



file

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 18, 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 (FGT) Permit Modifications
1230034-004-AC, (PSD-FL-202), Station 15, Taylor County
Request to Modify the BACT limit for NO_x

Dear Mr. Roesler:

The Department has received your letter dated May 28 and June 17, 1997 requesting the 25 ppmvd NO_x emission limit be deleted. FGT claims that according to the manufacturer, Solar Turbines, the limit is not achievable even if the turbine is overhauled.

The permitted emission limit for NO_x is an enforceable permit condition and represents the Best Available Control Technology (BACT) for the subject turbine. Based on our review of this emission unit file, we have determined that the following information is needed before evaluating your request.

1. Please submit all NO_x test data for this emission unit.
2. Provide the Department with an expected compliance date as required in the construction permit for this emission unit.
3. Submit a BACT on NO_x economic analysis as required by the BACT determination conducted in 1993. During the review of the BACT analysis presented by FGT in 1993 (see copy attached), it was the Department understanding that Solar was in the process of developing dry low NO_x burner technology that would achieve emission control level of 25 ppmvd at 15% oxygen when firing natural gas. Please explain the rationale for Solar's claim that the NO_x level is not achievable even if the engine is overhauled?
4. Is it possible to move the engine to another location in the future and replace the engine in Taylor County with one that does meet the 25 ppm requirement?

Mr. Clayton Roesler
Page 2 of 2
June 18, 1997

If this matter is not resolved before January 1, 1998, please be advised that the BACT remains in force. Unless the conditions are revised, the Department can enforce the terms of the existing permit. There is no reason to believe that the BACT determination was an error.

Pursuant to Rule 62-4.050, F.A.C., please submit the above requested information under a professional engineer seal.

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: Chris Kirts, NED
Mort Benjamin, NED
Jim Pennington, BAR

Is your RETURN ADDRESS completed on the reverse side?

- SEND**
- Complete this form.
 - Print your name and address on the reverse of this form so that we can return this card to you.
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 - Write "Return Receipt Requested" on the mailpiece below the article number.
 - The Return Receipt will show to whom the article was delivered and the date delivered.

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

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Clayton Roesler, DES
 Fla. Gas Transmission
 PO Box 945100
 Maitland, FL
 32794-5100

4a. Article Number
 P 339 251 200

4b. Service Type

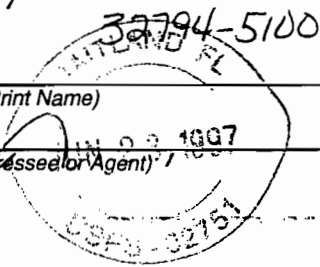
<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Certified
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Insured
<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> COD

7. Date of Delivery

5. Received By: (Print Name)

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

6. Signature: (Addressee or Agent)



PS Form 3800

Receipt

Thank you for using Return Receipt Service.

P 339 251 200

US Postal Service
Receipt for Certified Mail

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

Sender	Clayton Roesler
Street & Number	FGT
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	6-18-97
	1230034-004-AC PSD-FI-202 St. # 15

PS Form 3800, April 1995

Best Available Control Technology (BACT) Determination
Florida Gas Transmission Company
Taylor County-PSD-FL-202

The applicant proposes to expand an existing natural gas pipeline compressor station No. 15 near the town of Perry in Taylor County, Florida. The proposed expansion consists of adding one new 12,600 brake horsepower (BHP) natural-gas-fired, turbine engine.

The applicant has indicated the maximum total annual tonnage of regulated air pollutants emitted from the proposed turbine engine based on 8,760 hrs/year operation to be as follows:

<u>Pollutant</u>	<u>Max. Net Increase in Emissions (TPY)</u>	<u>PSD Significant Emission Rate (TPY)</u>
NOx	70.70	40
SO ₂	13.18	40
PM/PM ₁₀	2.32	25/15
CO	51.30	100
VOC	2.93	40

Rule 17-212.400(2)(f)(3) of the Florida Administrative Code (F.A.C.) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table. In this case, BACT is only required for nitrogen oxides (NOx).

BACT Determination Requested by the Applicant

The BACT Determination requested by the applicant is given below:

<u>Pollutant</u>	<u>Proposed Limits</u>
NOx	42 ppmvd at 5% O ₂

Date of Receipt of a BACT Application

April 7, 1993

Review Group Members

This determination was based upon comments received from the applicant and the Permitting and Standards Section.

BACT DETERMINATION PROCEDURE

In accordance with F.A.C. Chapter 17-212, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available control methods, systems and techniques.

In addition, the regulations require that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other State.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT ANALYSIS FOR NITROGEN OXIDES (NOx)

CONTROL TECHNOLOGY REVIEW

The uncontrolled emissions of nitrogen oxides (245.4 TPY) represent a significant proportion of the total emissions generated by this project, and need to be controlled if deemed appropriate. As such, the applicant presented an extensive analysis of the different available technologies for NOx control.

The technologies that were evaluated in the application are:

- o Selective catalytic reduction (SCR)
- o Dry low-NOx combustion controls (Dry Low NOx)
- o Wet (water/steam) injection
- o Selective noncatalytic reduction (SNCR)
- o Nonselective catalytic reduction (NSCR)

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Florida Gas Transmission
Taylor County-PSD-FL-202

The applicant has indicated that only two of the above technologies (SCR & Dry Low-NOx) presented are technically feasible alternatives for control of NOx emissions from gas turbines in compressor service stations.

Dry Combustion Technology (Dry Low-NOx)

Dry combustion techniques are designed to alter the conditions in the combustion chamber to influence the temperature, residence time, and mixing of air and fuel so as to reduce the amount of NOx formed. The state-of-the-art concept in designing a low-NOx turbine involves raising the air-to-fuel ratio in the combustion primary zone and thoroughly premixing primary combustion air and fuel. This reduces NOx formation by lowering the average flame temperature in the combustor primary zone and avoiding localized hot spots.

Dry combustion controls will reduce NOx emissions for this turbine by 173.79 TPY. Annual NOx emissions are expected not to exceed 70.7 TPY (42 ppmvd at 15% O₂). Total annual cost for this technology is estimated to be \$103,134. Therefore, NOx controls costs will be \$593 per ton of NOx removed based on a 10 years operating life for the dry low control installation. This makes dry low-NOx combustion a technically and economically feasible control method for natural gas pipeline turbines.

The applicant has proposed that BACT for nitrogen oxides will be met by using dry low NOx combustor design to limit emissions to 42 ppmvd at 15% O₂ when burning natural gas.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NOx emission limit established to date for a gas turbine at a compressor station is 8.0 ppmvd at 15% oxygen. This level of control was accomplished through the use of a selective catalytic reduction (SCR) system.

Selective Catalytic Reduction (SCR)

Selective catalytic reduction is a post-combustion method for control of NOx emissions. The SCR process combines vaporized ammonia with NOx in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage through the catalyst bed. The SCR process can achieve up to 90% reduction of NOx with a new catalyst. As the catalyst ages, the maximum NOx reduction will decrease to approximately 86 percent.

The effect of exhaust gas temperature on NO_x reduction depends on the specific catalyst formulation and reactor design. Most commercial SCR systems operate over a temperature range of about 600-750°F although recently developed zeolite-based catalysts are claimed to be capable of operating at temperatures as high as 950°. At levels above and below this window, the specific catalyst formulation will not be effective and NO_x reduction will decrease. Operating at high temperatures can permanently damage the catalyst through sintering of surfaces.

For this type of turbines, a significant design concern is the location of the catalyst bed within the flue gas duct work to ensure that the required SCR temperature "window" is met. A typical gas turbine in compressor service has an exhaust temperature near 1000°F (Solar, 1991), either water quench, dilution with ambient air, or heat recovery, would be required in order to bring the turbine exhaust temperature into the SCR window. All three temperature reduction methods have detrimental side effects.

Another major technical problem, identified by the applicant, is the reliability of the required automated control equipment. As engine power demand fluctuates, gas density, temperature, flow rate, and other system operational characteristics vary. As these factors change, engine exhaust flow rate, exhaust temperature, and other parameters important to maintaining catalytic NO_x reduction efficiency also change. This limits the application of SCR at natural gas compressor stations, which are often designed to operate in an unattended mode.

In addition, flow variations in natural gas pipelines impose an additional design complication for the reliable high conversion operation of the SCR process. The systems must be designed to cope with the maximum and minimum flow and the maximum and minimum temperature without prohibitive additional reheat costs and multiple ammonia injection systems. The appropriate method to operate without excessive ammonia slip at the low temperature, low flow condition is to select an active catalyst that will allow high conversion of ammonia at low temperature with an ammonia/NO_x ratio close to one. This will provide high conversion of NO_x at low load and temperature and somewhat lower conversions at high load without excessively complex ammonia control technology. There are no complex ammonia controls on existing compressor stations that are capable of coping with the flow and temperature variations found in natural gas transmission service. Moreover, the sophisticated controls needed for a system this complex may require extensive operator attention and maintenance.

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Florida Gas Transmission
Taylor County-PSD-FL-202

The 90% NOx removal specified in other BACT analyses is not technically feasible for Compressor Station No. 15 because the SCR system must be designed to satisfy both high and low load conditions. Tradeoffs in SCR system operation to limit ammonia slip decrease the amount of NOx removal possible. A maximum of approximately 80% NOx removal is deemed technically feasible for SCR over the entire operating range of the proposed turbines.

BACT EVALUATION BY THE DEPARTMENT

Although technically feasible, the applicant has rejected using SCR on this type of turbine because of economic, energy, and environmental impacts. The following limitations, identified by the applicant, has been evaluated by the Department.

Energy Impact

The energy impacts of SCR will increase electrical power generation by 0.6 MW hr/yr

Economic Impact

Given the applicant's proposed BACT level for nitrogen oxides, an evaluation was made of the cost and associated benefit of using SCR as follows:

The applicant has indicated that the total annual cost to install SCR at 100 percent capacity factor is \$962,378. Taking into consideration the total annual cost, a cost/benefit analysis of using SCR was developed.

Based on the information supplied by the applicant, it is estimated that the maximum annual NOx emissions from the proposed compressor engine will be 245.40 tons/year. Assuming that SCR would reduce NOx emissions by 80%, the SCR would control approximately 195.6 tons of NOx annually. When this reduction (195.6 TPY NOx) is taken into consideration with the total annual cost of \$962,378, the total cost per ton of controlling NOx is \$4,920 per ton NOx removed. This cost is not representative of costs that have been previously justified as BACT for this type of turbine.

Environmental Impact

The use of SCR could result in accidental spills, emissions of ammonia, and the handling of spent catalyst which is sometimes classified as hazardous waste.

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In addition to nitrogen oxides and ammonia, the impacts of toxic pollutants associated with the combustion of natural gas have been evaluated. These toxics (formaldehyde and polycyclic organic matter) common to the combustion of natural gas, are expected to be emitted in minimal amounts and will not have an impact on air quality or this BACT analysis.

BACT DETERMINATION BY THE DEPARTMENT

Based on the information presented by the applicant and the studies conducted, the Department believes that the NOx control emission technology proposed by the applicant satisfies the BACT requirement for this 12,600 HP gas turbine. A review of the latest BACT Clearinghouse determinations for NOx show limits of 25 ppmvd at 15% O₂ (natural gas) using dry low-NOx burn technology. Solar is currently developing dry low NOx programs to achieve emission control level of 25 ppmvd at 15% oxygen when firing natural gas. Therefore, since this technology will likely be available by 1997, the Department has accepted the proposed 42 ppmvd (natural gas) at 15% O₂ as a BACT for a limited time.

Although add-on control (SCR) could be used to provide additional control, the benefits that would be obtained do not warrant the cost. The emission limit for the 12,600 HP gas turbine is thereby established as follows:

<u>Pollutant</u>	<u>Emission Limit</u>
NOx	42 ppmvd at 15% O ₂ 25 ppmvd at 15% O ₂ , not later than 1/1/98

Note: Initial NOx emission rates for natural gas firing shall not exceed 42 ppmvd at 15% oxygen on a dry basis. The permittee shall achieve NOx emissions of 25 ppmvd at 15% oxygen at the earliest achievable date. After 1/1/98, the Department will revise the BACT determination and re-evaluate the economic analysis for this project if the compliance schedule and the NOx emission limit of 25 ppmvd at 15% O₂ has not been met.

Details of the Analysis May be Obtained by Contacting:

Doug Outlaw, P.E., BACT Coordinator
Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Solar Turbines

A Caterpillar Company

Solar Turbines Incorporated

215 Centre Park Blvd.
De Soto, TX 75115
(972) 228-5500
Fax (972) 228-6180

TWO-SHAFT GAS TURBINE CERTIFIED TEST REPORT

Date of Test : 17-Jun-97
Equipment Tested : MARS 90
Model Type : T12000S

	<u>Gas Producer</u>	<u>Power Turbine</u>
Serial Number	: 0463M	TUE97-M6157
Solar M.O.	: 4421280	4421281
Purpose of Test	: NEW BUILD	NEW BUILD
Test Specification	: ES2039	ES2039

Approvals

TEST DATA PREPARATION :	<u>Kenneth Robinson</u> WHITNEY COLE	<u>6/17/97</u> Date
TEST DATA VERIFICATION :	<u>Steve Rawson</u> STEVE RAWSON	<u>6/18/97</u> Date
PRODUCT ACCEPTANCE :	<u>D. Simon</u> D.SIMON	<u>6/17/97</u> Date

Test Summary (gas fuel)

Solar Turbines - Desoto, Texas
Two-Shaft Gas Turbine Certified Test Report
 Corrected to Sea Level, No Duct Losses, 60% Rel. Humidity and Match Temp.

