LIST OF APPENDICES

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G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval or any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (BACT), *not applicable.*
(b) Determination of Prevention of Significant Deterioration (PSD), *not applicable.*
(c) Compliance with New Source Performance Standards, *applicable.*

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

40 CFR 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) Stationary gas turbine means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) Simple cycle gas turbine means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) Regenerative cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) Combined cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) Emergency gas turbine means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) Ice fog means an atmospheric suspension of highly reflective ice crystals.

(g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) Efficiency means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) Base load means the load level at which a gas turbine is normally operated.

(k) Fire-fighting turbine means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) Turbines employed in oil/gas production or oil/gas transportation means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A Metropolitan Statistical Area or MSA as defined by the Department of Commerce.

(n) Offshore platform gas turbines means any stationary gas turbine located on a platform in an ocean.

(o) Garrison facility means any permanent military installation.

(p) Gas turbine model means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) Electric utility stationary gas turbine means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) Emergency fuel is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) Regenerative cycle gas turbine means any stationary gas turbine that recovers thermal energy from the exhaust gases and utilizes the thermal energy to preheat air prior to entering the combustor.

Rule 62-296.200, F.A.C. Definitions.

The following words and phrases when used in this permit shall have the following meanings:

(25) Allowable Emissions: The emission rate calculated using the maximum rated capacity of the emissions unit, as limited or modified by any state or federally enforceable restrictions on the operating rate or hours of operation, or both, and the most stringent state or federal emission limiting standard applicable to the emissions unit; or the maximum allowable emission rate specified by any state or federally enforceable permit conditions.

(99) Department: The State of Florida Department of Environmental Protection.

(110) Emission: The discharge or release into the atmosphere of one or more air pollutants.

(111) Emission Limiting Standard or Emission Standard or Emission Limitation or Performance Standard: Any restriction established in or pursuant to a regulation adopted by the Department which limits the quantity, rate, concentration or opacity of any pollutant released, allowed to escape or emitted, whether intentionally or unintentionally, into the atmosphere, including any restriction which prescribes equipment, sets fuel specifications, or prescribes operation or maintenance procedures for an emissions unit to assure emission reduction or control.

(113) Emission Point or Discharge Point: The point at which an air pollutant first enters the atmosphere.

(114) Emissions Unit: Any part or activity of a facility that emits or has the potential to emit any air pollutant.

(119) Excess Emissions: Emissions of pollutants in excess of those allowed by any applicable rule of the Department or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions which occur during startup, shutdown, sootblowing, load changing or malfunction.

(126) Facility: All of the emissions units which are located on one or more contiguous or adjacent properties and which are under the control of the same person (or persons under common control).

(179) Malfunction: Any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

(203) Objectionable Odor: Any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.

(208) Opacity: A condition which renders material partially or wholly impervious to rays of light causing obstruction of observer's view.

(255) Secretary: The Secretary of the Department of Environmental Protection.

(258) Shutdown: The cessation of the operation of an emissions unit for any purpose.

(271) Stack: A pipe, duct, chimney, or other functionally equivalent device that confines and conveys air pollutants from an emissions unit or group of emissions units into the atmosphere through an emission point designed to discharge air pollutants into the atmosphere, but not including flares.

(275) Startup: The commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.

(300) Unconfined Emissions: Emissions which escape and become airborne from unenclosed operations or which are emitted into the atmosphere without being conducted through a stack.

(310) Visible Emission: An emission greater than 5 percent opacity as measured by standard methods.

ABBREVIATIONS AND ACRONYMS

°F	-	Degrees Fahrenheit
CFR	-	Code of Federal Regulations
DEP	-	State of Florida, Department of Environmental Protection
DARM	-	Division of Air Resource Management
EPA	-	United States Environmental Protection Agency
F.A.C.	-	Florida Administrative Code
F.S.	-	Florida Statute
ISO	-	International Standards Organization *(Refers to standard conditions of 288°K, 60% relative humidity, and 101.3 kPa.)*
LAT.	-	Latitude
LONG.	-	Longitude
mmBTU	-	million British Thermal Units
MW	-	Megawatt
ORIS	-	Office of Regulatory Information Systems
SOA	-	Specific Operating Agreement
UTM	-	Universal Transverse Mercator

