875-5846*

THE TAMPA TRIBUNE

Published Daily

Tampa, Hillsborough County, Florida

State of Florida } ss.
County of Hillsborough }

Before the undersigned authority personally appeared R. Pulney, who on oath says that he is Accounting Manager of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of _____

PUBLIC NOTICE

was published in said newspaper in the issues of
JULY 24, 1996

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at its post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

R. Pulney
29

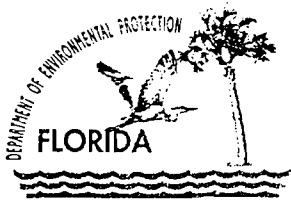
Sworn to and subscribed before me, this _____ day
of _____, A.D. 1996

Personally Known _____ or Produced Identification _____
Type of Identification Produced _____

(SEAL) *Thomas Kennedy*

IRA S. KENNEDY
Notary Public, State of Florida
My comm. expires April 21, 2000
No. CC5-48841

USE CONSTRUCTION PERMIT AMENDMENTS
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRAFT Permit No. 0170033-03 MAC Hillsborough County
03043-03-03 Hillsborough County
The Department of Environmental Protection gives notice of 20 days to show cause as construction permit amendments to Florida Gas Transmission Company (FGT) for permit revisions. The permit revisions include: (1) revisions to the permit conditions and revisions to the permit requirements which address the specific by rule for the units located at Compressor Station No. 30, Northwest of Plant City on SR 681 in Hillsborough County, and Compressor Station No. 26, Northwest of Lecanto in Citrus County.
These facilities burn clean natural gas and during initial compliance testing demonstrated compliance with all of the required emission standards. This amendment will state emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the New Source Performance Standards (NSPS) for Gas Turbines as necessary for Prevention of Significant Air Pollution (PSAP) for Rule 61B, F.A.C. Defining the requirements will not result in increased emissions of any of these pollutants but will clarify the applicable permits and reduce annual testing costs.
The visible emission requirements for these units will be revised from 10 percent capacity to 20 percent in accordance with the Rule 61B-320, F.A.C. A Best Available Control Technology determination was not required. The applicant's name and address is Florida Gas Transmission Company, Post Office Box 94500, Orlando, Florida.
The Department will issue the FINAL Permit Amendment on the occasion with the conditions of the enclosed DRAFT Permit Amendment, unless a response received in accordance with the following procedure results in a different decision or significant change of terms or conditions.
The Department will accept written comments concerning the proposed permit issuance within a period of 30 (thirty) days from the date of publication of this Notice. Written comments should be provided to the Department of Environmental Protection, 2600 State Street, Room 2400, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change to the DRAFT Permit Amendment, the Department shall issue a Revised DRAFT Permit Amendment and require, if applicable, another Public Notice.
In addition, any person whose substantial interests are affected by this proposed permitting action may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of Hearings and Appeals, Department of Environmental Protection, 2600 State Street, Room 2400, Tallahassee, Florida 32399-2400. A copy of the petition must be mailed to the petitioner to the applicant of the task as indicated on the form of this notice. The petition must be filed with the hearing officer within 30 days of any notice which person may have received of administrative determination (hearing) under Section 120.57, F.S., et. seq.
The Petition shall contain the following information: (1) The name, address, and telephone number of each petitioner; the applicant's name and address; the Department Permit File Number and the county in which the project is proposed; (2) A statement of how and when each petitioner received notice of the Department's action or proposed action; (3) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (4) A statement of the material facts disputed by Petitioner, if any; (5) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (6) A statement of which rules or statutes petitioner believes require reversal or modification of the Department's action or proposed action; and (7) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.
If a petition is filed, the administrative hearing process is designed to terminate either by action of the Department or by Departmental action in accordance with the provisions of the Florida Statutes.
DRAFT Permit Amendment. Persons whose substantial interests



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 2, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Allan Weatherford
Environmental Specialist
Florida Gas Transmission Company
Maitland, Florida 32794-5100

RE: DRAFT Permit Amendment Nos:
0170035-001-AC Hillsborough County
0570438-002 -AC Citrus County
1230034- 002-AC Taylor County

Dear Mr. Weatherford:

Attached is one copy of the Proposed Permit Amendment, Intent to Issue, and Public Notice of Intent to Issue (for publication by Florida Gas Transmission) for each of the above mentioned facilities located in Florida.

