Department of Environmental Protection

DEP06-1084

Jeb Bush
Governor

Twin Towers Building
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

July 7, 2006

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Mr. George K. "Chip" Allen
Indiantown Cogeneration, L.P.
Post Office Box 1799
Indiantown, Florida 34956

RE: Indiantown Cogeneration Facility, PA 90-31G
OGC No. 06-1391

ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Mr. Allen:

On January 21, 2005, the Department issued Air Operation Permit 0850102-007-AV for Indiantown Cogeneration Facility. Pursuant to 403.516 (1) (b)1.-2., Florida Statutes ("F.S."), the Department may modify the Conditions of Certification for this facility to conform to the federally delegated permit as noticed by the Department on October 4, 2004. The Conditions of Certification for the Indiantown Cogeneration Facility are hereby modified as follows:

PART II. DEPARTMENT OF ENVIRONMENTAL PROTECTION

(1) AIR

The construction and operation of the Indiantown Cogeneration Project (ICP) shall be in accordance with ~~all applicable provisions of~~ Chapter 62-204, 62-210, 62-212, 62-296, 62-297, 62-256, and 62-702, and all other applicable provisions of Chapter 62 F~~lorida~~ A~~dministrative~~ C~~ode~~, except for SO_2 and NOx during startup, shutdown, and malfunction, then 40CFR60 shall apply, and Title V Air Operation Permit for facility I.D.0850102. The current Title V Air Operation Permit (0850102-007-AV) is incorporated by reference herein as part of this Certification attached as Appendix I. The provisions of the Title V Air Operation Permit shall be conditions of this certification. The licensee shall comply with the substantive provisions and limitations set forth in the Title V Air Operation Permit as part of these Conditions of Certification, and as those provisions may be modified, amended, or renewed in the future by the Department. Such provisions shall be fully enforceable as conditions of this certification. Any violation of such provisions shall be a violation of these Conditions of Certification.

~~A. Construction~~

~~1. General~~

~~a. Construction shall reasonably conform to the plans and schedule given in the application.~~

~~b. The permittee shall report any delays in construction and completion of the project which would delay commercial operation by more than 90 days to the DEP Southeast District office in West Palm Beach.~~

~~2. Equipment Identification~~

~~The Licensee shall submit at least four copies of complete information as to the make and model numbers of the selected pulverized coal and auxiliary boilers, all pollution control and continuous emissions monitoring devices, operation and maintenance manuals and calibration procedures, updated process flow diagrams showing mass/energy/heat balances and ammonia injector locations and rates, and related equipment, to the DEP Bureau of Air Regulation at least 90 days prior to commencing on-site construction of that particular item.~~

~~3. Stack Height and Design~~

~~The height of the boiler exhaust stack for ICL shall not be less than 495 ft. above grade. Detailed stack drawings showing sampling locations shall be submitted to the DEP Bureau of Air Regulation al least 90 days prior to commencing on-site construction of the affected equipment or feature.~~

~~4. Fugitive Dust and Odors~~

~~The Licensee shall employ proper odor and dust control techniques to minimize odor and fugitive dust emissions. Precautions to prevent fugitive particulate emissions during construction shall be to coat the roads and construction sites used by contractors, regrass or water areas or disturbed soils. Control techniques shall be sufficient to prevent nuisance conditions on adjoining property.~~

~~5. Open Burning~~

~~Open burning in connection with initial land clearing shall be in accordance with Chapter 62-256, F.A.C., Chapter 5I-2, F.A.C., Uniform Fire Code Section 33.101 Addendum, and any other applicable regulations of Martin or Okeechobee Counties, as applicable.~~

No open burning of construction-generated material, after initial land clearing, shall be allowed.

B. Operation

1. Boilers

The Pulverized Coal (PC) boiler is permitted to operate at a maximum of 3422 MMBtu/hr heat input (nominal 330 MW). This facility shall be allowed to operate continuously (8,760 hrs/yr). In addition to the PC boiler, the facility will have one or two auxiliary boilers rated at up to a combined total of 342 MMBtu/hr (#2 Fuel Oil) and a combined total of 358 MMBtu/hr (Natural Gas or propane) which operate at a combined total of less than 1.79×10^{12} British Thermal Units per year. The auxiliary boilers are each permitted to operate 5,000 full load equivalent hours per calendar year, with no more than 1,000 hours of that period using fuel oil with 0.05% sulfur, by weight, as the primary fuel.