Equipment Summary

Date	17-Jun-97	GP M.O.	4421280	Model	T12000S
GP S/N	0463M	PT M.O.	4421281	CS Curve	27562
PT S/N	TUE97-M6157	FuelType	Gas	Test Spec	ES2038
Data Pt.	34				

Corrected Performance Summary

100% NGP = 10780 RPM

100% NPT = 9500 RPM

<u>Parameter Name</u>	<u>Units</u>	<u>Results</u>	<u>Min</u>	<u>Max</u>
Corrected NGP	%	103.54	103.50	103.70
Corrected NPT	RPM	8434.47	8390.0	8550.0
Corrected HP	HP	12138.7	11738.0	
Corrected SFC	BTU/HP-HR	8088.5		8134.0
Corrected TRIT	DEG F	1918.5		

Engine Parameters

<u>Parameter Name</u>	<u>Units</u>	<u>Results</u>	<u>Min</u>	<u>Max</u>
Air Inlet Temp	DEG F	67.0		
Corrected T5	DEG F	1250.1		
T5Base	DEG F	1261.9		
Corrected T9	DEG F	874.6		
T5/T3	RATIO	0.7189	0.7052	0.7427
Compensator P/N	120902	N/A		
T5 Delta	DEG F	77.4		110
Final IGV Angle	DEG	-8.0		
Carr Mass Flow	PPS	85.32		
PCD	PSI	208.4		
Pump	Inches H2O	0.6		2.0
T2 Spread	DEG F	6.0		6.0
T9 Delta	DEG F	4.2		20.0

Test Technician

Whitney Cole

 WHITNEY COLE

Solar Turbines - Desoto, Texas
Two-Shaft Gas Turbine Certified Test Report
 Corrected to Sea Level, No Duct Losses, 80% Rel. Humidity and Match Temp.

Equipment Summary

Date	17-Jun-97	GP M.O.	4421280	Model	T12000S
GP S/N	0463M	PT M.O.	4421281	CS Curve	27562
PT S/N	TUE07-M6157	FuelType	Gas	Test Spec	ES2038
Data Pt.	34				

Lube System Parameters

<u>Location</u>	<u>Pressure</u>		<u>Results</u>		<u>Min</u>	<u>Max</u>
Brg 1	36.9	PSI	75.1	GPM	66.0	83.0
Brg 2&3	38.4	PSI	15.8	GPM	9.6	15.6
Brg 4&5	34.9	PSI	78.2	GPM	54.8	84.9
Lube Oil Temp			160	DEG F	148.0	168.0
Lube Oil Pres Limits					30.0	45.0
GP Oil Drain Temp			218.1	DEG F		255
GP Thrust Brg Temp			186.7	DEG F		230.0
PT Thrust Brg Temp			181.8	DEG F		220

Emissions Summary

<u>Full Load</u>	<u>Units</u>	<u>Results</u>	<u>Limits</u>
NOx (15% O2)	PPM	12.8	25
NOx (ISO Corr)	PPM	N/A	N/A
CO	PPM	3.4	50
UHC	PPM	2.2	25
O2	% Vol.	16.0	N/A
CO2	% Vol.	2.9	N/A
 <u>48% Load</u>	 <u>Units</u>	 <u>Results</u>	 <u>Limits</u>
D.P. # 39			
NOx (15% O2)	PPM	10.8	25
NOx (ISO Corr)	PPM	N/A	N/A
CO	PPM	30.1	50
UHC	PPM	5.7	25
O2	% Vol.	15.9	N/A
CO2	% Vol.	2.9	N/A

**Solar Turbines - Dasoto, Texas
Two-Shaft Gas Turbine Certified Test Report
Corrected to Sea Level, No Duct Losses, 60% Rel. Humidity and Match Temp.**

Equipment Summary

Date	17-Jun-97	GP M.O.	4421280	Model	T12000S
GP S/N	0463M	PT M.O.	4421281	CS Curve	27562
PT S/N	TUE97-M6157	FuelType	Gas	Test Spec	ES2039
Data Pt.	34				

Data Tag Information

Model No.	T12000S	
Serial No.	0463M	
Turbine RPM	10780	
Output RPM	9500	
T5 Comp.	120902-	N/A
Final IGV Angle	-8.0	
T5 Base	1261.9	
T1 STD	67.0	
Pilot 3 Off Sp	91	
Pilot 2 P/N	182627	-2093
Pilot 3 P/N	182627	-1732
SWBVT5UP_SP	1212	
	<u>Pilot ON</u>	<u>Pilot Off</u>
T-5 98%	1232	1232
T-5 86%	1230	1230
T-5 94%	1220	1220
T-5 92%	1220	1220
T-5 90%	1212	1212

Engineer's Note: The oil temperature was two degrees above the limit of 158 due to facility issues. The oil flow to the #2&3 bearings was .2 gpm above the limit due to the high supply temperature. These items have been reviewed and accepted by Engineering.

Test Data (gas fuel)

SLNXDATA.XLS

**Solar Turbines Incorporated
Desoto, Texas**

ENGINE DATA REPORT

Model	T12000S	Date	17-Jun-97
Equipment	MARS 90	Time	01:58:23

	Gas Producer	Power Turbine	
Serial Number	0463M	TUE87-M8157	
Part Number	0463M	127670-308	
Solar M.O.	4421280	4421281	
Purpose of Test	NEW BUILD	NEW BUILD	
Test Specification	ES2039		
Test Engineer	STEVE RAWSON		
Product Engineer	D.SIMON	Data Pt.	34
Test Technician	WHITNEY COLE		

RUN INFORMATION

FUELTYPE	1	Gas	NGP_100	10780	rpm
T_AMB	67.0	deg F	NPT_100	9500	rpm
RH	93.9	%			
P_BARO	29.91	In Hg	# SHAFTS	2	
ENGCON	12001		STD_TEMP	67.0	deg F
			T1_0_AVG	87.0	deg F

ENGINE OUTPUT

%NGP	103.68		CORR % NGP	103.64	
NGP	11176	rpm	CORR_NGP	11162	rpm
%NPT	87.44		CORR % NPT	88.78	
NPT	8302	rpm	CORR_NPT	8434	rpm
HP	11053	Hp	CORR_HP	12139	Hp
TRIT	1914.8	deg F	CORRTRIT	1918.5	deg F
IGV_ANGL	-8.0	deg	CORR_SFC	8086.3	Dtu/Hp-Hr
			F1_DYNO	2781.	lbs

FUEL:NATURAL GAS OR LIQUID

FUELTYPE	1	NATURAL GAS	F_NG_1	63.97	cfm
			F_NG_2	85.00	cfm
T_LIQ	102.8	deg F	P_NG_1	350.3	psig
F_LIQ_1	-0.11	gpm	P_NG_2	348.2	psig
F_LIQ_2	0.00	gpm	T_NG_1	60.9	deg F
SG_LIQ	0.8114		T_NG_2	60.7	deg F
			SG.NGAS	0.600	
WF_MASS1	4801.5	pph	HHV	1004	Btu/scf
WF_MASS2	4844.9	pph	LHV	20084	Btu/lb
WF_AVG	4823.2	pph			
WF_DELTA	-0.94	%			

SLNXDATA.XLS

ENGINE DATA REPORT

Serial Number	Gac Producer	Power Turbine
Part Number	0463M	TUE97-M6157
Solar M.O.	0463M	127670-308
	4421280	4421281
		Data Pt. 34
		Time 01:58:23

LUBE OIL

DPSUMP	0.56	in H2O	TPKG_OIL	160.0	deg F
P_INLT	36.9	psig	F_INLT	73.1	gpm
P_COMP	39.4	psig	F_COMP	15.8	gpm
P_PT	34.9	psig	F_PT	78.2	gpm

GPTHRUST	188.5	deg F	GP DRAIN	218.1	deg F
PTTHRUST	181.8	deg F			

COMPRESSOR INLET

TV	65.7	deg F	P_AMB	14.20	psia
T1_0_1	66.8	deg F	P1_0_1	-9.86	in H2O
T1_0_2	67.1	deg F	P1_0_2	-10.11	in H2O
T1_0_3	67.2	deg F	P1_0_3	-10.35	in H2O
T1_0_4	67.0	deg F	P1_0_4	-10.08	in H2O
T1_0_AVG	67.0	deg F	P1_0_AVG	-10.15	in H2O
T1_0_SPR	0.4	deg F			
Delta T1-TV	1.34				

P1.PKG1	-83.37	in H2O	DPV_ST_1	-55.48	in H2O
P1.PKG2	-74.86	in H2O	DPV_ST_2	-53.96	in H2O
P1.PKG3	-59.63	in H2O	DPV_ST_3	-55.87	in H2O
P1.PKG4	-81.25	in H2O	DPV_ST_4	-55.12	in H2O
P1.PKG.AVG	-74.73	in H2O	DPV_AVG	-55.04	in H2O
			DPV_SPR	2.01	in H2O

PV_PLNM	-0.48	in H2O
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COMPRESSOR DISCHARGE

T2_0_1	802.5	deg F	PCD	206.4	psig
T2_0_2	788.0	deg F	PTC	94.5	psig
T2_0_3	796.5	deg F			
T2_0_AVG	799.4	deg F			
T2_0_SPR	6.0	deg F			

TURBINE TEMPERATURES

T5_1_1	1248.8	deg F	T5_1_9	1227.7	deg F
T5_1_2	1212.0	deg F	T5_1_10	1228.2	deg F
T5_1_3	1253.9	deg F	T5_1_11	1237.7	deg F
T5_1_4	1265.5	deg F	T5_1_12	1263.4	deg F
T5_1_5	1233.0	deg F	T5_1_13	1237.2	deg F
T5_1_6	1253.4	deg F	T5_1_14	1244.0	deg F
T5_1_7	1235.1	deg F	T5_1_15	1328.4	deg F
T5_1_8	1233.5	deg F	T5_1_16	1268.1	deg F
			T5_1_17	1236.1	deg F

TTC	696.8	deg F	T5_1_AVG	1249.0	deg F
			T5_1_MAX	1326.4	deg F
H2O_FLOW	0.071	GPM	T5_1_MIN	1212.0	deg F
WH2O/WF	0.006	RATIO	T5_1_DEL	77.4	deg F

SLNXDATA.XLS

ENGINE DATA REPORT

Serial Number	0463M	Power Turbine	TUE97-M6157
Part Number	0463M		127670-308
Solar M.O.	4421280		4421281
		Data Pt.	34
		Time	01:58:23

EXHAUST TEMPERATURES AND PRESSURES

T9_0_1	886.2	deg F	T9_0_8	889.9	deg F
T9_0_2	883.6	deg F	T9_0_9	887.3	deg F
T9_0_3	887.3	deg F	T9_0_10	884.1	deg F
T9_0_4	890.5	deg F	T9_0_11	878.3	deg F
T9_0_5	889.9	deg F	T9_0_12	886.2	deg F
T9_0_6	881.0	deg F	T9_0_13	886.8	deg F
T9_0_7	886.8	deg F	T9_0_14	884.8	deg F
P9_0_1	9.14	in H2O	T9_DELTA	42	deg F
P9_0_2	10.09	in H2O	T9_0_AVG	886.8	deg F
P9_0_3	5.61	in H2O	T9_0_MAX	891.0	deg F
P9_0_4	6.77	in H2O	T9_0_MIN	878.3	deg F
P9_AVG	7.83	in H2O	T9_0_SPR	12.7	deg F

TEST REPORT DATA

NGP	11178	rpm	CORR_NGP	11162	rpm
%NGP	103.68		CORR % NGP	103.54	
NPT	8302	rpm	CORR_NPT	8434	rpm
%NPT	87.44		CORR % NPT	88.78	
HP	11063	Hp	CORR_HP	12198.7	Hp
F1_DYNO	2791	bf	CORR_SFC	8086.5	Btu/Hp-Hr
TRIT	1915	deg F	CORRTRIT	1918.5	deg F
IGV_ANGL	-8.0	deg	T5/TRIT	0.7180	
T5_1_AVG	1249.0	deg F	CORR_T5	1250.1	deg F
			T5_BASE	1261.9	deg F
T9_0_AVG	886.8	deg F	CORR_T9	874.5	deg F
WA	80.5	pps	CORR_WA	85.3	pps
			T2_0_SPR	6.0	deg F
			T9_DELTA	42	deg F
			PCD	208.4	psig
			PTC	94.6	psig
			T1_0_AVG	87.0	deg F

PERFORMANCE PARAMETERS

Eta Comp	0.8395
Eta burn	0.8815
Eta TOA	0.8816
WQ31CC	183.87
WQ51EC	841.70
HEAT BAL	0.9818

TGPTBRG1	188.5	deg F
TGPTBRG2	186.7	deg F
TPTBRG1	181.8	deg F

DYNO PARAMETERS

DYNO_FWD	5.40	GPM
DYNO_AFT	10.07	GPM
DYNO_SUPPLY	105.88	PSI
DYNO_IN	115.20	deg F
DYNO_OUT	208.50	deg F

SLNXDATA.XLS

ENGINE DATA REPORT

Serial Number	Gas Producer	Power Turbine	
Part Number	0463M	TUE97-M6157	
Solar M.O.	0463M	127670-308	
	4421280	4421281	
		Data Pt.	34
		Time	01:58:23

SoLoNOx DATA

BLEED VALVE PARAMETERS

WBLEED	0.0	pps
P_BLEED	0.0	psig
T_BLEED	210.7	deg f
DP_BLEED	0.0	
PCT_BLEED	0.0	
P_AIR_MAN	201.0	psig
T_AIR_MAN	438.7	deg F

EMISSIONS DATA

ISO_NOX	14.8	PPM
NOX	12.8	PPM
CO	3.4	PPM
HC	2.2	PPM
O2	16.0	%
CO2	2.9	%

PILOT FUEL PARAMETERS

WF_PIL	72.8	%PILOT	1.8
WF_PIL2	133.7	%PILOT2	2.9
WF_PIL3	-210.8	%PILOT3	-1.3
PNG_MAIN	0.6	WCC	69.9 PPS
PILOT1_STAT	0	AFR	59.2
		CMBTEMP	1959.9 F
PILOT3_STAT	0		

EMISSIONS SUMMARY (GAS FUEL)