The "*PUBLIC NOTICE*" must be published by the applicant within 30 days of receipt of this letter. The applicant shall provide Proof of publication, i.e., newspaper affidavit, to the permitting authority office within 7 (seven) days of publication.

Please submit any written comments you wish to have considered concerning the proposed action to Mr. A. A. Linero, P.E., Administrator, New Source Review Section. If you have any other questions, please contact Teresa Heron at (904)488-1344.

Sincerely,

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

CHF/th/t

Enclosure

Copies furnished to:

Robert Leech, NED
Bill Thomas, SWD
Rick Kirby, EPCHC

BEST AVAILABLE COPY

Is your RETURN ADDRESS completed on the reverse side of this form? Yes No

Write 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.

3. Article Addressed to:
 Allan Weatherford, ES
 Fla. Gas Transmission
 PO Box 945100
 Mayland, FL
 32794-5100

4a. Article Number
 P 339 251 122

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

7. Date of Delivery
 7-12-96

5. Signature (Addressee)
 [Signature]

6. Signature (Agent)
 [Signature]

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

PS Form 3811, December 1991 *U.S. GPO: 1993-352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

P 339 251 122

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to Allan Weatherford	
Street Number Fla. Gas Transmi	
Post Office, State, & ZIP Code Mayland, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Hessboro Citrus Taylor	7-9-96

PS Form 3800, April 1995

INTENT TO ISSUE AIR CONSTRUCTION PERMIT AMENDMENT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of an
Application for Permit by:

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

DRAFT Permit Amendment Nos:
AC 29-228821 Hillsborough County
AC 09-229441 Citrus County
AC 62-229319 Taylor County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit amendment (copy of DRAFT Permit amendment enclosed) for a portion of the proposed changes at the sources detailed in the application specified above, for the reasons stated below.

The applicant, Florida Gas Transmission Company (FGT), applied on May 10, 1996 to the Department for permit revisions to eliminate emissions limitations and revise testing requirements which exceed those specified by rule for its compressor stations located at Compressor Station No. 30, Northeast of Plant City on SR 582 in Hillsborough County, Compressor Station No. 26, Northwest of Lecanto in Citrus County, and Compressor Station No. 15, North of Perry on C-361 in Taylor County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that air construction permit amendments as well as approval from EPA (of the Custom Fuel Monitoring Schedule) are required prior to operating these facilities as proposed.

The Department will issue the permit amendment as stated in the attached Department letter unless a petition for an administrative proceeding (hearing) is filed in accordance with Section 120.57, F.S. The Department will not act on the Custom Fuel Monitoring Schedule until approval is given by EPA.

The Department intends to issue these air construction permit amendments based on the belief that reasonable assurances have been provided to indicate that operation of the source will not adversely impact air quality, and the sources will comply with all appropriate provisions of Chapters 62-4, 62-210, 62-212, 62-272, 62-275, 62-296, and 62-297,

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "*PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT AMENDMENT.*" The notice shall be published one time only within 30 (thirty) days of receipt of this notice in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general

circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in each county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation at the address below within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit

The Department will issue FINAL Permit Amendment, in accordance with the conditions of the enclosed DRAFT Permit Amendment unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of "*PUBLIC NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT.*" Written comments should be provided to the permitting authority office. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Amendment, the Department shall issue a Revised DRAFT Permit Amendment and require, if applicable, another Public Notice.

In addition, any persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, F.S. The petition must contain the information set forth below and must be filed (received) through the Office of General Counsel of the Department at the address listed below. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of the receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated below at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the proposed source is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by petitioner, if any;
- (e) A statement of facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and,
- (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this DRAFT Permit Amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/request have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above, and be filed (received) within 14 days of receipt of this intent with in the Office of General Counsel of the Department at the address listed below. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 60Q-2.010, F.A.C.

Executed in Tallahassee, Florida.



C. H. Fancy, Chief
Bureau of Air Regulation

PUBLIC NOTICE OF INTENT TO ISSUE
AIR CONSTRUCTION PERMIT AMENDMENTS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit Nos: 0170035-001-AC - Hillsborough County
0570438-002-AC - Citrus County

The Department of Environmental Protection (Department) gives notice of its intent to issue air construction permit amendments to Florida Gas Transmission Company (FGT) for permit revisions to eliminate emissions limitations and revise testing requirements which exceed those specified by rule for its units located at Compressor Station No. 30, Northeast of Plant City on SR 582 in Hillsborough County, and Compressor Station No. 26, Northwest of Lecanto in Citrus County.