2. CO_2 recovery Plant

A CO_2 recovery plant is permitted to operate continuously for 8,760 hours per year. A slipstream, consisting of between 5% to 10% of the main boiler (stack) flue gas shall be routed to the CO_2 recovery plant. The flue gas will be cooled and scrubbed with a monoethanolamine (MEA) solution, which captures CO_2. The CO_2 will then be stripped out of the MEA solution, cleaned, compressed and shipped in liquid form. The CO_2 plant will be designed to produce 400 tons per day (TPD) of liquid CO_2. Note: The production is limited in order to ensure that secondary pollutants are within the ranges provided in the application. Any increase in capacity shall be accompanied by an appropriate review for PSD or MACT applicability.

3. Emissions Limitations

a. Pulverized Coal Boiler

Based on a permitted heat input of 342 MMBtu/hr heat input, the stack emissions from the main boiler shall not exceed any of the following limitations:

i. Combustion Emissions

Pollutant	**Basis**	**Emission Limitation**	
	lb/MMBtu	**lb/hr**	**TPY**
SO_2	0.170	582*	2549
NOx	0.170	582*	2549
PM	0.018	61.6	270

PM_{10}	0.018	61.6	270
CO	0.110	376*	1649
VOC at 7% O_2	0.0036	12.30	54
H_2SO_4	0.0004	1.450	6.350
Beryllium	0.00000273	0.0093	0.041
Mercury	0.0000114	0.039	0.172
Fluorides	0.002	7.26	22.26
Arsenic	0.0000511	0.175	0.765

*24 hour daily block average (midnight to midnight)

ii. NH_3 (Ammonia) - Slip from exhaust gases shall not exceed 50 ppmdv.

iii. VE (Visible Emissions)

VE from the pulverized coal boiler baghouse exhaust shall not exceed 10% opacity (six minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

VE from other baghouse exhausts shall not exceed 10% opacity (six minute average).

No VE during lime silo loading operations (i.e., less than 5% opacity).

VE from the ash handling baghouse shall not exceed a particulate limit of 0.010 grains/acf and VE of 5% opacity.

b. Auxiliary Boiler

The auxiliary boiler or boilers, rated at up to a combined total of 358 MMBtu/hr (Natural Gas and propane) and a combined total of 342 MMBtu/hr (#2 Fuel Oil), shall be limited to a combined total of less than 1.79×10^{12} British Thermal Units per year. The auxiliary boilers are each permitted to operate 5,000 full load equivalent hours per calendar year, with no more than 1,000 hours of that period using fuel oil with 0.05% sulfur, by weight, as the primary fuel. The maximum total annual emissions from the auxiliary boiler or boilers will be as follows when firing #2 fuel oil:

MAXIMUM EMISSIONS		
Pollutant	**lbs/hr**	**tons/year**
NOx	68.4	34

~~SO_2~~	~~17.8~~	~~9~~
~~PM~~	~~1.40~~	~~0.70~~
~~PM_{10}~~	~~1.40~~	~~0.70~~
~~CO~~	~~47.30~~	~~24~~
~~VOC~~	~~0.63~~	~~0.31~~
~~Be~~	~~4.1×10^{-5}~~	~~2.0×10^{-5}~~
~~Hg~~	~~5.1×10^{-4}~~	~~2.6×10^{-4}~~
~~Pb~~	~~3.6×10^{-2}~~	~~1.8×10^{-2}~~
~~As~~	~~6.8×10^{-3}~~	~~3.4×10^{-3}~~

~~c. Particulate emissions from the coal, and limestone handling facilities:~~

~~i. All conveyors and conveyor transfer points will be enclosed to preclude PM emissions (except those directly associated with the coal stacker/reclaimer for which an enclosure is operationally infeasible). Fugitive emission shall be tested as specified in conditions 1.B.2.e.~~

~~ii. Inactive coal storage piles shall be shaped, compacted, and oriented to minimize wind erosion, and covered.~~

~~iii. Water sprays or chemical wetting agents and stabilizers shall be applied to uncovered storage piles, roads, handling equipment, etc. during dry periods and as necessary to all facilities to maintain an opacity of less than or equal to 5 percent, except when adding, moving or removing coal from the coal pile, which would be allowed no more than 20%.~~