CITATION FORMAT

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Code of Federal Regulations:

Example: **[40 CFR 60.334]**
Where:
40 - refers to Title 40
CFR - refers to the Code of Federal Regulations
60 - refers to Part 60
60.334- refers to Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213.205, F.A.C.]**
Where:
62 - refers to Title 62 of the Florida Administrative Code (F.A.C.)
62-213 - refers to Chapter 62-213, F.A.C.
62-213.205 - refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example: Facility ID No.: 099-0001
Where:
099 - 3 digit number indicates that the facility is located in Palm Beach County
0221 - 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example: 099-2222-001-AC or 099-2222-001-AV
Where:
AC - identifies permit as an Air Construction Permit
AV - identifies permit as a Title V Major Source Air Operation Permit
099 - 3 digit number indicates that the facility is located in Palm Beach County
2222 - 4 digit number assigned by state database identifies specific facility
001 - 3 digit sequential number assigned by the state database identifies specific permit project

Old Permit Numbers:

Example: AC50-123456 or AO50-123456
Where:
AC - identifies permit as an Air Construction Permit
AO - identifies permit as an Air Operation Permit
123456 - 6 digit number assigned by state database identifies specific permit

Other Permit Numbers:

Example: PSD-FL-185 or PA95-01
Where: PSD-FL refers to a Prevention of Significant Deterioration Permit issued by the Florida DEP
PA refers to a Power Plant Siting Act Permit

The following items have been identified by the owner as emitting negligible amounts of air pollution and are exempt from the requirements to obtain an air pollution permit.

Description of Equipment or Activity	Insignificant / Exempt
184 bhp natural gas fired emergency generator	Conditional exemption issued by DEP's Bureau of Air Regulation on 10-19-93 pursuant to Rule 62-4.040(1)(b), F.A.C.
439 Hp natural gas fired mobile field compressor	Conditional exemption issued by DEP's Bureau of Air Regulation on 10-19-93 pursuant to Rule 62-4.040(1)(b), F.A.C.
2000 gallon new lube oil tank 4200 gallon condensate tank 300 gallon oily water tank 600 gallon used lube oil tank 4200 gallon oily water tank Fugitive emissions of natural gas from valves, flanges, and fittings.	Emit negligible amounts of fugitive VOC. Conditional exemption issued by Health Department on 12-18-95 pursuant to Rule 62-4.040(1)(b), F.A.C.

1.0 CONDITIONAL EXEMPTIONS

1.1 On October 19, 1993, the Florida Department of Environmental Protection's Bureau of Air Regulation issued a conditional exemption from the requirement to obtain an air pollution permit for the following sources of air pollution **[Rule 62-4.040(1)(b), F.A.C.]**:

(a) **184 hp natural gas fired emergency electrical generator:**

(1) Unit shall not operate more than 400 hours per consecutive 12 month period.

(2) Fuel shall be limited to natural gas.

(b) **439 hp Mobile Field Compressor (Waukesha Model 6-LRORB-13):**

(1) Unit shall not operate more than 168 hours per consecutive 12 month period.

(2) Fuel shall be limited to natural gas.

2.0 NEGLIGIBLE SOURCES OF POLLUTANT EMISSIONS

2.1 The following activities were identified in the application for this permit as sources of fugitive emissions of volatile organic compounds:

- 2000 gallon new lube oil tank
- 4200 gallon condensate tank
- 300 gallon oily water tank
- 600 gallon used lube oil tank
- 4200 gallon oily water tank
- Fugitive emissions from valves, flanges, and fittings

The Health Department determines these activities to emit negligible amounts of fugitive emissions of volatile organic compounds and exempts them from the requirement to obtain an air pollution permit. **[Rule 62-4.040(1)(b), F.A.C.]**

62-297.310 General Test Requirements.

The focal point of a compliance test is the stack or duct which vents process and/or combustion gases and air pollutants from an emissions unit into the ambient air.

(1) For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct; and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided that three complete and separate determinations shall not be required if the Department determines that the process variables are not subject to variation during a compliance test, or if a determination is not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is 20% below the allowable emission limiting standards.