These facilities burn clean natural gas and, during initial compliance testing, demonstrated compliance with all of the required emission standards. This amendment will delete emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the the New Source Performance Standard (NSPS) for Gas Turbines or necessary for Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Deleting the requirements will not result in increased emissions of any of these pollutants, but will simplify the applicable permits and reduce annual testing costs.

The visible emissions requirements for these units will be revised from 10 percent opacity to 20 percent in accordance with the Rule 62-296.320, F.A.C. A Best Available Control Technology determination was not required. The applicant's name and address is Florida Gas Transmission Company, Post Office Box 945100, Maitland, Florida.

The Department will issue the FINAL Permit Amendment, in accordance with the conditions of the enclosed DRAFT Permit Amendment unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Written comments should be provided to the Department of Environmental Protection, Bureau of Air Regulation, 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Amendment, the Department shall issue a Revised DRAFT Permit Amendment and require, if applicable, another Public Notice.

In addition, any person whose substantial interests are affected by this proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000 within 14 days of publication of this Notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information; (a) The name, address, and the telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and, (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this DRAFT Permit Amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice, through the Office of General Counsel of the Department. Failure to petition within the allotted time frame constitutes a waiver of any rights such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 60Q-2.010, Florida Administrative Code.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department offices listed below. The complete project file includes the Draft Permit Amendment, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section at the Department's Tallahassee address and at (904)488-1344.

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
(904)488-1344

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8219
(813)744-6100

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605
(813)272-5530



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

DRAFT
July 2, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Dear Mr. Weatherford:

RE: Request for Amendments to Air Construction Permits:
AC 29-228821 (Station No 30) Hillsborough County
AC 09-229441 (Station No. 26) Citrus County
AC 62-229319 (Station No. 15) Taylor County

The Department is in receipt of your letter dated April 12 and May 10, 1996, requesting to amend the above permits to include the EPA custom fuel monitoring schedule and to modify specific conditions Nos. 1, 2 and 8 of the first two permits.

The Department has reviewed this request and hereby amends the above mentioned permits as follows:

PERMITS: AC 29-228821 and AC 09-229441

SPECIFIC CONDITION NO. 1

This condition will be modified to exclude the emission limits standard for all pollutants except for nitrogen oxides (NO_x) and sulfur dioxide (SO₂). The emissions expressed in units of mass (TPY) will remain as a condition of the permit. This facility has already demonstrated initial compliance with the permit limits.

DRAFT

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

DRAFT

FROM:

PERMIT AC 29-228821

POLLUTANT	lbs/hr	tons/yr	Emission Factor
NOx	3.95	17.3	1.49 g/bhp-hr
CO	5.88	25.75	2.22 g/bhp-hr
VOC(s) (non-methane)	0.25	1.10	0.95 g/bhp-hr
PM	0.077	0.34	5 lbs/MMscf
PM10	0.077	0.34	5 lbs/MMscf
S02	0.44	1.94	10 gr S/100scf

**NOx emission standard shall not exceed 42 ppmv at 15% oxygen on a dry basis.

* Based on 100% load conditions.

PERMIT AC 09-229441

POLLUTANT	lbs/hr	tons/yr	Emission Factor
NOx	8.92	39.05	0.62 g/bhp-hr
CO	6.46	28.29	0.45 g/bhp-hr
VOC(s) (non-methane)	0.37	1.62	0.26 g/bhp-hr
PM	0.35	1.51	5 lbs/MMscf
PM10	0.35	1.51	5 lbs/MMscf
S02	1.97	8.62	10 gr S/100scf

**NOx emission standard shall not exceed 42 ppmv at 15% oxygen on a dry basis.

* Based on 100% load conditions.

TO:

Standard for Sulfur Dioxide [40 CFR 60.333(a)]

The owner or operator shall not cause to be discharge into the atmosphere from any gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis. Annual emissions shall not exceed 1.94 TPY (AC29-228221) and 8.62 TPY (AC09-229441).