Best Available Copy

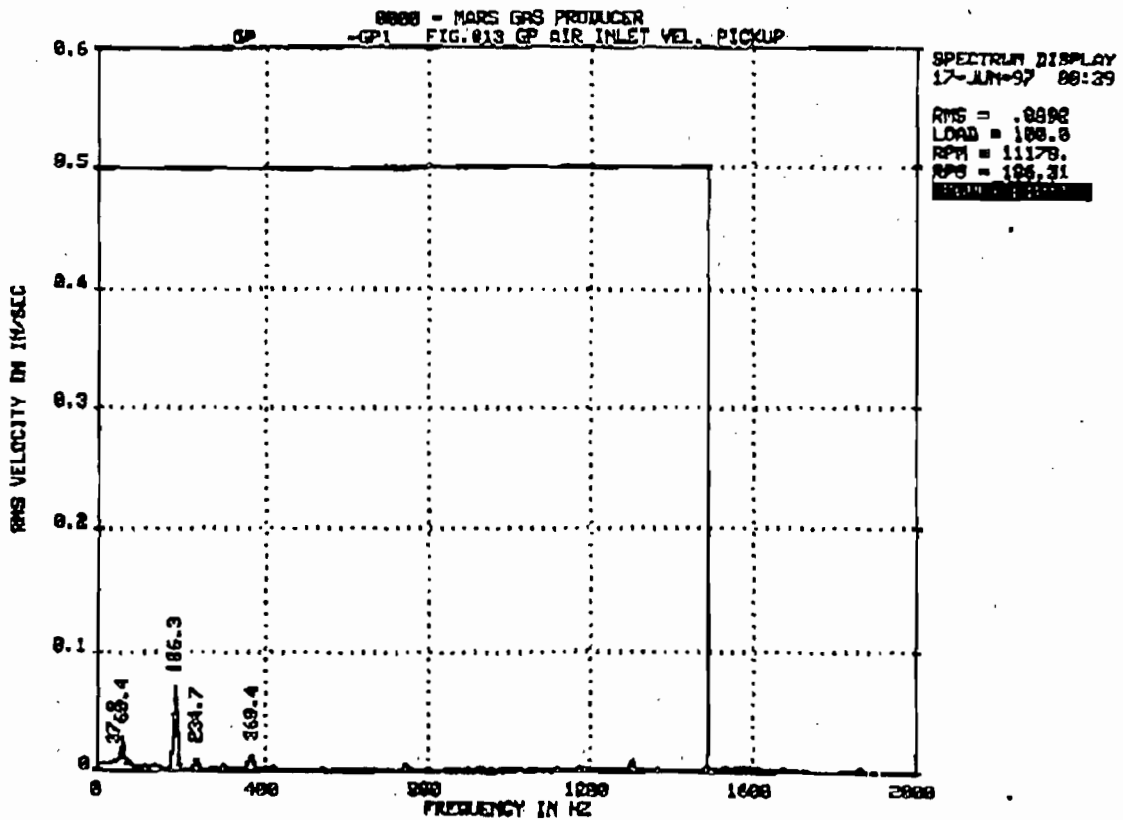
EMISSIONS DATA ACQUISITION SYSTEM ETM v1.09 6/16/95

Date: June 17, 1997 Time: 01:56:38

Data saved while scanning Mode: NOx
 System status : Scanning.....
 Time of last calibration : 06-17-1997 01:06:29
 Data Point # : 37
 System Number : 1
 Hose # : 1
 Test Location : DeSOTO
 Test Engineer : S. RAWSON
 Emissions Operator : R.TALLEY
 Engine Type : T12000
 Engine S/N : 0463M
 Injector Type :
 Fuel : GAS
 Average Fuel-Factor : 1.72

Gas	Real Time Range	1 min Avg Corrected to 15% O2	1 min Avg Actual Concentration
CO2	5 %		2.86 %
CO	50 PPM	3.4 PPM	2.8 PPM
NOX	25 PPM	12.8 PPM	10.6 PPM
NOx-only Mode**			
HC	25 PPM	2.2 PPM	1.8 PPM
O2	25 %		16.03 %

VIBRATION PLOTS

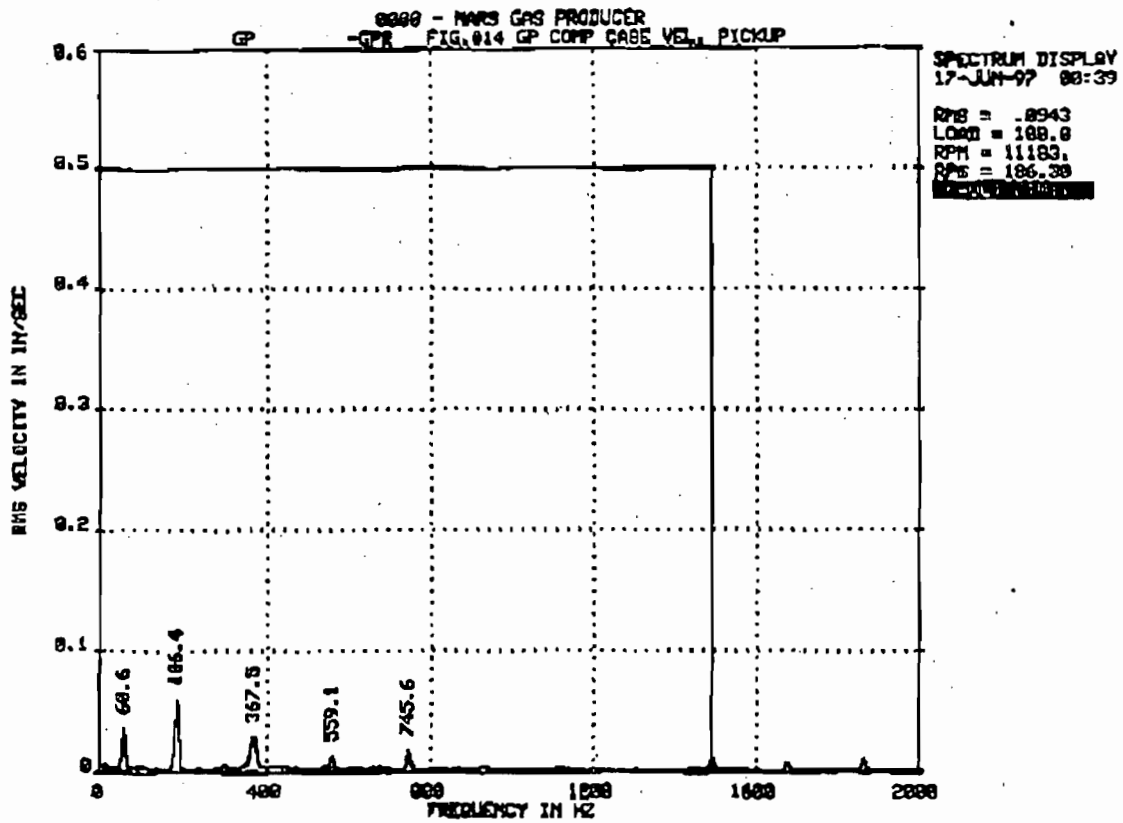


LABEL GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -GP1 --> FIG.#13 GP AIR INLET VEL. PICKUP
 Date/Time: 17-JUN-97 00:39:33 Amplitude Units: IN/SEC RMS
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	12.89	.0076	.07
2	37.92	.0102	.20
3	60.39	.0288	.32
4	76.59	.0099	.41
5	186.33	.0729	1.00
6	234.68	.0114	1.26
7	300.43	.0062	1.61
8	368.39	.0132	1.98
9	745.48	.0062	4.00
10	1303.85	.0094	7.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0892	.0375 / 18%	.0758 / 72%	.0282 / 10%

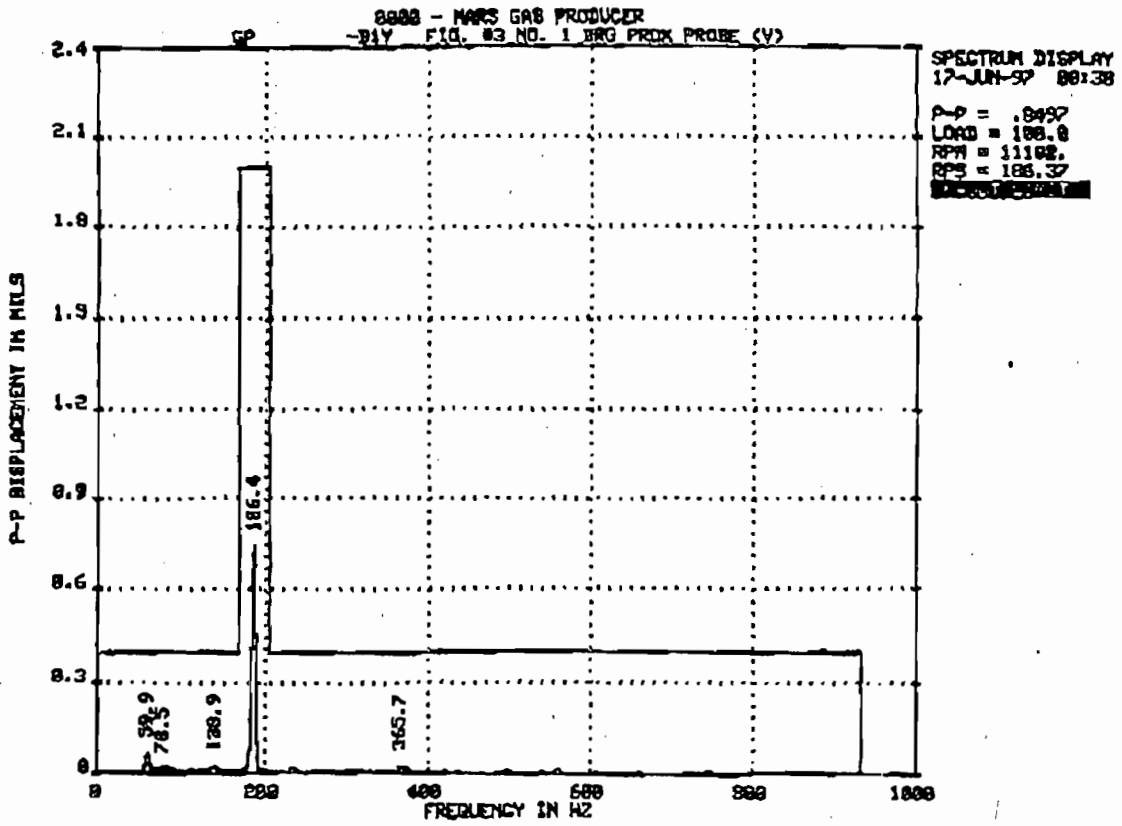


LABEL: GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -GPR --> FIG.#14 GP COMP CASE VEL. PICKUP
 Date/Time: 17-JUN-97 00:39:39 Amplitude Units: IN/SEC RMS
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	16.74	.0084	.09
2	60.60	.0358	.33
3	93.04	.0061	.50
4	186.41	.0630	1.00
5	367.50	.0324	1.97
6	559.06	.0130	3.00
7	745.64	.0169	4.00
8	1491.13	.0109	8.00
9	1677.38	.0091	9.00
10	1863.88	.0114	10.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0943	.0399 / 18%	.0765 / 66%	.0381 / 16%

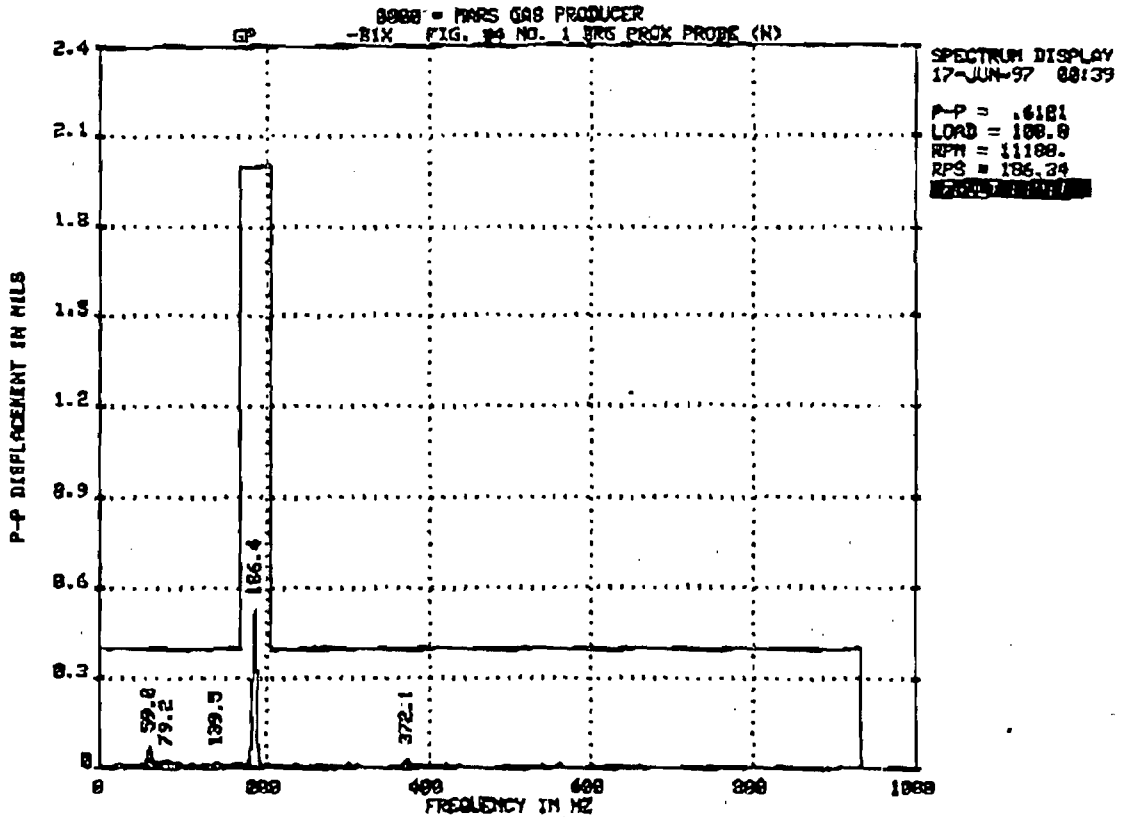


LABEL: GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B1Y --> FIG. #3 NO. 1 BRG PROX PROBE (V)
 Date/Time: 17-JUN-97 00:38:54 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	39.94	.0698	.32
2	78.50	.0237	.42
3	81.36	.0227	.44
4	89.05	.0142	.48
5	125.77	.0142	.67
6	138.89	.0248	.75
7	186.37	.8415	1.00
8	233.64	.0231	1.25
9	365.73	.0270	1.96
10	372.70	.0226	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.8497	.0979 / 1%	.8359 / 97%	.1168 / 2%