~~iv. The lime handling system including the lime silos shall be maintained at a negative pressure while operating and the exhaust vented to a control system.~~

~~v. The fly ash handling system (including transfer and silo storage) shall be totally enclosed and vented (including pneumatic system exhaust) through fabric filters; and~~

~~vi. The Licensee shall submit to the Department, Bureau of Air Regulation in Tallahassee within thirty (30) days after it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal and lime handling facilities. These data shall include, but not be limited to guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of any such device if the Department determines the selected control device to be inadequate to meet the emission limits specified in COC-(1)B.2.d. below. Such disapproval shall be issued within 30 days of receipt of the technical data.~~

d. Particulate emissions form bag filter exhausts from the following facilities shall be limited to 0.010 gr/acf: coal, lime and flyash handling systems. A visible emission reading of 5% opacity or less may be used to establish compliance with this emission limit. A visible emission reading greater than 5% opacity will not create a presumption that the 0.010gr/acf emission limit is being violated. However, a visible emission reading greater than 5% opacity will require the permittee to perform a stack test, as set forth in COC (1)B.3. Verification and recording of the above requirements for particulate emissions shall be done at least annually.

e. Emissions shall not be visible more than 2 minutes in any 15 minutes period. Compliance with fugitive emissions limitations from all transfer points will be determined by EPA/DEP referenced Method 22 and opacity Method 9 (Appendix A, 40 CFR 60).

f. Coal shall not be burned in the unit unless the spray dryer scrubber, fabric filter baghouse and other air pollution control devices are operating properly except as provided under 40 CFR Part 60, Subpart Da. Any malfunctions of these air pollution control devices are to be recorded, including duration, cause, and description of repair as specified in condition 1.D.

g. The fuel oil to be fired in the PC boiler and the auxiliary boiler shall be "new oil" which means an oil which has been refined from crude oil and has not been used. The quality of the No. 2 fuel oil used by the auxiliary boiler shall not contain more than 0.05% sulfur, by weight, based on each shipment analysis report.

h. No fraction of flue gas shall be allowed to bypass the air pollution control devices (PCD) system to reheat the gases exiting from the PCD system, if the bypass will cause emissions above the limits specified in COC (1)B.2. The percentage and amount of flue gas bypassing the PCD system shall be documented and records kept for a minimum of two years available for DEP's inspection.

i. All fuel oil and coal shipments shall have a shipment analysis for sulfur content, ash content, and heating value. In the event continuous emission monitoring of sulfur dioxide is not performed, a daily analysis of coal sulfur content for the purpose of establishing the percentage reduction in potential sulfur emissions shall be made. Such determination shall be in accordance with EPA reference Method 19. Records of all the analyses shall be kept for public inspection for a minimum of two years after the data is recorded.

j. The applicant shall comply with applicable requirements and provisions of the New Source Performance Standard for electric utility steam generating units (40 CFR 60 Part Da).

~~k. As a requirement of this specific condition, the applicant shall comply with all emissions limits and enforceable restrictions required by the State of Florida Department of Environmental Protection pursuant to Section 403.511(5), F.S., which may be adopted by regulation and which are more restrictive, that is lower emissions limits or more strict operating requirements and equipment specifications, than the requirements of COC-II(1)B.2. of these conditions.~~

~~l. CO_2 Recovery Plant~~

~~The CO_2 absorber column shall emit no more than 5 lb/hr VOC in addition to the production of combustion from the PC boiler. (Emissions from the PC boiler are regulated by Condition II.1.C.2.a.) If any batches of CO_2 do not meet product specifications, the off-spec product may also be vented to the atmosphere.~~

~~m. Temporary Package Boiler~~

~~i. The package boiler shall be operated such that:~~

~~(a) No visible emissions (5 percent opacity) are observed, except that visible emissions not exceeding 20% opacity are allowed for up to three minutes in any one-hour period.~~

~~(b) No objectionable odors are observed~~

~~(c) Manufacturers guidelines are followed~~

~~ii. The package boiler shall fire natural gas or propane only, and throughput shall be measured and recorded. No more than 150 million standard cubic feet (combined) shall be fired annually and operating hours plus fuel usage shall be tracked, separately identified and attributed to the annual throughput of the auxiliary boilers.~~