DRAFT

Standard for Nitrogen Oxides

NOx emissions shall not exceed 42 ppmv at 15% oxygen on a dry basis (Based on a 100% load conditions). Annual emissions shall not exceed 17.3 TPY (AC 29-228221) and 39.05 TPY (AC 09-229441).

SPECIFIC CONDITION No. 2

FROM:

Visible Emissions shall not exceed 10% opacity.

TO:

Visible emissions shall not exceed 20% opacity.

SPECIFIC CONDITION No. 8

FROM:

Compliance with the allowable emission limits shall be determined within 60 days after achieving the maximum production rate at which this facility will be operated, but not later than 180 days after initial start-up and annually thereafter except as provided in Specific Condition 10, below, by the following reference methods as described in 40 CFR 60, Appendix A (July 1992 version) and adopted by reference in Chapter 17-297, F.A.C.

Method 1	Sample and Velocity Traverses
Method 2	Volumetric Flow Rate
Method 3 or 3A	Gas Analysis
Method 9	Determination of the Opacity of the Emissions from Stationary Sources
Method 10	Determination of the Carbon Monoxide from Stationary Sources
Method 20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines
Method 18	Measurement of Gaseous Organic Compounds Emissions by Gas Chromatography
Method 25A	Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

TO:

Compliance with the allowable emission limits shall be determined by the following EPA reference methods as described in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297, F.A.C.

DRAFT

Method 1	Sample and Velocity Traverses
Method 2	Volumetric Flow Rate
Method 3 or 3A	Gas Analysis
Method 9	Determination of the Opacity of the Emissions from Stationary Sources
Method 20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Gas Turbines

Since this source already demonstrated initial compliance with permitted emission limits, subsequent testing frequency (in operating permits) shall be as determined by the Hillsborough County Environmental Protection Commission (EPCHC).

CUSTOM FUEL MONITORING SCHEDULE

AC 29-228821, AC 09-229441 and AC 62-229319

The custom monitoring schedule will be incorporated by reference after approval by EPA, will be incorporated by reference. Currently, EPA is in the process of reviewing FGT request.

This letter must be attached to the above mentioned permits and shall become a part of each permit.

Sincerely,

DRAFT
Howard E. Rhodes, Director
Division of Air Resources
Management

HLR/th/t

Attachment to be Incorporated

Mr. Allan Weatherford's letters of April 12 and May 10, 1996.

cc: Robert Leech, NED
Bill Thomas, SWD
Rick Kirby, EPCHC

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy
THRU: A. A. Linero *aa*
FROM: Teresa Heron *TH by aa*
DATE: July 2, 1996
SUBJECT: Florida Gas Transmission - Amendments
Hillsborough County, Citrus County and Taylor County

*Clair - We will
issue subsequent
notice when EPA
approves customized
fuel monitoring schedule
AL*

Attached is a letter modifying a construction permit for the above mentioned facilities. These facilities burn clean natural gas and, during initial compliance testing, demonstrated compliance with all of the required emission standards. This amendment will delete emission standards and testing requirements for carbon monoxide, particulate matter and volatile organic compounds because they are not required by the New Source Performance Standard (NSPS) for Gas Turbines or necessary for Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Deleting the requirements will not result in increased emissions of any of these pollutants, but will simplify the applicable permits and reduce annual testing costs.

In addition, the visible emissions requirements for these units will be revised from 10 percent opacity to 20 percent in accordance with the Rule 62-296.320, F.A.C.

I recommend your approval and signature.

TH/t



Florida Gas Transmission Company

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

RECEIVED

May 9, 1996

OVERNIGHT MAY 10 1996

BUREAU OF
AIR REGULATION

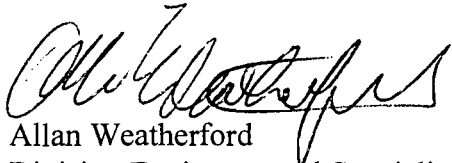
A. A. Linero, P.E.
Administrator
New Source Review Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

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

[Handwritten Signature]

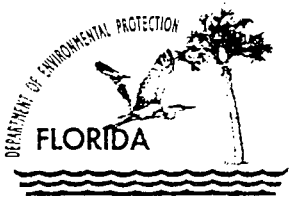
NOT VALID OVER \$5000.00 UNLESS COUNTERSIGNED

FIELD DISBURSEMENT ACCOUNT

CITIBANK DELAWARE



0570438-002 AC - Link
0170035-001 AC
1230034-002 AC



Department of Environmental Protection

File

Lawton Chiles
Governor

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

Virginia B. Wecherell
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

If 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 AND FL
 Post Office Box 945100
 Maitland, Florida 32794-5100

