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Department of Environmental Protection

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Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

March 17, 2003

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Roger P. Zirkle, Asset Manager
Environmental Services BB1A
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

**RE: Tiger Bay Cogeneration Facility
Modification to Conditions of Certification
DEP Case Number PA 97-37A
OGC Number 03-0533**

ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Zirkle:

On February 24, 2002, the Department issued Title V Air Permit number 1050223-010-AV for the operation of the Tiger Bay Cogeneration Facility. Pursuant to Rule 62-17.211(4), Florida Administrative Code ("F.A.C.") the Department is required to modify the Conditions of Certification for this facility to conform them to the Title V Permit.

On January 13, 2003, all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification. Additionally, on January 15, 2003, notice of the Department's intent to modify the Conditions of Certification for this facility was published in the Florida Administrative Weekly ("FAW"), and on the Department's internet home page at <http://www.dep.state.fl.us/> under the link or button titled "Official Notices." Those notices specified that pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, F.A.C., all parties to the certification proceeding have 45 days from the issuance of the notice by mail to such party's last address of record in which file a written objection to the modification; that any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice in the FAW to object in writing; that failure to act within the time frame constitutes a waiver of

the right to become a party; and that the Department will issue a Final Order Modifying the Conditions of Certification for this facility if no written objections are received by the Department.

No objections to the modification have been received by the Department. The Conditions of Certification for the Tiger Bay Cogeneration Facility are hereby modified as follows:

XIII. D. Emissions Limits: Spray Dryer and Bag House (Emission Unit 002)

1. through 12. - No change

E. Auxiliary Boiler (Emission Unit 003)

1. Permitted Capacity. The maximum operation heat input rate is as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
<u>-003</u>	<u>100</u>	<u>Natural Gas</u>

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

2. Emissions Unit Operating Rate Limitation After Testing. See common condition E.17. [Rule 62-297.310(2), F.A.C.]

3. Methods of Operation - Fuels. Pipeline quality natural gas is the only fuel allowed to be fired in the auxiliary boiler. [Rules 62-4.160(2) and 62-213.440(1), F.A.C.; and, 1050223-009-AC.]

4. Hours of Operation. This emissions unit shall only operate up to 6,000 hours during any consecutive 12-month period. [Rules 62-213.440 and 62-210.200, F.A.C.; and, 1050223-009-AC.]

5. Visible Emissions. Visible Emissions shall not exceed 20 percent opacity except for one six-minute period per hour during which opacity shall not exceed 27 percent. [Rule 62-296.406(1), F.A.C.; and, 1050223-009-AC.]

6. Particulate Matter. Particulate matter emissions shall be controlled by the firing of natural gas. [Rule 62-296.406(2), F.A.C.; BACT; and, 1050223-009-AC.]

7. Sulfur Dioxide. Sulfur dioxide emissions shall be controlled by the firing of natural gas. [Rule 62-296.406(3), F.A.C.; BACT; and, 1050223-009-AC.]

8. Nitrogen Oxides: Nitrogen oxide emissions shall not exceed 0.10 lb/MMBtu (30 tons per year), as measured by applicable compliance methods. [Rule 62-4.070(3), F.A.C.; BACT; and, 1050223-009-AC.]

9. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

10. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

11. Visible Emissions: Unit -003 shall be tested annually for visible emissions, in accordance with the requirements listed below. [Rule 62-297.320(7)(a)4., F.A.C.; and, 1050223-009-AC.]

12. Nitrogen Oxides Emissions: Prior to applying for a Title V operation permit renewal, Unit -003 shall be tested for nitrogen oxides emissions, in accordance with the requirements listed below. [Rule 62-297.320(7)(a)4., F.A.C.; and, 1050223-009-AC.]

13. Visible Emissions: The test method for visible emissions shall be DEP Method 9 (see Specific condition E.14.), incorporated in Chapter 62-297, F.A.C. [Rules 62-213.440 and 62-296.405(1)(e)1., F.A.C.; and, 1050223-009-AC.]

14. DEP Method 9: The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

a. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen-second intervals during the required period of observation.

b. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 27 percent is permissible for not more than six minutes per hour) opacity shall be computed as follows:

(1) For the basic part of the standard (i.e., 20 percent opacity), the opacity shall be determined as specified above for a single-valued opacity standard.

(2) For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value. [Rule 62-297.401(9)(c), F.A.C.; and, 1050223-009-AC.]

15. Nitrogen Oxides: The test method for Nitrogen oxide emissions shall be Method 7E, incorporated in Chapter 62-297, F.A.C. [Rule 62-297.401(7)(e), F.A.C.; and, 1050223-009-AC.]

16. Required Number of Test Runs: 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, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are 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 or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

17. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical 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.
[Rule 62-297.310(2), F.A.C.]

18. Calculation of Emission Rate: 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. [Rule 62-297.310(3), F.A.C.]

19. Applicable Test Procedures:

a. Required Sampling Time.

(1) 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.

(2) 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:

(a) 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.

(b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

(c) 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.

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

c. Required Flow Rate Range. For EPA 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.

d. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.

e. Allowed Modification to 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. [Rule 62-297.310(4), F.A.C.]