~~iii. ICLP shall notify the Department prior to the delivery of the temporary boiler and upon its removal. The notifications shall include proof that all other permitting conditions identified herein can be or have been met.~~

~~iv. Under no circumstances shall the temporary boiler be on-site for more than 90 calendar days, or operated for more than 60 calendar days during any calendar year.~~

~~v. The package boiler shall meet the ASME and Pressure Vessel Code Accreditation and utilize an ASME Code Symbol Stamp.~~

vi. The package boiler shall be guaranteed of meeting a NOx emission limit of 0.15 lb/MMBtu.

vii. The package boiler shall not be operated at the same time as both auxiliary boilers.

viii. The package boiler shall be disconnected and removed from the plant site within 15 days of the date that either the main PC boiler or both auxiliary boilers become operable.

4. Stack Testing

a. Within 60 calendar days after achieving the maximum capacity at which the unit will be operated, but no later than 180 operating days after initial startup, the permittee shall conduct performance tests for particulates, SO_2, NOx, and visible emissions during normal operations near (±10%) 342 MMBtu/hr heat input and furnish the Department a written report of the results of such performance tests within 45 days of completion of the tests. The performance tests will be conducted in accordance with the provisions of 40 CFR 60.46a and 48a.

b. Compliance with emission limitation standards mentioned in Specific Condition No. (1)B.2.above shall be demonstrated using EPA Methods, as 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), or any other method as approved by the Department, in accordance with F.A.C. Rule 62-297.620.

EPA Method	For Determination of
1	Selection of sample site and velocity traverses.
2	Stack gas flow rate when converting concentrations to or from mass emission limits.
3, 3A & 3B	Gas analysis when needed for calculation of molecular weight or percent O_2.
4	Moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
5	Particulate matter concentration and mass emissions.
6, 6C, or 19	Sulfur dioxide emissions from stationary sources.
7E	Nitrogen oxide emissions from stationary sources.

9	Visible emission determination of opacity. (201) - At least three one hour runs to be conducted simultaneously with particulate testing for the emissions from dry scrubber/baghouse, and ash handling building baghouse. (202) - At least one lime vehicle unloading into the lime silo (from start to finish).
22	Fugitive emissions from transfer points.
10	Carbon monoxide emissions from stationary sources.
12 or 101A	Lead concentration from stationary sources.
13A or 13B	Fluoride emissions from stationary sources.
18 or 25	Volatile organic compounds concentration.
101A or 108	Mercury emissions.
104	Beryllium emission rate and associated moisture content.

NOTE: Use EPA draft method or other methods approved by Department to test for ammonia.

c. Performance tests shall be conducted under such conditions as the Department shall specify based on representative performance of the facility. The permittee shall make available to the Department such records as may be necessary to determine the conditions of the performance tests.

d. The permittee shall provide 30 days notice of the performance tests or 15 days notice for stack tests in order to afford the Department the opportunity to have an observer present.

e. Stack tests for particulates (PM and PM_{10}), NOx and SO_2 and visible emissions shall be performed annually in accordance with COC (1)B.3.b. above.

C. Monitoring and Reporting

1. Air Monitoring Program

a. A flue gas oxygen meter shall be installed for each unit to continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously maintain air/fuel ratio parameters at an optimum. Performance tests shall be conducted and operating procedures established. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" may be used as a guide. The permittee shall install and operate continuously monitoring devices for each main boiler exhaust for sulfur dioxide, nitrogen dioxide and opacity, including flue gas O_2 and/or CO_2 content. The monitoring devices shall meet the applicable requirements of Section 62-297, F.A.C., and 40 CFR 60 a minimum of 95% of the time the source is operating.

b. The licensee shall maintain a log of the amounts and types of fuel received and copies of fuel analyses containing information on sulfur content, ash content and heating values. These logs shall be kept for at least two years.

c. The licensee shall provide stack sampling facilities as required by Rule 62-297.310(6) F.A.C.

d. Prior to operation of the source, the licensee shall submit to the Department's Bureau of Air Regulation a plan or procedure that will allow the licensee to monitor emission control equipment efficiency and enable the licensee to return malfunctioning equipment to proper operation as expeditiously as possible.

e. Prior to the operation of the CO_2 Recovery Plant, the licensee shall submit to the Department's Bureau of Air Regulation a plan or procedure demonstrating that the system used to measure the PC boiler emissions accurately accounts for the exhaust gases ducted to the CO_2 plant.

f. Within 90 days of initial operation of the CO_2 Recovery Plant, the licensee shall submit to the Department's Bureau of Air Regulation a summary of the actual emissions of the Recovery Plant. This shall include (at a minimum) emissions of all regulated pollutants, MEA, ammonia and methanol based upon a net CO_2 recovery level of 400 TPD of liquid CO_2 as well as the estimated maximum daily throughput of the Recovery Plant (if greater than 400 TPD). An O&M plan shall be submitted to the Department's Southeast District Office, detailing best practices for the minimization of secondary pollutant emissions.