MAY 09 1996

5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, December 1991

U.S. GPO: 1993-352-714

DOMESTIC RETURN RECEIPT

4a. Article Number

2 127 633 206

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)

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	<i>Allan Wetherford</i>
Street and No.	<i>F.T.</i>
P.O. State and ZIP Code	<i>Maitland FL 32794</i>
Postage	\$ <i>5.00</i>
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	<i>AC 62-229317</i> <i>5-6-96 AC 09</i> <i>229441</i> <i>AC 29-228821</i>

670035-001-AC



Florida Gas Transmission Company

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

RECEIVED

APR 16 1996

BUREAU OF
AIR REGULATION

April 12, 1996

Mr. Clair Fancy
Florida Department of Environmental Protection
Northwest District Branch Office
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Re: Air Permit No. AC09-229441
Florida Gas Transmission Company - Station 26
Citrus County, Lecanto, Florida

Florida Gas Transmission Company (FGT) requests that certain modifications be made to the above referenced construction permit and also requests approval for a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in the natural gas.

The permitted unit is a minor source at a minor facility. Changes are requested to eliminate requirements that exceed those specified by rule without significantly impacting reasonable compliance oversight.

Specifically, FGT requests the following changes to the referenced permit:

Change Specific Condition 1 so that all emissions limiting standards are omitted except for NOx and SO2 standards. The standards should be consistent with the standards that are applicable to the source in NSPS (40CFR61) and should be expressed in the units defined in the standard rather than in pounds per hour (lbs/hr) or tons per year (TPY).

Change Specific Condition 2 to read: "Visible emissions shall not exceed 20% opacity."

Revise Specific Condition 8 so that the test requirements are limited to:

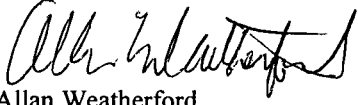
- Annual Testing: for visible emissions by Method 9
- Prior to Renewal Testing: for Nox by Methods 1,2,3A, and 20

NOTE: The initial tests, as currently specified in the permit, were completed and showed compliance with all permit limits. FGT is requesting the change to affect only the "annual" and "prior to renewal" testing requirements.

Additionally, pursuant to Specific Condition 13, FGT requests approval of a custom monitoring schedule for sampling and analyzing nitrogen and sulfur in its fuel gas (a copy of this request has also been sent to Hillsborough County EPC for their consideration). 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,

A handwritten signature in black ink, appearing to read "Allan Weatherford". The signature is written in a cursive style with some loops and flourishes.

Allan Weatherford
Division Environmental Specialist

c Charlie Thompson
 Roy Smith
 Mark Winder
 John Ludlow
 Eric Peterson, Hillsborough County EPC

**TABLE 2: Summary of Results
Unit No. 2601**

Company: Florida Gas Transmission Company
 Plant: Compressor Station #26
 Location: 2 miles NW of Lecanto in Citrus County
 Technicians: CDC, LJB, LAB
 Source: Solar Taurus Model 60S Solonox Turbine