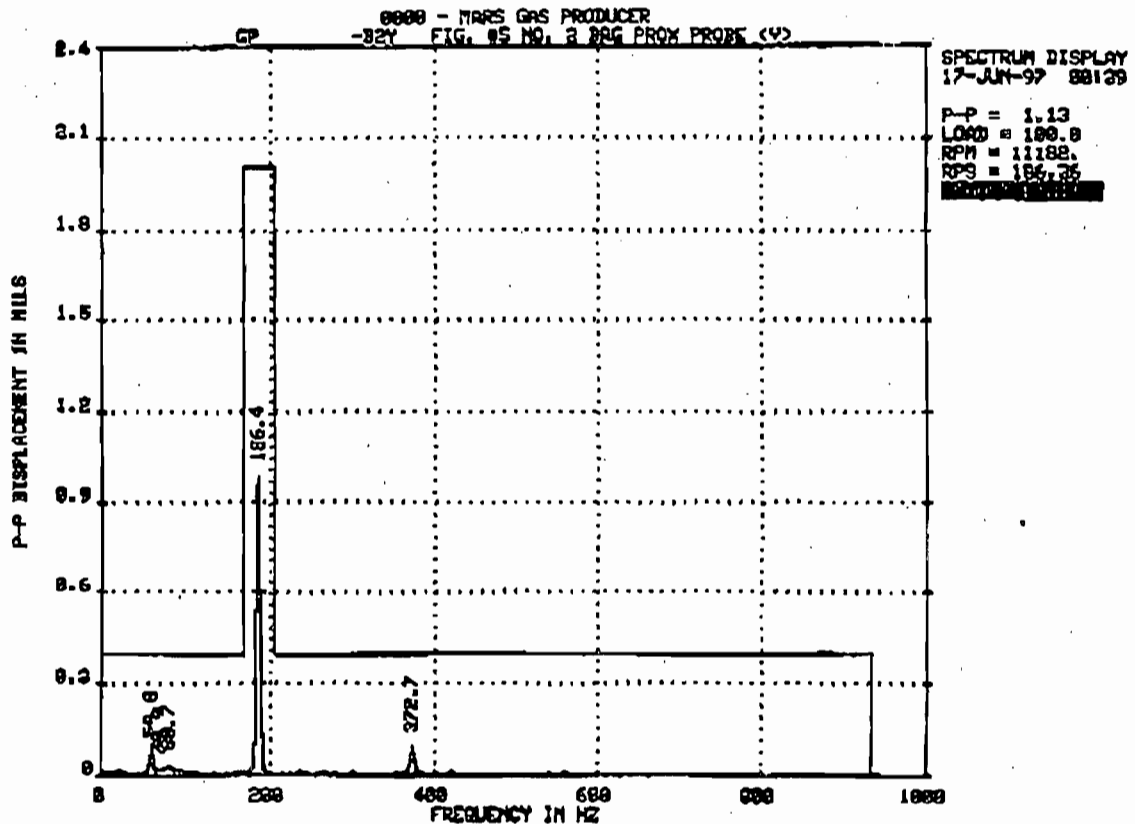


LABEL - GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B1X --> FIG. #4 NO. 1 BRG PROX PROBE (H)
 Date/Time: 17-JUN-97 00:39:01 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	21.35	.0164	.11
2	59.84	.0662	.32
3	68.94	.0168	.37
4	79.17	.0284	.42
5	93.62	.0154	.50
6	126.42	.0129	.68
7	139.54	.0211	.75
8	186.37	.6022	1.00
9	299.92	.0135	1.61
10	372.14	.0231	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.6121	.0947 / 2%	.5985 / 96%	.0861 / 2%

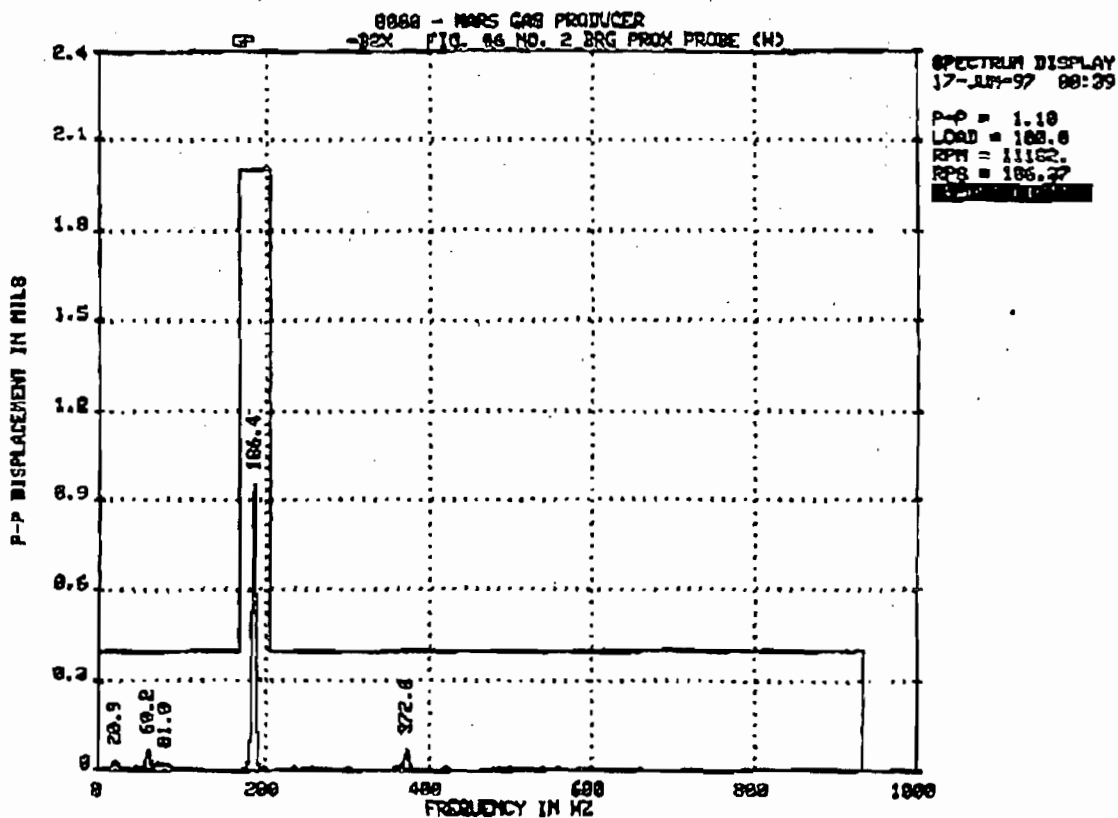


Label: GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B2Y --> FIG. #5 NO. 2 BRG PROX PROBE (V)
 Date/Time: 17-JUN-97 00:39:08 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	6.33	.0176	.03
2	19.28	.0178	.10
3	23.83	.0152	.13
4	59.79	.0765	.32
5	70.92	.0221	.38
6	80.75	.0336	.43
7	91.39	.0185	.49
8	186.37	1.1207	1.00
9	236.11	.0166	1.27
10	372.67	.0865	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
1.1305	.1050 / 14	1.1162 / 974	.1454 / 24

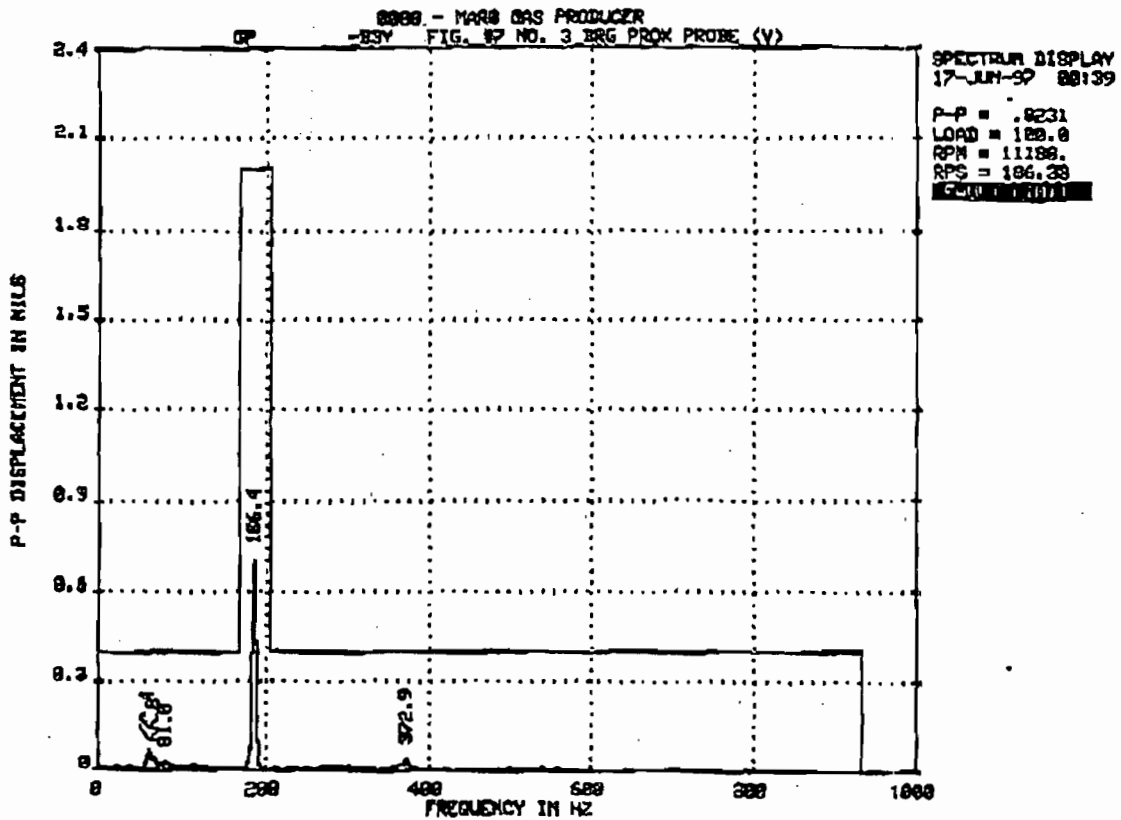


LABEL: GP/SN 0463M PT/SN TUE97-M6157
 List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B2X --> FIG. #6 NO. 2 BRG PROX PROBE (H)
 Date/Time: 17-JUN-97 00:39:14 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	20.95	.0309	.11
2	46.18	.0112	.25
3	60.22	.0701	.32
4	73.52	.0258	.39
5	80.95	.0277	.43
6	96.35	.0106	.52
7	186.37	1.0867	1.00
8	234.64	.0150	1.26
9	300.16	.0131	1.61
10	372.79	.0699	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
1.0970	.1004 / 1%	1.0836 / 98%	.1393 / 2%

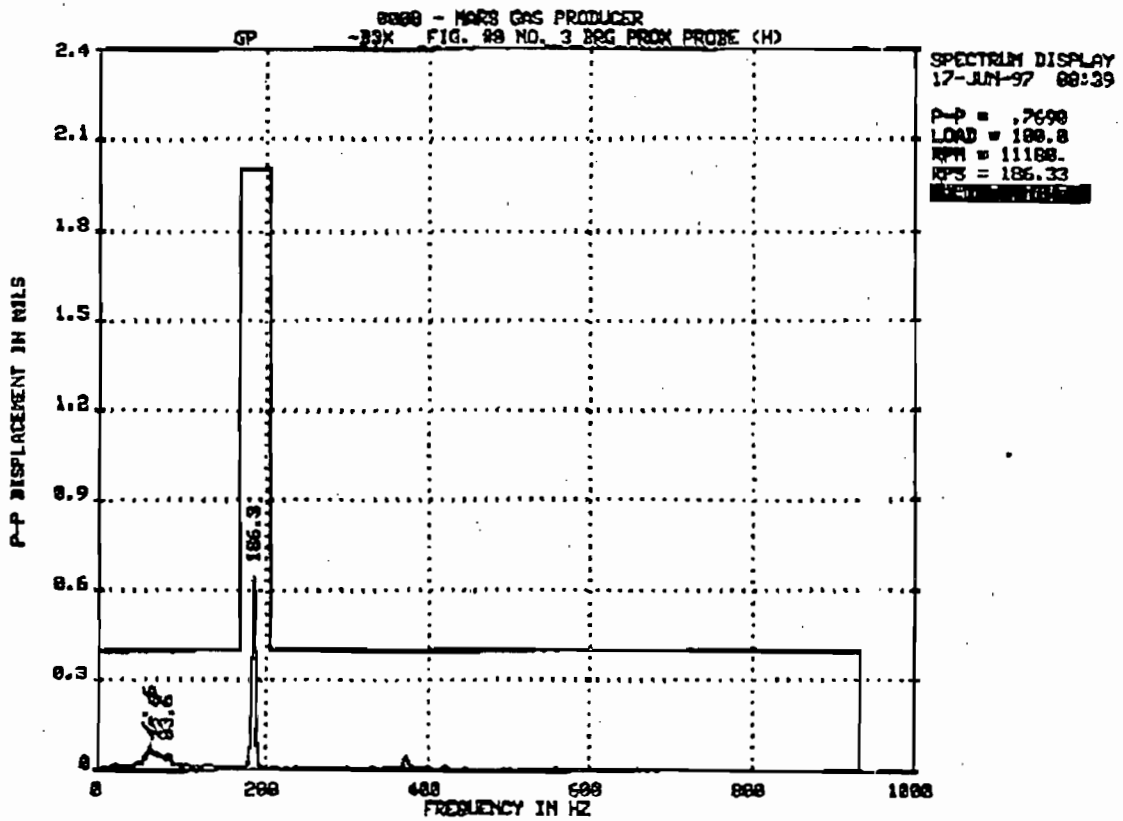


LABEL: GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B3Y --> FIG. #7 NO. 3 BRG PROX PROBE (V)
 Date/Time: 17-JUN-97 00:39:21 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	21.21	.0137	.11
2	60.38	.0717	.32
3	66.79	.0452	.36
4	81.00	.0258	.43
5	86.42	.0169	.46
6	111.47	.0124	.60
7	186.36	.8137	1.00
8	300.41	.0157	1.61
9	366.07	.0184	1.96
10	372.92	.0399	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.8231	.1068 / 2%	.8084 / 96%	.1122 / 2%