(2) Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity as defined below. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

(a) Combustion Turbines. (Reserved)

(b) All Other Sources. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.

(3) The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

62-297.330 Applicable Test Procedures.

This section establishes required sampling times, minimum sample volumes and special test requirements, as applicable, for each category of emissions units for which an emission limiting standard is specified in or established pursuant to any of the air pollution rules of the Department.

(1) Required Sampling Time.

(a) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

(b) Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

1. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

2. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.340(3), F.A.C., Waiver of Compliance Test Requirement, shall be established on a case-by-case basis as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
3. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(2) Minimum Sample Volume. Unless otherwise specified in the applicable rule the minimum sample volume per run shall be 25 dry standard cubic feet.

(3) Required Flow Rate Range. For DEP Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(4) Calibration. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.330-1 (located at end of this Appendix).

(5) EPA Method 5. When EPA Method 5 is required the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

62-297.345 Stack Sampling Facilities Provided by the Owner of an Air Pollution Point Source.

This section describes the minimum requirements for stack sampling facilities that are necessary to sample point sources. Sampling facilities include sampling ports, work platforms, access and electrical power. Sources must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR 1910, Subparts D and E. A copy of this reference document is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. and may be inspected at the Department's Tallahassee office.

(1) Permanent Test Facilities. The owner or operator of a source that is required to conduct a compliance test, other than a visible emission test, on at least an annual basis, shall install and maintain permanent stack testing facilities.

(2) Temporary Facilities. *(Omitted)*

(3) Test Facilities.

(a) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. Location of sampling ports.

   a. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, construction or other flow disturbances.
   b. For sources which do not comply with the criteria set forth in a. above, the source owner or operator shall demonstrate to the Department, within 12 months after the effective date of this rule, that sampling port locations for such source are not subject to flow disturbances which result in invalid test results. If the source cannot make such a demonstration to the Department's satisfaction, the Department, after full review of all data timely submitted by the source, shall specify appropriate sampling procedures or port locations in the source's operating permit.

4. For sources for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter,

four sampling ports, each 90 degrees apart, shall be installed. For sources for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. For sources not subject to Rule 62-296.800, F.A.C., (Standards of Performance for New Stationary Sources) or Rule 62-296.810, F.A.C., (Emissions Standards for Hazardous Air Pollutants) and which have submitted a complete application for a permit to construct prior to December 1, 1980, FDEP Method 1 may be substituted for EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(b) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(c) Access.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
2. Walkways over free fall areas shall be equipped with safety rails and toe boards.

(d) Electrical Power.

1. A minimum of two 120 volts AC, 20 amps outlets shall be provided at the sampling platform with 20 feet of each sampling port.
2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(e) Sampling Equipment Support.

1. An eyebolt and angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts. The eyebolt shall be capable of supporting a 500 pound working load. The dimensions and placement of these fixtures are shown on Figure 297.345-1. A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.
2. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

62-297.570 Test Reports.

(1) The owner or operator of an air pollution emissions unit, for which a compliance test is required, shall file a report with the Department on the results of each such test.

(2) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(3) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than an EPA or DEP Method 9 test, shall provide information on:

a. The type, location, and designation of the emissions unit tested.
b. The facility at which the emissions unit is located.
c. The owner or operator of the emissions unit.
d. The normal type and amount of fuels used and materials processed and the types and amounts of fuels used and material processed during each test run.
e. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
f. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
g. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
h. The date, starting time and duration of each sampling run.
i. The test procedures used including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
j. The number of points sampled and configuration and location of the sampling plane.
k. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
l. The type, manufacturer and configuration of the sampling equipment used.
m. Data related to the required calibration of the test equipment.
n. Data on the identification, processing and weights of all filters used.
o. Data on the types and amounts of any chemical solutions used.
p. Data on the amount of pollutant collected from each; the sampling probe, the filters, and the impingers, are reported separately for the compliance test.
q. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
r. All measured and calculated data required to be determined by each applicable test procedure for each run.
s. The detailed calculations for one run that relate the collected data to the calculated emission rate.
t. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
u. A certification that to the knowledge of the owner or his authorized agent, all data submitted is true and correct.