Test Number	26C-1	26C-1*	26C-2	26C-3	Averages	FDEP Permit Limits
Date	3/21/95	3/21/95	3/21/95	3/21/95		
Start Time	9:01	9:01	11:22	13:00		
Stop Time	10:10	10:10	12:22	14:04		
Turbine/Compressor Operation						
Power Turbine Speed (%NPT)	89.6	89.6	86.7	85.5	87.3	
Gas Producer Speed (%NGP)	96.9	96.9	96.5	96.5	96.6	
Estimated Horsepower (bhp ISO Day, Solar program)	6439	6439	6149	6243	6277	6500
PCD Observed (psig)	134.7	134.7	131.0	131.1	132.3	
T-1 Temperature (°F)	72.7	72.7	78.0	78.3	76.3	
T-5 Temperature (°F)	1400	1400	1401	1400	1400	
Compressor Flow (MMSCFD)	446.7	446.7	473.0	466.7	462.1	
Gas Compressor Suction Pressure (psi)	808.5	808.5	833.7	871.1	837.8	
Gas Compressor Suction Temperature (°F)	63.9	63.9	63.3	63.3	63.5	
Gas Compressor Discharge Pressure (psi)	1027.7	1027.7	1038.5	1039.9	1035.4	
Gas Compressor Discharge Temperature (°F)	99.6	99.6	96.0	95.7	97.1	
Fuel Data (Residue Gas)						
Fuel Heating Value (Btu/SCF-HHV)	1041	1041	1041	1041	1041	
O2 "F-factor", based on fuel analysis	8688	8688	8688	8688	8688	
CO2 "F-factor", based on fuel analysis	1030	1030	1030	1030	1030	
Total Sulfur in Fuel (grains/100 SCF)	0.063	0.063	0.063	0.063	0.063	10
Fuel Flow (MMSCF/hr)	0.0510	0.0510	0.0498	0.0497	0.0501	0.0684
Heat Input (MMBtu/hr)	53.05	53.05	51.78	51.70	52.18	71.52
Ambient Conditions						
Temperature (°F, wet)	66	66	69	69	68	
(°F, dry)	74	74	80	80	78	
Atmospheric Pressure ("Hg, abs.)	29.89	29.89	29.87	29.84	29.87	
Humidity (lbs/lb of air)	0.0112	0.0112	0.0124	0.0124	0.0120	
Measured Emissions						
NOx (ppmv, dry)	24.1	22.0	22.5	23.5	23.0	
NOx (ppm @ 15% O2)	28.0	25.6	26.4	27.6	26.9	42.0
NOx (ppm @15% O2, ISO Day)	29.4	26.8	27.9	29.2	28.4	154.2†
CO (ppmv, dry)	6.7	6.7	5.6	4.8	5.7	
O2 (% volume, dry)	15.82	15.82	15.88	15.88	15.86	
CO2 (% volume, dry)	3.00	3.00	2.85	2.97	2.94	
Fo	1.69	1.69	1.76	1.69	1.71	
THC (ppmv, dry as Methane via M-25A)	0.95	0.95	0.30	0.13	0.46	
Visible Emissions (% Opacity)	0	0	0	0	0	10
Stack Volumetric Flow Rates						
via Pitot Tube Traverse (SCFH, dry)	2.04E+06	2.04E+06	2.02E+06	1.98E+06	2.01E+06	
via O2 "F-factor" (SCFH, dry)	1.90E+06	1.90E+06	1.87E+06	1.87E+06	1.88E+06	
via CO2 "F-factor" (SCFH, dry)	1.82E+06	1.82E+06	1.87E+06	1.79E+06	1.83E+06	
Mass Emissions (via EPA Methods 1-4)						
NOx (lbs/hr)	5.86	5.35	5.44	5.55	5.53	8.92
CO (lbs/hr)	0.99	0.99	0.82	0.69	0.84	6.46
THC (lbs/hr)	0.081	0.081	0.025	0.011	0.039	0.37 ¥
SO2 (lbs/hr, based on fuel flow and fuel sulfur)	0.0092	0.0092	0.0090	0.0089	0.0090	1.97
NOx (tons/yr)	25.7	23.4	23.8	24.3	24.2	39.1
CO (tons/yr)	4.34	4.34	3.61	3.02	3.66	28.29
THC (tons/yr)	0.35	0.35	0.11	0.05	0.17	1.62 ¥
SO2 (tons/yr, based on fuel flow and fuel sulfur)	0.040	0.040	0.039	0.039	0.040	8.62
NOx (g/bhp-hr)	0.413	0.377	0.401	0.403	0.400	0.62
CO (g/bhp-hr)	0.070	0.070	0.061	0.050	0.060	0.45
THC (g/bhp-hr)	0.0057	0.0057	0.0019	0.0008	0.0028	0.26 ¥

* Reports NOx recalibration value per EPA 40 CFR 60, Appendix A, Method 20, Section 6.2.3.

† EPA 40 CFR 60 Subpart GG NSPS requirement

¥ FDEP Permit limits are for non-methane Volatile Organic Compounds (VOC).