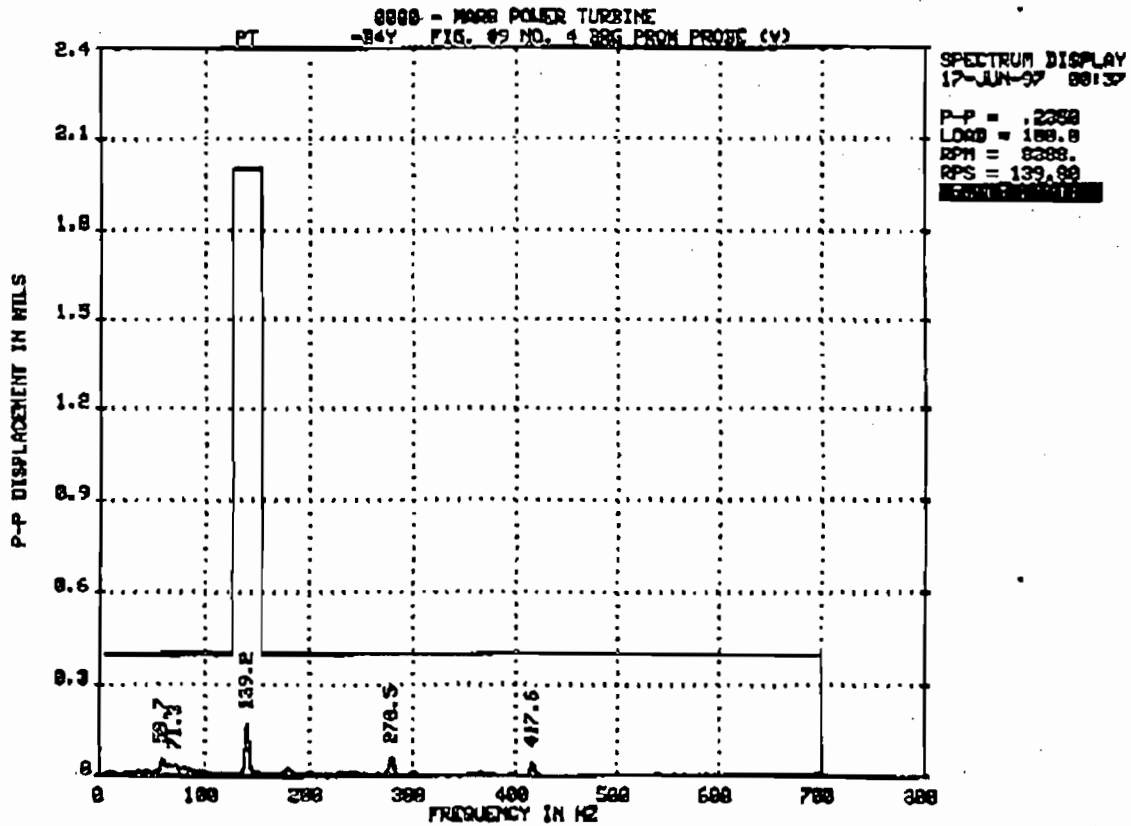


LABEL: GP/SN 0463M PT/SN TUE97-M6157
LIST OF SPECTRAL PEAKS

Machine: (0000) MARS GAS PRODUCER
 Meas. Point: GP -B3X --> FIG. #8 NO. 3 BRG PROX PROBE (H)
 Date/Time: 17-JUN-97 00:39:27 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	48.31	.0257	.26
2	56.12	.0516	.30
3	61.61	.0873	.33
4	68.90	.0606	.37
5	73.86	.0545	.40
6	83.61	.0577	.45
7	93.58	.0203	.50
8	105.74	.0193	.57
9	186.32	.7479	1.00
10	372.27	.0425	2.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.7690	.1681 / 5%	.7426 / 93%	.1091 / 2%

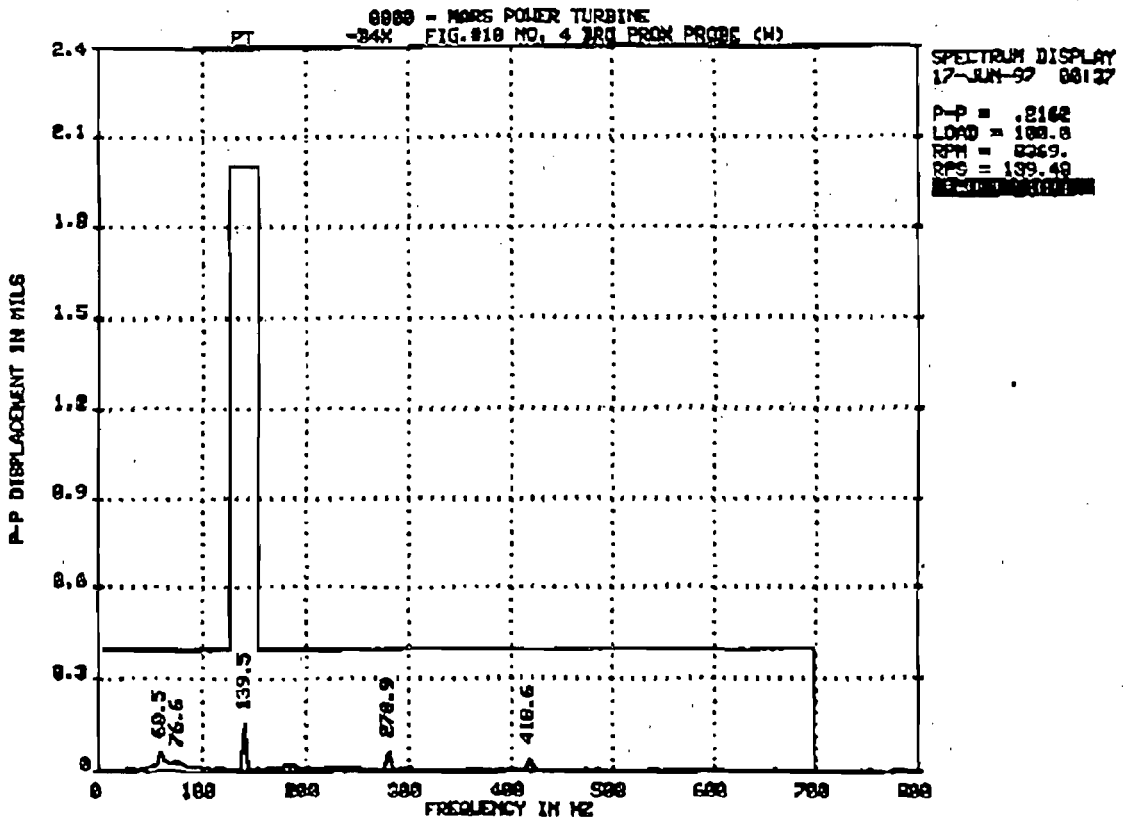


LABEL GP/SN 0463M PT/SN TUB97-M6157
List of Spectral Peaks

Machine: (0000) MARS POWER TURBINE
 Meas. Point: PT -B4Y --> FIG. #9 NO. 4 BRG PROX PROBE (V)
 Date/Time: 17-JUN-97 00:37:41 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUB97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	44.60	.0212	.32
2	59.75	.0555	.43
3	65.09	.0394	.47
4	71.35	.0412	.51
5	78.71	.0298	.56
6	85.09	.0246	.61
7	139.23	.1836	1.00
8	179.68	.0260	1.29
9	278.48	.0575	1.99
10	417.55	.0428	2.99

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.2350	.1115 / 23%	.1954 / 69%	.0680 / 8%

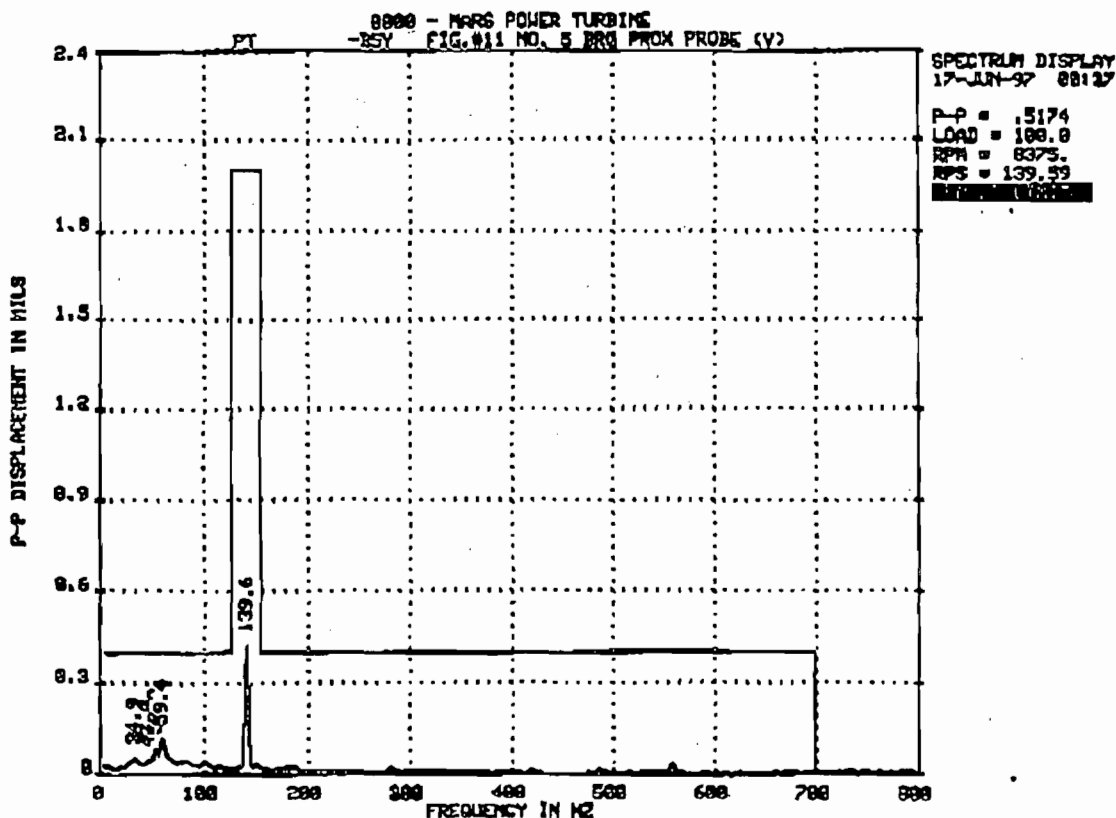


LABEL GP/SN 0463M PT/SN TUR97-M6157
List of Spectral Peaks

Machine: (0000) MARS POWER TURBINE
 Meas. Point: PT -B4X --> FIG.#10 NO. 4 BRG PROX PROBE (H)
 Date/Time: 17-JUN-97 00:37:48 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUR97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	54.47	.0238	.39
2	60.47	.0622	.43
3	71.06	.0347	.51
4	76.62	.0383	.55
5	81.01	.0257	.58
6	139.47	.1531	1.00
7	179.95	.0240	1.29
8	186.48	.0245	1.34
9	278.95	.0730	2.00
10	418.60	.0383	3.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.2162	.1150 / 28%	.1736 / 64%	.0582 / 7%

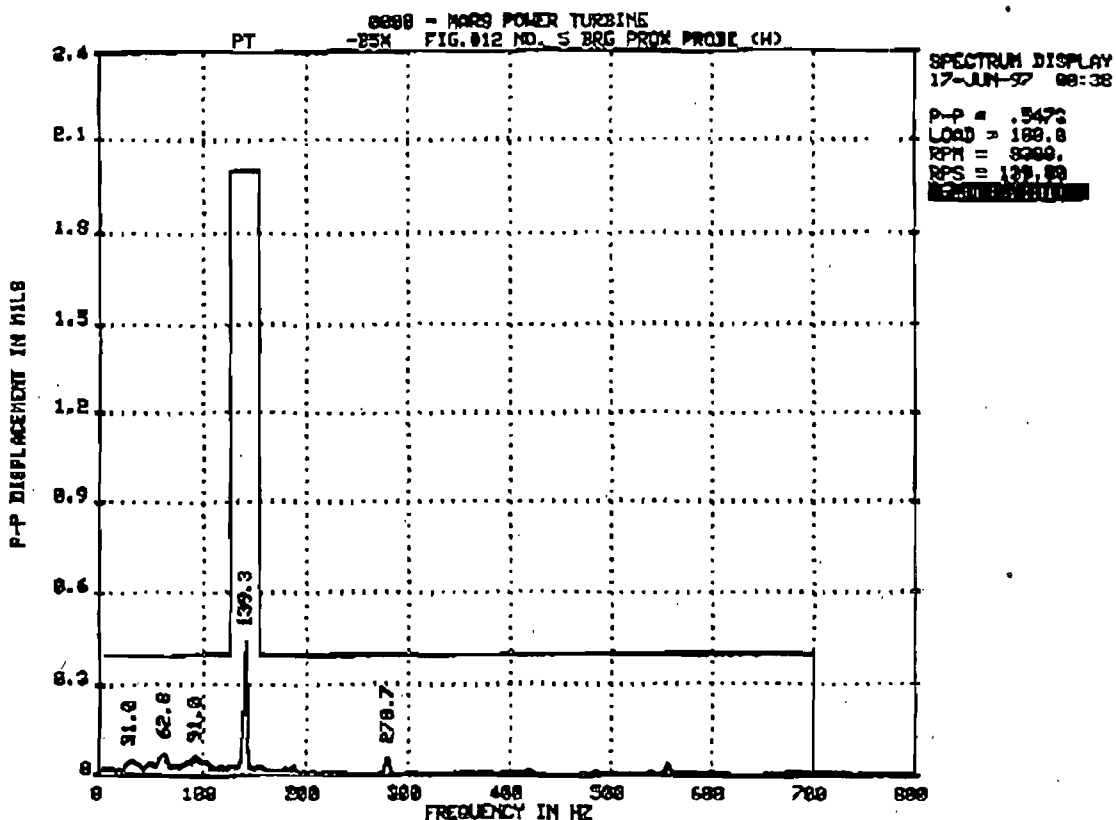


LABEL: GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

Machine: (0000) MARS POWER TURBINE
 Meas. Point: PT -BSY --> FIG.#11 NO. 5 BRG PROX PROBE (V)
 Date/Time: 17-JUN-97 00:37:55 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	28.86	.0453	.21
2	34.87	.0552	.25
3	46.99	.0539	.34
4	53.20	.0864	.38
5	59.43	.1176	.43
6	69.13	.0519	.50
7	76.92	.0410	.55
8	83.13	.0517	.60
9	99.05	.0474	.71
10	139.58	.4318	1.00