When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

62-297.620 Exceptions and Approval of Alternate Procedures and Requirements.

(1) The owner or operator may request in writing a determination by the Secretary of the Florida Department of Environmental Protection, or his designee, that any requirement of this chapter relating to emissions test procedures, methodology, equipment, or test facilities shall not apply to an emissions unit, and shall request prior approval of alternate procedures or requirements. For information on obtaining written approval for an Alternate Sampling Procedure (ASP), please contact the Emissions Monitoring Section in Tallahassee at (904) 488-1344.

(2) The request shall set forth the following information, at a minimum:

(a) Specific emissions unit and permit number, if any, for which exception is requested.
(b) The specific provision(s) of this chapter from which an exception is sought.
(c) The basis for the exception, including but not limited, to any hardship which would result from compliance with the provisions of this chapter.

(d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in Rule 62-210, 62-212, 62-252, 62-272, 62-273, 62-275, 62-296, or 62-297, F.A.C. or any permit issued pursuant to those rules.

(3) The Secretary or his designee shall specify by order each alternate procedure or requirement approved for an individual emissions unit in accordance with this section or shall issue an order denying the request for such approval. The Department's order shall be final agency action, reviewable in accordance with Section 120.57, Florida Statutes.

(4) In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Secretary or the appropriate Director of District Management may waive any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specify an alternative standard of 5% opacity. The waiver of compliance test requirements for a particulate emissions unit equipped with a baghouse, and the substitution of the visible emissions standard, shall be specified in the permit issued to the emissions unit.

TABLE 62-297.330-1 CALIBRATION SCHEDULE

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Thermometers, liquid in glass	Annually	ASTM Hg in glass reference thermometer or equivalent thermometric points.	(+/-) 2%
Thermometer, bimetallic	Quarterly	Calibrated liquid in glass thermometer.	5°F
Thermocouple	Annually	ASTM Hg in glass reference thermometer; NBS calibrated reference and potentiometer.	5°F
Barometer	Monthly	Hg barometer, or NOAA station.	(+/-) 1% scale
Pitot Tube	1. When required 2. When damaged	By construction or measurements or wind tunnel D greater than 16" and standard pitot tube.	See EPA Method 2, Figures 2-2 and 2-3.
Probes Nozzles	1. Before each test, or 2. When nicked, dented, or corroded.	Micrometer	(+/-) 0.001" mean of at least (3) readings. Maximum allowed deviation between readings is 0.004".
Dry gas and orifice meters	1. Full scale when received; Annually when 5% change observed. 2. One point semi-annually 3. Check after each test series.	Spirometer of calibrated wet test or dry gas test meter. Comparison check.	2% 5%

APPENDIX E
NSPS SUBPART GG REQUIREMENTS FOR GAS TURBINES

The following emissions unit is subject to the applicable requirements of Subpart A (General Provisions) and Subpart GG (Stationary Gas Turbines) established as New Source Performance Standards in 40 CFR 60 and adopted by reference in Rule 62-204.800(7)(b), F.A.C.

EU ID	Emission Unit Description
001	**Unit No. 2101:** 6500 bhp natural gas-fired combustion turbine with compressor.
002	**Unit No. 2102:** 6500 bhp natural gas-fired combustion turbine with compressor.

NSPS General Provisions

The emissions units are subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.

40 CFR 60, SUBPART GG
STANDARDS OF PERFORMANCE FOR STATIONARY GAS TURBINES

{Permitting Note: Each gas turbine shall comply with all applicable requirements of 40 CFR 60, Subpart GG adopted by reference in Rule 62-204.800(7)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes and requirements related to the Subpart GG requirements are shown in italics immediately following the section to which they refer. The rule basis for the Department requirements specified below is Rule 62-4.070(3), F.A.C.}

<u>40 CFR 60.330 - Applicability and Designation of Affected Facility</u>

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour), based on the lower heating value of the fuel fired.

<u>40 CFR 60.331 - Definitions</u>

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) Base load means the load level at which a gas turbine is normally operated.