Gas Fuel F Factor & Heating Value Calculation

Client **Florida Gas Transmission Company**
 Sample ID **pipeline natural gas (residue gas)**
 Time **6:23**
 Date **3/21/95**

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

Component	% Volume	Molecular Wt.	Density (lb/ft ³)	% volume x		Component Gross Btu/lb	Weight Fract. Btu	Gross Heating Value (Btu/SCF)	Volume Fract. Btu
				Density	weight %				
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	0.4930	28.016	0.0744	0.00037	0.8078	0	0.00	0.0	0
CO ₂	1.0030	44.010	0.1170	0.00117	2.5844	0	0.00	0.0	0
CO		28.010	0.0740	0.00000	0.0000	4347	0.00	322.0	0
Methane	95.1330	16.041	0.0424	0.04034	88.8320	23879	21212.20	1013.0	963.697
Ethane	2.2510	30.067	0.0803	0.00181	3.9807	22320	888.50	1792.0	40.3379
Ethylene		28.051	0.0746	0.00000	0.0000	21644	0.00	1614.0	0
Propane	0.5020	44.092	0.1196	0.00060	1.3222	21661	286.41	2590.0	13.0018
propylene		42.077	0.1110	0.00000	0.0000	21041	0.00	2336.0	0
Isobutane	0.1490	58.118	0.1582	0.00024	0.5191	21308	110.61	3363.0	5.01087
n-butane	0.1490	58.118	0.1582	0.00024	0.5191	21257	110.35	3370.0	5.0213
Isobutene		56.102	0.1480	0.00000	0.0000	20840	0.00	3068.0	0
Isopentane	0.1000	72.144	0.1904	0.00019	0.4193	21091	88.44	4008.0	4.008
n-pentane	0.1000	72.144	0.1904	0.00019	0.4193	21052	88.27	4016.0	4.016
n-hexane	0.1190	86.169	0.2274	0.00027	0.5960	20940	124.79	4762.0	5.66678
H ₂ S		34.076	0.0911	0.00000	0.0000	7100	0.00	647.0	0

total	100.00	Average Density	0.04541	100.0000	Gross Heating Value	Gross Heating Value
		Specific Gravity	0.59356		Btu/lb	22910

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	0			
Oxygen	32.000	0	0	0.00	0.0000	0			
Nitrogen	28.016	0	0	0.49	13.8119	0.804982658			
CO ₂	44.010	0.272273	0	1.00	44.1420	0.70047131			1.87034
CO	28.010	0.42587	0	0.00	0.0000	0			0
Methane	16.041	0.75	0.25	95.13	1526.0285	66.7048437	22.2349479		
Ethane	30.067	0.8	0.2	2.25	67.6808	3.15565165	0.78891291		
Ethylene	28.051	0.85714	0.14286	0.00	0.0000	0	0		
Propane	44.092	0.81818	0.181818	0.50	22.1342	1.0554699	0.23454915		
Propene	42.077	0.85714	0.14286	0.00	0.0000	0	0		
Isobutane	58.118	0.82759	0.17247	0.15	8.6596	0.41768188	0.08704503		
n-butane	58.113	0.82759	0.17247	0.15	8.6596	0.41768188	0.08704503		
Isobutene	56.102	0.85714	0.14286	0.00	0.0000	0	0		
Isopentane	72.144	0.83333	0.16667	0.10	7.2144	0.3503892	0.07007952		
n-pentane	72.144	0.83333	0.16667	0.10	7.2144	0.3503892	0.07007952		
n-hexane	86.169	0.83721	0.16279	0.12	10.2541	0.50034078	0.09728799		
H ₂ S	34.076	0	0.058692	0.00	0.0000	0	0		

Totals				99.99900	1715.7994	73.6529195	23.67	0.804982658	1.87034
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CALCULATED VALUES		
O ₂ F Factor (dry)	8688	DSCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
O ₂ F Factor (wet)	10662	SCF of Exhaust/MM Btu of Fuel Burned @ 0% excess air
Moisture F Factor	1974	SCF of Water/MM Btu of Fuel Burned @ 0% excess air
Combust. Moisture	18.52	volume % water in flue gas @ 0% excess air
CO ₂ F Factor	1030	DSCF of CO ₂ /MM Btu of Fuel Burned @ 0% excess air
Carbon Dioxide	11.85	volume % CO ₂ in flue gas @ 0% O ₂
Predicted Fo Factor	1.76	EPA Method 3a Fo value
Fuel VOC % (non-C1)	8.06%	non-methane fuel VOC content
Fuel VOC % (non-C1,C2)	3.98%	non-methane non-ethane fuel VOC content