TABLE 297.310-1
CALIBRATION SCHEDULE

<u>ITEM</u>	<u>MINIMUM CALIBRATION FREQUENCY</u>	<u>REFERENCE INSTRUMENT</u>	<u>TOLERANCE</u>
<u>Liquid in glass thermometer</u>	<u>Annually</u>	<u>ASTM Hg in glass ref. thermometer or equivalent, or thermometric points</u>	<u>+/-2%</u>
<u>Bimetallic thermometer</u>	<u>Quarterly</u>	<u>Calibrate liquid in glass thermometer</u>	<u>5 degrees F</u>
<u>Thermocouple</u>	<u>Annually</u>	<u>ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer</u>	<u>5 degrees F</u>
<u>Barometer</u>	<u>Monthly</u>	<u>Hg barometer or NOAA station</u>	<u>+/-1% scale</u>
<u>Pitot Tube</u>	<u>When required or when damaged</u>	<u>By construction or measurements in wind tunnel D greater than 16" and standard pitot tube</u>	<u>See EPA Method 2, Fig 2-2 & 2-3</u>
<u>Probe Nozzles</u>	<u>Before each test or</u>	<u>Micrometer</u>	<u>+/-0.001" mean of</u>

	<u>when nicked, dented, or corroded</u>		<u>at least three readings Max deviation between .004"</u>
<u>Dry Gas Meter and Orifice Meter</u>	<u>1. Full Scale: When received, when 5% change observed, annually.</u> <u>2. One point: Semiannually.</u> <u>3. Check after each test series.</u>	<u>Spirometer or calibrated wet test or dry gas test meter</u> <u>Comparison check</u>	<u>2%</u> <u>5%</u>

20. Determination of Process Variables:

a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C.]

21. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. [Rule 62-297.310(6), F.A.C.]

22. Test Notification: The owner or operator shall notify the Department's district office and, if applicable, appropriate local program, at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.; and, 40 CFR 60.8]

23. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or

questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department.
[Rule 62-297.310(7)(b), F.A.C.]

24. The permittee shall record and maintain records of the amount of natural gas combusted during each day the auxiliary boiler is operated.
[40 CFR 60.48c(g)]

25. Duration of Record Keeping: 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. 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 for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. [Rules 62-4.160(14)(a)&(b) and 62-213.440(1)(b)2.b., F.A.C.; and, 40 CFR 60.48c(i).]

26. Test Reports:

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

b. 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.

c. 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 for an EPA or DEP Method 9 test, shall provide the following information:

(1) The type, location, and designation of the emissions unit tested.

(2) The facility at which the emissions unit is located.

- (3) The owner or operator of the emissions unit.
- (4) 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.
- (5) 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.
- (6) 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.
- (7) 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.
- (8) The date, starting time and duration of each sampling run.
- (9) 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.
- (10) The number of points sampled and configuration and location of the sampling plane.
- (11) 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.
- (12) The type, manufacturer and configuration of the sampling equipment used.
- (13) Data related to the required calibration of the test equipment.
- (14) Data on the identification, processing and weights of all filters used.
- (15) Data on the types and amounts of any chemical solutions used.

(16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.

(17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

(18) All measured and calculated data required to be determined by each applicable test procedure for each run.

(19) The detailed calculations for one run that relate the collected data to the calculated emission rate.

(20) 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.

(21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are 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. [Rule 62-297.310(8), F.A.C.]

27. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]

28. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate local program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department. [Rule 62-210.700(6), F.A.C.]

29. Records of Hours of Operation. The owner or operator shall maintain an operation log available for Department inspection that documents the hours of operation each day. This record shall equal the hours that fuel is fired. Within 10 days after the end of each month, a record shall be made of the hours of operation in the previous consecutive 12-month period. [Rules 62-4.070(3) & 62-210.200(PTE), F.A.C.]

30. Records of Heat Input. The owner or operator shall maintain an operation log available for Department inspection that documents the average hourly heat input (higher heating value) to the boiler, as follows. At the end of each 24-hour period that the boiler operates, the average hourly heat input shall be calculated and recorded utilizing the quantity of fuel combusted (see Specific Condition 24), the actual hours operated in the previous 24-hour period (see Specific Condition 29), and the representative heat content (higher heating value) of the as-fired fuel. The heat content of the fuel can be obtained from either on-site testing or from the fuel supplier, as long as the information provided is representative of the as-fired fuel. [Rules 62-4.070(3) & 62-210.200(PTE), F.A.C.]

F. Rule Requirements - No change

Any party to the this Order has a right to seek judicial review of it pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000, 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 thirty days from the date this Order is filed with the Clerk of the Department of Environmental Protection.

Executed in Tallahassee, Florida.

Hamilton S. Oven

Hamilton S. Oven, P.E.

Administrator, Siting Coordination Office

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

Janda F. Korokos *3/17/03*
Clerk Date

CC:

James V. Antista, Esquire

Tiger Bay Cogeneration Facility
Order Modifying Conditions of Certification
DEP Case Number PA 97-37A
March 17, 2003

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