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.5174	.2591 / 25%	.4349 / 71%	.1069 / 4%



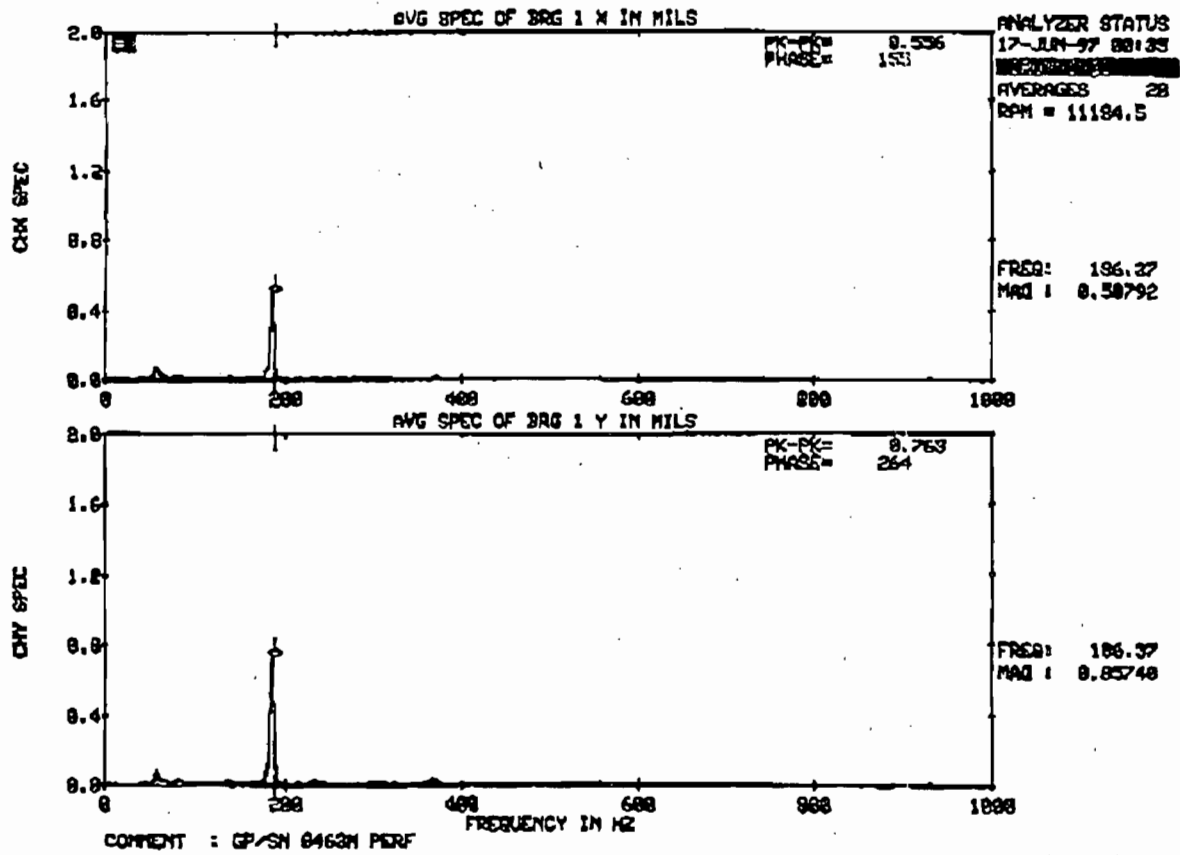
LABEL GP/SN 0463M PT/SN TUE97-M6157
List of Spectral Peaks

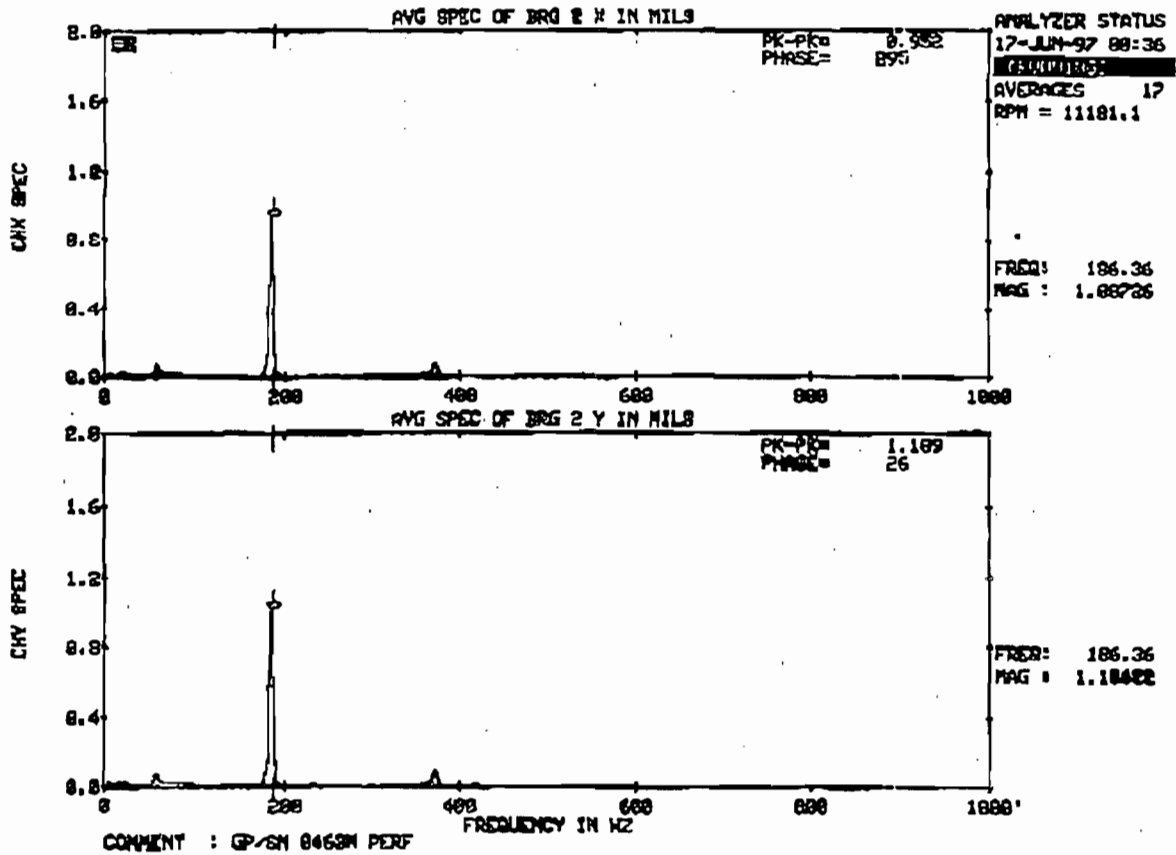
Machine: (0000) MARS POWER TURBINE
 Meas. Point: PT -B5X --> FIG.#12 NO. 5 BRG PROX PROBE (H)
 Date/Time: 17-JUN-97 00:38:02 Amplitude Units: MILS P-P
 Data Label: GP/SN 0463M PT/SN TUE97-M6157

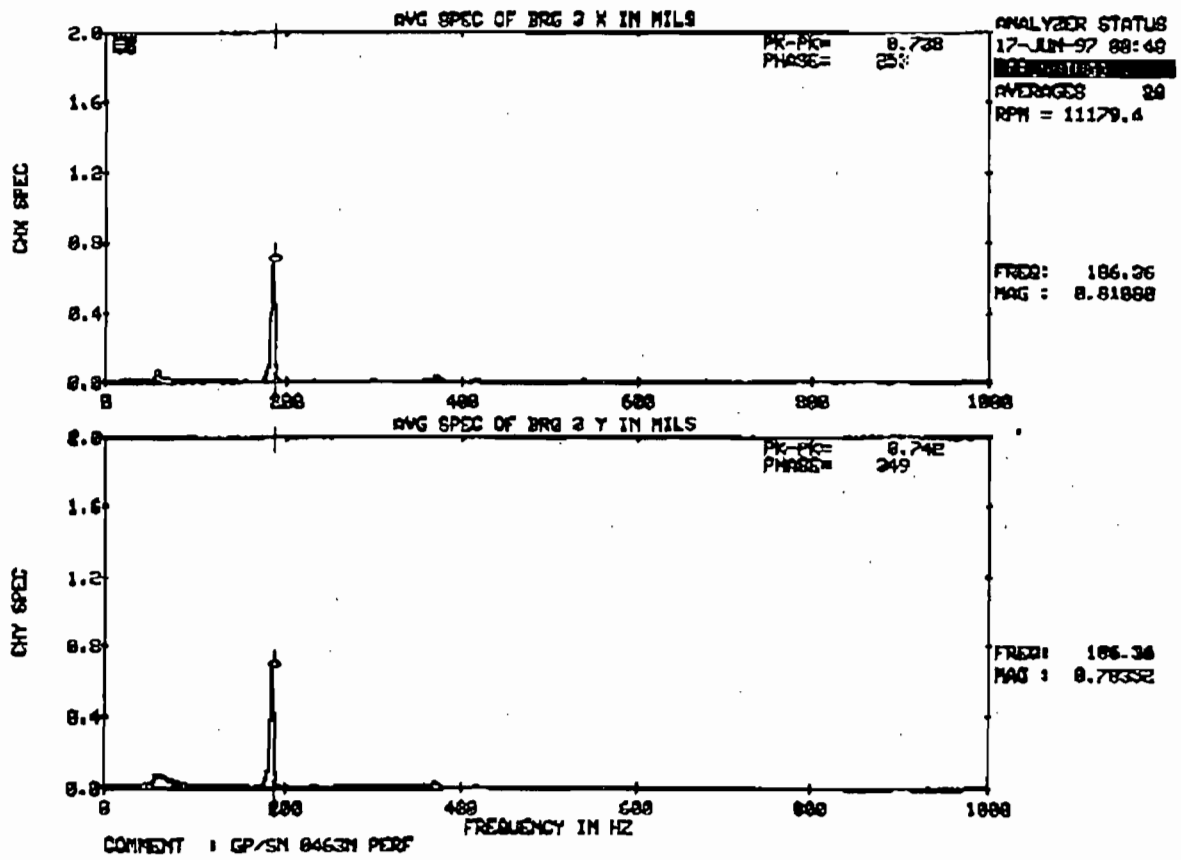
PEAK NO.	FREQUENCY (Hz)	PEAK VALUE	ORDER VALUE
1	26.96	.0462	.19
2	30.96	.0604	.22
3	49.06	.0526	.35
4	62.80	.0826	.45
5	82.98	.0441	.59
6	86.76	.0500	.62
7	91.02	.0703	.65
8	103.04	.0505	.74
9	139.31	.4750	1.00
10	278.74	.0597	1.99

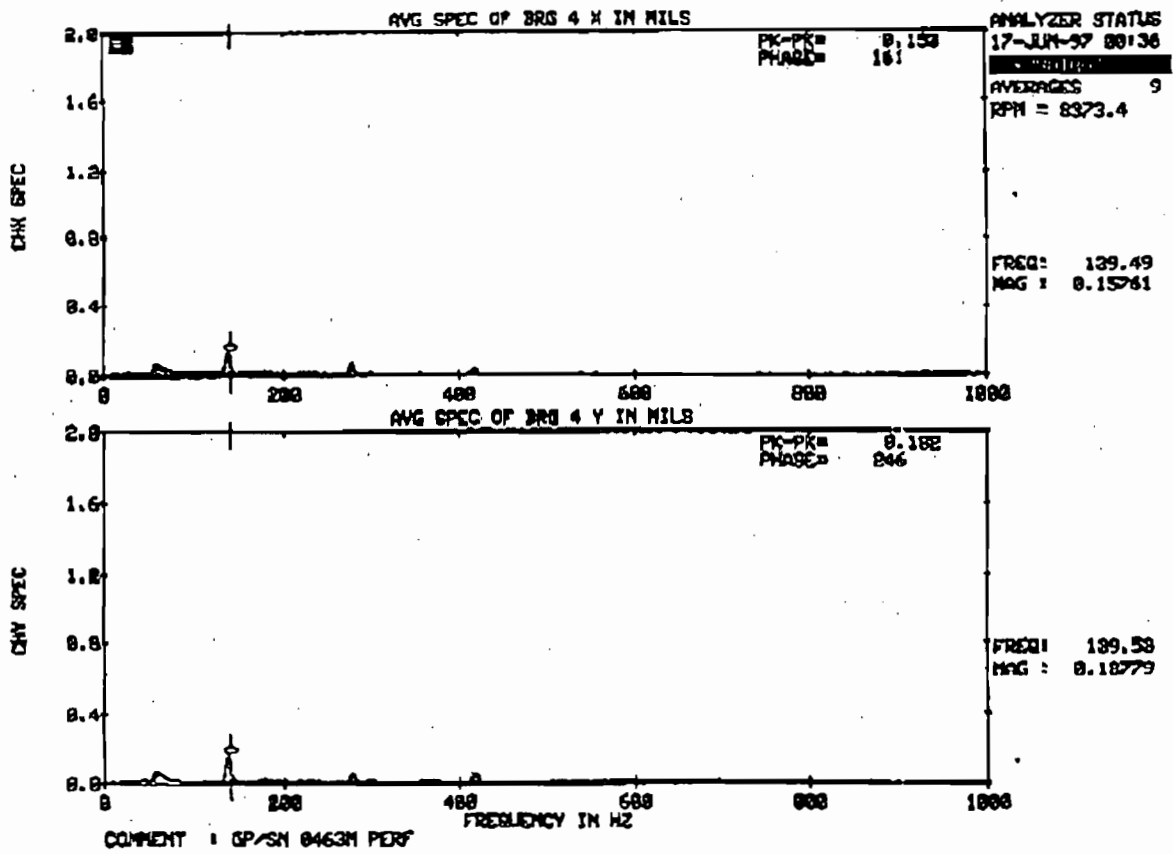
TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.5473	.2352 / 18%	.4799 / 77%	.1180 / 5%