<u>40 CFR 60.332 - Standard for Nitrogen Oxides</u>

(a) On and after the date of the performance test required by Section 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (c) of this section shall comply with:

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NOx percent by volume)
N≤0.015	0
0.015<N≤0.1	0.04(N)
0.1<N≤0.25	0.004+0.0067(N–0.1)
N>0.25	0.005

where: N=the nitrogen content of the fuel (percent by weight).

Department Requirement: When firing natural gas, the "F" value shall be assumed to be 0.

{Permitting Note: The "Y" value for this gas turbine is approximately 12.9 for natural gas. The equivalent emission standard is 167 ppmvd corrected to 15% oxygen. The emissions standards specified in this permit are much more stringent than this requirement.}

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

40 CFR 60.333 - Standard for Sulfur Dioxide

On and after the date on which the performance test required to be conducted by Section 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

{Permitting Note: The gas turbines will exclusively fire natural gas, which contains less than 0.03% sulfur by weight assuming a density of 0.0455 lb/scf of natural gas.}

40 CFR 60.334 - Monitoring of Operations

(c) For the purpose of reports required under Section 60.7(c), periods of excess emissions that shall be reported are defined as follows:

(1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Section 60.332 by the performance test required in Section 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Section 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Section 60.335(a).

{Permitting Note: Excess NOx emissions reporting requirements do not apply. The gas turbine uses "dry" lean premix combustors and not wet injection to control NOx emissions. As indicated above, the Subpart GG NOx standard is 166 ppmvd @ 15% oxygen. This is nearly four times the NOx standard specified in the permit and would be nearly impossible for this lean premix combustion turbine to exceed. As stated in the preamble to the July 2004 amendments, the rule changes do not impose any additional monitoring requirements for existing units.}

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in §60.332).

{Permitting Note: Because the nitrogen content of pipeline natural is negligible, the permittee does not claim an allowance for fuel bound nitrogen and will use "0" for the F-value when calculating the NOx standard in §60.332. The permit prohibits the permittee from claiming the allowance for fuel nitrogen. Therefore, no fuel nitrogen monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

(3) May elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(v), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring.

§60.331(v) states, "*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard

atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: Landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value."

The permittee elects not to monitor the sulfur content of natural gas based on §60.334(h)(3)(i), which states that, "The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less." The current tariff sheet specifies that natural gas delivered by the pipeline system shall contain not more than 10 grains of total sulfur per 100 cubic feet of gas. Therefore, the pipeline natural gas meets the above definition.

{Permitting Note: The permit requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel sulfur monitoring is required and no periodic reports of excess SO_2 emissions are required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

<u>40 CFR 60.335 - Test Methods and Procedures</u>

(a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

(b) In conducting the performance tests required in Section 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in Section 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in Sections 60.332 and 60.333(a) as follows:

(1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$$NOx = (NOxo)\,(Pr/Po)^{0.5}\, e^{19(Ho - 0.00633)}\,(288°K/Ta)^{1.53}$$

where:

NOx = emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.

NOxo = observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

Ho = observed humidity of ambient air, g H2O/g air.

e = transcendental constant, 2.718.

Ta = ambient temperature, °K.

<u>Department Requirement</u>: The permittee is required to correct NOx emissions to ISO ambient atmospheric conditions for each required emissions performance test and compare to the NOx standard specified in 40 CFR 60.332.

(2) The monitoring device of Section 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with Section 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

<u>Department Requirement</u>: The initial NOx performance tests shall be conducted at approximately four evenly spaced points between the minimum normal operating load and 100% of peak load.

{Permitting Note: Although the dry low-NOx combustion controls are only effective above a minimum load of approximately 50%, the proposed gas turbines are able to quickly ramp up above this level. Gas turbines used as compressor engines typically operate at permitted capacity. Excluding startup and shutdown, the permit requires operation above 50% load. The minimum normal operating load will be identified during initial testing.}

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

Department Requirement: The span value shall be no greater than 75 ppm of nitrogen oxides due to the low NOx emission levels of the specified gas turbine.

(d) The owner or operator shall determine compliance with the sulfur content standard in Section 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Section 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of Section 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

{Permitting Note: The permit prohibits the permittee from claiming the allowance for fuel nitrogen. The permit also requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel nitrogen or fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}