2. Reporting

a. For the ICL, stack monitoring, fuel usage and fuel analysis data shall be reported to the Department's Southeast District Office on a quarterly basis commencing with the start of commercial operation in accordance with 40 CFR, Part 60, Section 60.7, and 60.49a and in accordance with Section 62-210.370 and 62-210.700, F.A.C.

b. Utilizing the SAROAD or other format approved in writing by the Department, ambient air monitoring data shall be reported to the Bureau of Air Monitoring and Assessment of the Department quarterly. Upon commencement of ambient air monitoring, such reports shall be due within 45 days of the end of the quarterly reporting period. Reporting and monitoring shall be in conformance with 40 CFR Parts 53 and 58.

c. Beginning one month after certification, the permittee shall submit to the Department a quarterly status report briefly outlining progress made on

~~engineering design and purchase of major pieces of air pollution control equipment. All reports and information required to be submitted under this condition shall be submitted to the Siting Coordination Office, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida, 32301.~~

~~**D. Malfunction or Shutdown**~~

~~In the event of a prolonged (thirty days or more) equipment malfunction or shutdown of air pollution control equipment, operation shall be allowed to resume and continue to take place under appropriate Department order, provided that the Licensee demonstrates such operation will be in compliance with all applicable ambient air quality standards and PSD increments and industrial waste rules. During such malfunction or shutdown, the operation of the ICL shall comply with all other requirements of this certification and all applicable state and federal emission standards not affected by the malfunction or shutdown which is the subject of the Order. Operational stoppages exceeding two hours for air pollution control systems or four hours for other systems or operational malfunctions as defined in the operational contingency plans as specified in COC/I-(17) are to be reported as specified in COC/I-(12). Identified operational malfunctions which do not stop operation but may prevent compliance with emission limitations shall be reported to DEP as specified in COC/I-(12).~~

B. WATER USE CONDITIONS

1. **General** No Change
2. **Site Specific Design Authorizations**
   a.-b. No Change
   c. Authorized Withdrawal Facilities

   2 - 3,700 GPM Surface Water Pumps in L 63N
   1 - 10" x 1340' Floridan Aquifer Well cased to 500' (existing well)
   1 - 10" x 1265' Floridan Aquifer Well cased to 750'
   2 - 15" x 1350' Floridan Aquifer Wells cased to 750'
   2 - 15" x 1650' Floridan Aquifer Wells cased to 1487'
   2 - 14" x 1330' ~~Surficial~~ Upper Floridan Wells cased to 730'
   1 - 8" x 118' Surficial Aquifer Well cased to 78'

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.

Linda Karakous 7-7-06

Clerk Date

James V. Antista, Esquire
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399-1600

David S. Dee, Esquire
Landers & Parsons, P.A.
Post Office Box 271
Tallahassee, FL 32302-0271

William Cochran Keating, Esquire
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Steven Fry, Esquire
County Attorney
Martin County
2401 Southeast Monterey Road
Stuart, FL 34996

George K. Allen, General Manager
Indiantown cogeneration Facility
Post Office Box 1799
Indiantown, Florida 34956

Roger G. Saberson, Esquire
Treasure Coast Regional Planning Council
70 Southeast 4th Avenue
Delray Beach, FL 33483-4514

Sheauchang Yu, Esquire
Assistant General Council
Florida Department of Transportation
650 Suwannee Street, Mail Station 58
Tallahassee, FL 32399-0450

Colin Roopnarine, Esquire
Florida Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

Ashley Foster, Esquire
South Florida Water Management District
Post Office Box 1260
West Palm Beach, FL 33416-4680

George Long
Okeechobee County Administrator
304 Northwest 2nd Street
Okeechobee, FL 34972