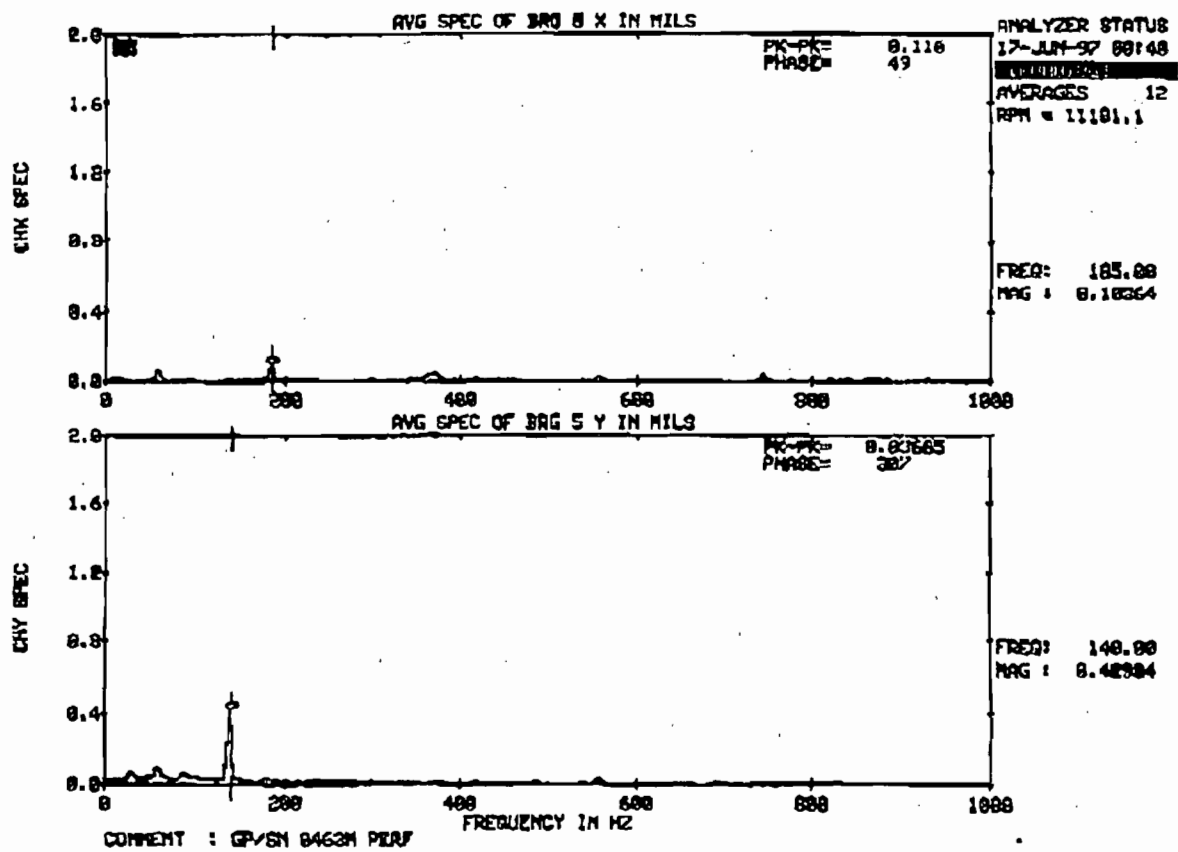
Vibration Plots With Phase Angle













1230034-005-AC

Florida Gas Transmission Company

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

June 16, 1997

OVERNIGHT

Mr. Clair Fancy
Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Enclosed please find a check for \$250.00 for the revision of Air Permit AC62-229319/PSD-FL-202. The original request was sent on May 28, 1997. (See attached).

If you have any questions, please do not hesitate to call.

Very truly yours,

Clayton A. Roesler
Division Environmental Specialist

CR0616a.swp

Enclosure

cc: J. Deron, BAR
NED

RECEIVED

JUN 17 1997

BUREAU OF
AIR REGULATION

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



CHECK NO. 0622512051

CHECK DATE 6/16/97

PAGE 1 OF 1

VENDOR NO:
REMITTANCE STATEMENT

VOUCHER NO.	INVOICE DATE	INVOICE NO.	PURCHASE ORDER	AMOUNT		
				GROSS	DISCOUNT	NET
	6/16/97	INV61697		250.00		
					TOTAL	250.00

SPECIAL INSTRUCTIONS:

DETACH AND RETAIN THIS STUB FOR YOUR RECORDS.



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

CHECK NO. 0622512051

CHECK DATE 6/16/97

PAY EXACTLY TWO HUNDRED 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

Wayne Comas

NOT VALID OVER \$5000.00 UNLESS COUNTERSIGNED

FIELD DISBURSEMENT ACCOUNT

CITIBANK DELAWARE

Solar Turbines[®]

A Caterpillar Company

Solar Turbines Incorporated

13105 Northwest Freeway
Suite 400
Houston, TX 77040
(713) 895-2350
(800) 242-8998
Fax: (713) 895-4250

May 5, 1997

Florida Gas Transmission
P. O. Box 945100
Maitland, Florida 32794

Attn: Mr. Roy Smith, Jr.

RE: "SoloNOx"/Mars Engines

Dear Mr. Smith:

This is to confirm our recent telephone conversation. The Mars Engines you now operate were sold with emission guarantees at 42 PPMV of NOx. If you have a full overhaul performed on your engine at our DeSoto, Texas overhaul facility or take an "Exchange" overhauled engine, the newly overhauled engine will carry the same 42 PPMV guarantee (during the warranty period) for NOx. (A full field "in situ" overhaul of the entire engine is not a viable option). The NOx Emissions Guarantee can only be reduced by purchasing a new engine which will then carry a 25 PPMV guarantee on NOx.

If you have any further questions concerning our SoloNOx Engines, please do not hesitate to call on me.

Very truly yours,



R. M. Lawson
Regional Manager
Southern U.S.

RML/jlw



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

December 10, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William E. Rome
Vice President of Gulf Coast Operation
Florida Gas Transmission Company
Post Office Box 1188
Houston, Texas 77251-1188

Re: Permit No. AC62-229319 (PSD-FL-202)
Compressor Station No. 15, Perry, Taylor County
Replacement of 12,600 bhp turbine

Dear Mr. Rome:

The Department is in receipt of the letter of December 10 from Mr. Clayton Roesler advising of a replacement of the subject 12,600 bhp turbine at Compressor Station 15, Perry, Taylor County, with a 13,000 bhp (derated to 12,000 bhp) turbine. The certified test data from Caterpillar/Solar Turbines for the replacement unit indicate that it will comply with Specific Condition 1 of the subject permit requiring achievement of a lower nitrogen oxides emission rate of 25 parts per million by January 1, 1998. Therefore it may be installed in replacement of the 12,600 bhp unit.

The unit also complies with the other emission limits given in the same permit. Since it was derated to and tested at 12,000 bhp, it may be operated at no more than 12,000 bhp until we receive a manufacturer or professional engineer certification that it can operate within permitted emission limits at the higher permitted rate. Since the unit is subject to 40 CFR 60, Subpart GG, adopted by reference in Rule 62-204.800, F.A.C., it must be tested in accordance with the test methods listed in the permit within 60 days following the startup date.

A person whose substantial interests are affected by this permit amendment may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 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, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9730, fax: 904/487-4938. Petitions must be filed within fourteen days of receipt of this permit amendment. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the 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 the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that 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 that the petitioner wants the Department to take with respect to the action or proposed action.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this permit amendment.

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

Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this permit amendment.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permit amendment is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 62-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit amendment will not be effective until further order of the Department.

When the Order (Permit Amendment) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, 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.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

Mr. William E. Rome

Page 3 of 3

December 10, 1997

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this AMENDMENT was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12-11-97 to the person(s) listed:

Mr. William Rome, FGT *

Mr. Clayton Roesler, FGT

Mr. Barry Andrews, P.E., ENSR

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kuni Ober
(Clerk)

12-11-97
(Date)

Is your RETURN ADDRESS completed on the reverse side?

SENDER: ■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ 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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: William E. Rome, VP Fla. Gas Transmissioz P O Box 1188 Houston, TX 77251-1188	4a. Article Number P 265 659 266	4b. Service Type <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail <input type="checkbox"/> Insured <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> COD
5. Received By: (Print Name) LEE PARKER	7. Date of Delivery	
6. Signature: (Addressee or Agent) X <i>Lee Parker</i>	8. Addressee's Address (Only if requested and fee is paid)	

Thank you for using Return Receipt Service.

PS Form 3811, December 1994

Domestic Return Receipt

P 265 659 266

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to		William C Rome	
Street & Number		Flt. GAS TRANS.	
Post Office, State & ZIP Code		HOUSTON, TX	
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		12-11-97	
		PSD-A-202 No. 15, Perry Station	

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:
 William E. Rome, VP
 Fla. Gas Transmission
 P O Box 1188
 Houston, TX
 77251-1188

4a. Article Number
P 265 659 266

4b. Service Type

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

7. Date of Delivery

5. Received By: (Print Name)
LEE PARKER

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

6. Signature: (Addressee or Agent)
X [Signature]

Thank you for using Return Receipt Service.

PS Form 3811, December 1994

Domestic Return Receipt

P 265 659 266

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	William E Rome
Street & Number	FLA. GAS TRANS.
Post Office, State & ZIP Code	HOUSTON, TX
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	12-11-97
	PSO-FI-202 No. 15, Perry Station

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

- SEND**
- Complete this form and attach to the mailpiece.
 - Print your name and address on the reverse of this form so that we can return this card to you.
 - Attach this form to the front of the mailpiece, or on the back if space does not permit.
 - Write "Return Receipt Requested" on the mailpiece below the article number.
 - The Return Receipt will show to whom the article was delivered and the date delivered.

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

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Clayton Roesler, DES
 Fla. Gas Transmission
 PO Box 945100
 Maitland, FL 32794-5100

4a. Article Number
 P 339 251 200

4b. Service Type

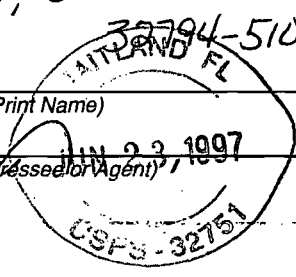
Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

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

6. Signature: (Addressee or Agent)



PS Form 3800, April 1995

Receipt

Thank you for using Return Receipt Service.

P 339 251 200

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sender	Clayton Roesler
Street & Number	FGT
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 6-18-97
	1230034-009-AC P30-FL-202 St. # 15

PS Form 3800, April 1995



Florida Gas Transmission Company

1967 Commonwealth Lane Tallahassee, Florida 32303 (904) 580-4300 Fax (904) 580-4335

December 10, 1997

Mr. Clair Fancy
Florida Department of Environmental Protection Air Bureau
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: Florida Gas Transmission Company
Compressor Station 15, Perry, Florida
Air Permit No. AC 62-229319

Dear Mr. Fancy:

Florida Gas Transmission (FGT) respectfully requests authorization from the Florida Department of Environmental Protection (FDEP) to replace Unit 1507, a 12,600 bhp turbine, located at FGT's Compressor Station 15, in Perry, Florida.

Specific Condition 1 of the above reference permit requires achievement of 25 ppmv NO_x by January 1, 1998. The turbine that is currently at Compressor Station 15 is unable to meet this standard even with modification by the manufacturer, Solar Turbines. This will be a "like kind" replacement of the same model turbine and meets all of the current permit conditions while having the ability to achieve the 25 ppmv NO_x condition in the construction permit. Please see the attached Solar Turbines test report for the replacement unit for verification of turbine run parameters.

FGT is currently in a critical situation requiring the replacement of the turbine. Unit 1507 went down last Friday evening due to vibration, and is only able to run at idle speed. This turbine, which runs at full speed, nearly full time is critical to FGT's ability to supply natural gas to power plants, businesses and individuals in Central and South Florida. This situation necessitates replacement of the turbine.

Should you have any questions, please do not hesitate to call me at 407-875-5865.

Sincerely,

Clayton A. Roesler
Division Environmental Specialist

E-Mailed May 1, 1997
to Welch & Kirby

Florida Department of
Environmental Protection

Memorandum

TO: Jerry Campbell, EPCHC
Jeff Koerner, PBCPHU
Jerry Kissel, SWD

THRU: Clair Fancy, Chief BAR *CF*

FROM: Al Linero, Administrator NSR Section *Al Linero 4/30*

DATE: April 30, 1997

SUBJECT: Florida Gas Transmission Company (FGT)
April 2, 1997, Letter Amendment Requests

0990333-003-AC
0170035-003-AC
0570438-004-AC
1230034-004-AC

We have reviewed Jerry Campbell's memo of April 25, 1997 and had discussions with at least some of you regarding the FGT request to allow replacement of the combustion turbines at several facilities for routine maintenance purposes and your concerns about it. We agree that the responsible District or Local office should have jurisdiction with respect to these requests if they do not involve PSD permits. Therefore EPCHC should handle the one within Hillsborough County, the SWD should handle the one in Citrus County, PBCPHU should handle the one within Palm Beach County, and we will take care of the one in Taylor County. For your information, none of the Title V permits for the subject facilities is being processed in Tallahassee.

Day "30" is May 6. At this time, we plan to send FGT Company an incompleteness letter (draft attached) based on the fact that their request is not clear and not signed by a professional engineer. Please send us any additional comments to incorporate into our letter as soon as possible. FGT will send a copy of its reply to each responsible office who can then reevaluate their respective project for completeness.

Attached is a "draft model revision" of the format we intend to adopt for the units in Taylor County, if we accept FGT's position regarding routine turbine repair, maintenance, and replacement. We recommend that you employ a similar format. Please provide us with your comments on the adequacy of this format. Feel free to adopt it as necessary to reflect historical reliability in your area.

Since these construction permits have expired, it will be necessary to reissue them following the procedures outlined in the Guidance memo of February 4, 1995 (DARM-PERM/GEN-16).

If you have any questions, please contact Teresa Heron at SC 278-1344.

Attachments

CHF/aal/l

June XX, 1997

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: Permit Modification No. XXXX-XXX-00X AC
FGT Compressor Station No. xx, xxxx County
Turbine Unit Xxxx

Dear Mr. Roesler:

The Department is in receipt of your letter dated April 2, 1997 requesting treatment of turbine replacements at the FGT Compressor Station No. xx as routine replacements not requiring construction permits or modifications. Since the operating unit can fail without notice, it is the Department's understanding that it is imperative to replace or repair the old unit immediately. The continued operation of the system will allow FGT to maintain its gas transmission services to its customers (including several electric power utilities) around the State.

The Department has reviewed the modification request and the permit is hereby revised as follows:

The existing unit, [a xxxxx bhp gas turbine Model yyyy], will be replaced by a similar turbine whenever maintenance requires removal of the turbine from the site provided the following requirement are met:

1. The horsepower rating of the replacement turbine does not exceed that of the existing turbine.
2. The emissions of the replacement turbine shall not exceed the permitted emission limits of the existing turbine.
3. The existing unit is a gas turbine subject to the NSPS requirements
4. The replacement turbine shall meet all requirements of 40 CFR 60, Subpart GG.
5. A log that will indicate the existing and new gas turbine replacement information (date, model number, operating capacity, hours of operation, emission data, etc.) shall be kept for inspection by the Permitting Authority.

Mr. Clayton Roesler.

Page 2 of 2

June xx, 1997

6. FGT shall notify the District or Local program office within 14 days of the start of operation of the replacement turbine.
7. An initial compliance test for the pollutants required in the permit shall be conducted. The owner or operator shall comply with all applicable regulations in Chapter 62-297, F.A.C..
8. A certificate of completion shall be provided to the Department as required in Chapter 62-210, F.A.C.

Replacement of pre-NSPS units by new units will be subject to Preconstruction Review. A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Sincerely,

[Permitting Authority]

NSRS
Heron
↓ FGT →

May ~~XX~~, 1997

~~DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT~~

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. New units will be subject to 40 CFR 60, Subpart GG. Please be advised that a replacement of an old unit for a new unit will have to be accomplished by the permitting process.

Please provide the Department with 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. 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 identical in capacity and that the emissions 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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 21 1998

RECEIVED

OCT 26 1998

BUREAU OF
AIR REGULATION

4APTMD-ARB

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

SUBJECT: Custom Fuel Monitoring Schedule for Combustion Turbines
located at Florida Gas Transmission Company - #29228821
Compressor Stations 15, 26 and 30 -0570438-002-AC

Dear Mr. Linero:

PSD-202 1 0170035-001-AC #09229441
#62229319

Thank you for your letter of September 11, 1998, regarding Florida Gas Transmission Company's request for approval of a custom fuel monitoring schedule proposed for combustion turbines operated by the company at the above referenced compressor stations. The natural gas fired turbines are subject to 40 C.F.R. Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines. Region 4 has concluded that the use of the proposed custom fuel monitoring schedule is acceptable because it is consistent with guidance that the U.S. Environmental Protection Agency (EPA) previously issued regarding such schedules. The approved custom fuel monitoring schedule is outlined in the following paragraph.

According to 40 C.F.R. 60.334(b)(2), owners and operators of stationary gas turbines subject to Subpart GG are required to monitor fuel nitrogen and sulfur content on a daily basis if a company does not have intermediate bulk storage for its fuel. 40 C.F.R. 60.334(b)(2) also contains provisions allowing owners and operators of turbines that do not have intermediate bulk storage for their fuel to request approval of custom fuel monitoring schedules that require less frequent monitoring of fuel nitrogen and sulfur content. In a memorandum dated August 14, 1987, the EPA Compliance Monitoring Branch provided guidance regarding

acceptable custom fuel monitoring provisions for natural gas fired turbines, and this memorandum also gave EPA regional offices the authority to approve custom fuel monitoring schedules for Subpart GG turbines.

Under the EPA guidance issued in 1987, the requirement to monitor the nitrogen content of pipeline quality natural gas was waived entirely since the Agency determined that this type of fuel does not contain any fuel-bound nitrogen that can cause NOx emissions. As an alternative to daily sulfur monitoring, the 1987 policy describes a three-stage process under which owners and operators of natural gas fired turbines can obtain approval to conduct sampling on a semiannual basis. In the first step of this process, the sulfur content of the fuel must be monitored twice a month for at least six months. If the results of this bimonthly monitoring verify compliance with the applicable sulfur limit and indicate little variability in the sulfur content of the fuel, the fuel sampling and analysis frequency can be reduced from a bimonthly to a quarterly basis. If six quarters of fuel monitoring data verify compliance with the applicable sulfur standard and indicate little variability in the sulfur content of the fuel, the sampling and analysis frequency can be reduced to a semiannual basis. Since the custom fuel monitoring approach Florida Gas Transmission Company included with their requests is identical to that outlined in the 1987 custom fuel monitoring guidance issued by EPA, Region 4 has no objections to approval of the proposed alternative for Compressor Stations 15, 26 and 30.

If you have any questions about the determination provided in this letter, please contact Mr. David McNeal of my staff at 404-562-9102.

Sincerely,

Douglas Neeley

R. Douglas Neeley, Chief
Air and Radiation Technology
Branch
Air, Pesticides and Toxics
Management Division

cc: J. Heron

FGT
EPCHC
SWD
NED

B. Andrews, ENSR

Z 333 612 488

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>Clayton Keester</i>	
Street & Number <i>FGT</i>	
Post Office, State, & ZIP Code <i>Maitland, 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>Approval of CFMs 10-28-98</i> <i>Stat. 15, 26, 30</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

June 9, 1997

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

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

RE: Request for Revision of Air Permit AC62-229319/PSD-FL-202

Dear Mr. Roesler:

The Bureau of Air Regulation received your May 28 request for a revision to the above referenced permit. Before we can begin processing your request, we will need a processing fee pursuant to Rule 62-4.050(4)(r)5, F.A.C. If you have any questions, please call Teresa Heron at (904)488-1344.

Sincerely,

A. A. Linero, P.E.
Administrator
New Source Review Section
Bureau of Air Regulation

P 339 251 195
no green card 7/98

US Postal Service	
Receipt for Certified Mail	
No Insurance Coverage Provided.	
Do not use for International Mail (See reverse)	
Sender	Clayton Roesler
Subject & 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	AC62-229-319 6-6-97 PSD-FL-202

PS Form 3800, April, 1995



Florida Gas Transmission Company

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

May 28, 1997

RECEIVED

JUN 02 1997

BUREAU OF
AIR REGULATION

Mr. Clair Fancy P.E., Chief
Bureau Chief, Bureau of Air Regulations
Mail Station 5505
Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Re: Request for Revision of Air Permit AC 62-229319/PSD-FL-202
FGT Compressor Station No. 15, Taylor County

Florida Gas Transmission (FGT) requests a revision to the above referenced permit. In the Best Available Control Technology (BACT) Determination portion of the permit, in the BACT Determination by the Department section there is a requirement to meet NO_x levels 25 ppmvd at 15% O₂, not later than 1/1/98. According to Solar Turbines, in the attached letter to Florida Gas Transmission, the 25 ppmvd NO_x level is not achievable, even if the engine is overhauled. The only way to achieve the 25 ppmvd NO_x level is to purchase a new engine, which is not economically feasible. Therefore, I request that the requirement to achieve the 25 ppmvd NO_x level by 1/1/98 be removed from the permit.

Sincerely,

Clayton A. Roesler
Division Environmental Specialist

1230034 - 002 - AC
PSD-FL-202

Pats # 62229319

cc: Norman Tedder
Glenn Sellars
Riley Jackson
File: C/S 15 Air Permit

cc: T. Newton, BAR



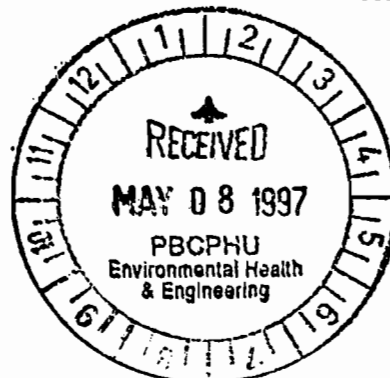
Department of Environmental Protection

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
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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



Lawton Chiles, Governor

James T. Howell, M.D., M.P.H., Secretary

CERTIFIED MAIL
July 30, 1997 (FAXED)

0990333-003-AC

SECOND NOTICE

45 DAYS SINCE LAST REQUEST FOR ADDITIONAL INFORMATION

APPLICANT:

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

PERMIT NO.: 099-0333-003-AC
PALM BEACH COUNTY
PROJECT: Turbine Replacements
PERMIT ENGINEER: Jeff Koerner

Dear Mr. Roesler:

I have discussed the permit modification for Station No. 21 in Palm Beach County with both Al Linero and Teresa Heron of the New Source Review Section, Department of Environmental Protection in Tallahassee. It is my understanding that I will be processing the permit modification for this station because it is a minor source of air pollution and a modification of permit number 099-0333-002-AC which was originally processed by my agency.

On May 5, 1997, you were notified that your application for an air pollution permit was incomplete. Additional information is necessary to complete your application. A copy of the initial request is attached. Please submit this additional information by August 15, 1997. If you need additional time to compile this information, please send me a written request by this date.

When a permit application is incomplete, all processing of the application is suspended. Pursuant to Section 120.60, Florida Statutes (F.S.), the Health Department may deny a permit if the applicant, after receiving timely notice, fails to correct errors, omissions, or supply additional information within a reasonable period of time. It has been more than 45 days since you were notified of the deficiencies in your application. Please remember that a permit must be obtained from the Health Department before you begin the proposed work. If you have any questions, please contact me at the numbers below.

Sincerely,

For the Division Director
Environmental Health and Engineering

Jeffery F. Koerner, PE
Air Pollution Control Section
Phone: (561) 355-4549 FAX: (561) 355-2442

Att.: Original Completeness Summary

RECEIVED

AUG 04 1997

BUREAU OF
AIR REGULATION

Filename: 0333003.45

cc: Teresa Heron, Engineer
New Source Review Section
Bureau of Air Regulation - DEP
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Andrew Neita, Air Permit Supervisor
DEP-Southeast District
P.O. Box 15425
West Palm Beach, FL 33416-5425



May 2, 1997

A. A. Linero, PE Administrator
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

MAY 08 1997

**BUREAU OF
AIR REGULATION**

**Re: Florida Gas Transmission Permit Modification
Station No. 21, Palm Beach County**

Dear Mr. Linero:

I welcome the opportunity to process the permit modification for the project located in Palm Beach County. Just for my own future information, I have a few general questions on the permitting process:

- (1) Your memorandum indicates that these modifications will be performed as construction permit modifications. Should any consideration be given to a FESOP for this permitting action? After all, no "modification" by definition is being performed, but rather a "like kind" replacement.
- (2) Assuming construction permits are issued, when should the operation permits be revised to include these changes? Should we wait until after the initial replacements?
- (3) Does a letter requesting a permit amendment constitute an "application" and require a processing "time clock"? Was a processing fee and application received?

In addition to the items listed in your draft Request for Additional Information, I also request the following information:

- (1) A table identifying for both the existing unit and the replacement unit: the manufacturer, model number, serial number, capacity (bhp), and the emission levels of CO, NOx, PM, SO2, and VOC for each.
- (2) Certification by a Professional Engineer, registered in Florida, that the replacement units are rated at the same capacity (brake horsepower) *or less* than the existing units AND that the emission levels of CO, NOx, PM, SO2, and VOC are equal to *or less* than the existing units. I would avoid using "identical" to describe the replacement units. For example, it would be reasonable to allow the installation of a smaller unit with emission levels equal to or less than the existing units.

I recommend the following changes/additions to the proposed "draft modification":

No comments on conditions 1., 2., 3., 4., 5., 6., and 7.

8. I don't believe we have a "Completion of Construction" form anymore; it's the Short Form Application, Form No. 62-210.900(2). I recommend the following condition:

"Emission Compliance Stack Test Reports: A report indicating the results of the initial emissions compliance tests shall be filed with the Health Department as soon as practical, but no later than 45 days after the last sampling run is completed. The report shall provide sufficient detail on the tested emissions unit and the procedures used to allow the Health Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in **F.A.C. 62-297.310(8)(c)**. The report shall also include a certification by a licensed Professional Engineer, registered in Florida, that the turbines were installed in accordance with the manufacturer's recommendations and that the test results demonstrate compliance with the existing permit conditions and 40 CFR 60, Subpart GG. [**Rules 62-297.310(8) and 62-4.050(3), F.A.C.**]"

9. *Add this requirement:* "FGT shall provide written notice of a proposed replacement at least seven days prior to replacing a turbine. The notification shall be certified by a professional engineer and include the manufacturer, model number, serial number, operating capacity (bhp), and emission levels for both the existing unit and the replacement unit."

Final question: Why are the pre-NSPS units subject to preconstruction review? Do you believe they will then be subject to NSPS Subpart GG? The following is the NSPS definition of "modification":

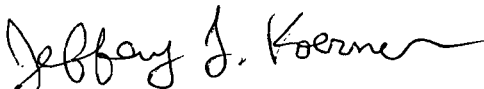
40 CFR 60.2 DEFINITIONS.

"Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. [Revised at 59 FR 12427, March 16, 1994]"

This situation doesn't apply to the units in Palm Beach County, I'm just curious as to the interpretation. If you have any questions, please call me at the numbers below. Thank you for the opportunity to comment on this project.

Sincerely,

For the Division Director
Environmental Health and Engineering



Jeffery F. Koerner, PE

Air Pollution Control Section

Phone: (407) 355-4549 SunCom: 273-4549

FAX: (407) 355-2442

This letter was also faxed on May 2, 1997 to Mr. Linero and to the following individuals at (904) 922-6979:

cc: Kim Tober, DEP - Bureau of Air Regulation
Theresa Heron, DEP - Bureau of Air Regulation

Filename: FGT_REP.DOC

cc: T. Nelson
a. Linero