

Golder Associates Inc.

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June 19, 2000

0037545A/01

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

JUN 20 2000

Attention: Mr. C. H. Fancy, Bureau of Air Regulation

BUREAU OF AIR REGULATION

RE: OKEELANTA POWER COGENERATION FACILITY
ARMS FACILITY ID NO. 0990332
PERMIT NO. PSD-FL-196
CONSTRUCTION PERMIT AMENDMENT REQUEST

Dear Mr. Fancy:

Okeelanta Power Limited Partnership (OkPLP) is requesting an amendment to its PSD permit to allow the use of natural gas as an alternative fuel in its three cogeneration boilers. For some time, OkPLP has been investigating the feasibility of bringing natural gas via pipeline to the facility and burning it as a supplemental/auxiliary fuel. The facility is currently permitted to burn biomass (bagasse and wood) up to 715 Million British Thermal Units/Hour (MMBtu/hr), No. 2 fuel oil up to 490 MMBtu/hr, and coal up to 490 MMBtu/hr in each of the three boilers. As you may be aware, OkPLP has not burned any coal and has not installed any coal handling facilities at the site.

OkPLP desires the ability to burn natural gas at up to 605 MMBtu/hr in each boiler. This would allow full steaming rate to be achieved while operating on natural gas only. However, the intended normal use of natural gas would be as a supplemental fuel to either bagasse or wood waste. A limited amount of natural gas should enhance the overall combustion in the furnace. It is anticipated that the full natural gas burning capability will be used infrequently, only when there is an interruption to the biomass feed system or ash handling system.

OkPLP is currently subject to a permit condition that limits the amount of fossil fuels fired in each boiler to 25 percent or less on a heat input basis per calendar quarter. OkPLP will continue to meet this requirement in the future with the addition of natural gas. On an annual fuel balance basis, natural gas would first displace No. 2 oil and then wood waste.

After approval of the project by FDEP, OkPLP will finalize contract negotiations with the natural gas supplier, who would extend the existing natural gas pipeline to the facility. New natural gas burners would be installed in the units.

Emission limits for natural gas burning under 40 CFR 60, Subpart Da, NSPS for Electric Utility Steam Generating Units, which will apply to the use of natural gas, are as follows:

PM: 0.03 lb/MMBtu
NO_x: 0.20 lb/MMBtu

As shown in the attached Table 1, the requested emission limits or potential emissions for these pollutants will not exceed the NSPS limits.

No emissions increase for any pollutant is expected due to this change. Comparative emissions calculations were performed using AP-42 emissions factors for natural gas (Tables 1.4-1 and 1.4-2) and are summarized in Table 1 attached. Currently permitted emissions limits for biomass, No. 2 fuel oil, coal, and the requested emissions limits for natural gas, are shown.

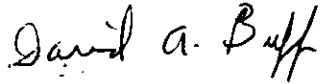
As shown, the use of natural gas as a fuel will significantly reduce emission of particulate matter, carbon monoxide, and VOCs compared to the other permitted fuels. The calculated emission rate for NO_x, based on AP-42, was performed assuming uncontrolled emissions. However, the OkPLP cogeneration facility is equipped with a urea injection system for NO_x control. This NO_x control system currently controls NO_x emissions to just below the allowable limit of 0.15 lb/MMBtu for biomass and No. 2 fuel oil. OkPLP will continue to operate the NO_x control system to ensure that emissions, when burning natural gas stay within the 0.15 lb/MMBtu limit.

Current urea usage for the NO_x control system is about 18 gal/hr per boiler, based on year 2000 operation. Under normal operation, when natural gas would represent only 10 percent or less of total heat input, no change in urea usage is expected. During infrequent times when burning primarily natural gas, no increase in urea usage is expected due to use of low-NO_x burners, which would result in uncontrolled NO_x emissions of 0.2 lb/MMBtu or less.

It is requested, based on this information, that the current construction permit for the facility be revised to allow the use of natural gas as a supplemental/auxiliary fuel. Attached is Section I of the air permit application form, as well as the segment section of the form, which provides information on the natural gas burning in the cogeneration boilers. Also attached is a permit amendment fee of \$250.

Thank you for your consideration of this request. Please call if there are any questions.

Sincerely,
GOLDER ASSOCIATES INC.



David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

DB/jkw/tla

Enclosures

cc: Gus Cepero
James Meriwether
David Dee
Bill Tarr
EPA
NPS
SD
PBCo.

Table 1. Comparison of Emissions for Biomass, No. 2 Oil, Coal, and Natural Gas

Pollutant	Biomass Permit Limit (lb/MMBtu)	No. 2 Oil Permit Limit (lb/MMBtu)	Coal Permit Limit (lb/MMBtu)	Natural Gas	
				Calculated Emissions ^c (lb/MMBtu)	Requested Emission Limits (lb/MMBtu)
Particulate (TSP)	0.03	0.03	0.03	0.0019	0.03
Particulate (PM ₁₀)	0.03	0.03	0.03	0.0019	0.03
Sulfur Dioxide ^a	0.1	0.05	1.2	0.006	--
Nitrogen Oxides ^b	0.15	0.15	0.17	0.15 ^d	0.15
Carbon Monoxide ^b	0.35	0.35	0.35	0.084	--
Volatile Organic Compounds	0.06	0.03	0.03	0.0055	--
Lead					
(Bagasse)	2.50E-06	8.90E-07	6.40E-05	5.00E-07	--
(Wood waste)	1.60E-04			--	--
Mercury					
(Bagasse)	5.43E-06	2.40E-06	8.40E-06	--	--
(Wood waste)	4.00E-06			--	--
Beryllium	--	3.50E-07	5.90E-06	--	--
Fluorides	--	0.0000063	2.40E-02	--	--
Sulfuric Acid Mist	0.003	0.0015	0.036	--	--

^a24-hour average.

^b30-day rolling average.

^cBased on uncontrolled emissions, unless otherwise noted.

AP-42 emission factors:

PM/PM₁₀ = 1.9 lb/MMscf

SO₂ = 0.6 lb/MMscf

NO_x = 190 lb/MMscf

CO = 84 lb/MMscf

VOC = 5.5 lb/MMscf

Natural gas heating value = 1,000 Btu/scf

^dAP-42 uncontrolled NO_x emission factor for low-NO_x burners equates to 0.19 lb/MMBtu; however, a urea injections system is used to control NO_x, therefore emissions will not exceed the current permit limit of 0.15 lb/MMBtu.

**Department of
Environmental Protection**

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : Okeelanta Power Limited Partnership	
2. Site Name : Okeelanta Power L.P.	
3. Facility Identification Number : 0990332	[] Unknown
4. Facility Location : 6 Miles S of S Bay on US 27	
Street Address or Other Locator : 21250 U.S. Highway 27	
City : South Bay	County : Palm Beach Zip Code : 33493
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

I. Part 1 - 1

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :

Name : Gus Cepero
Title : Vice President

2. Owner or Authorized Representative or Responsible Official Mailing Address :

Organization/Firm : Okeelanta Power L.P.
Street Address : 21250 U.S. Highway 27
City : South Bay
State : FL Zip Code : 33493

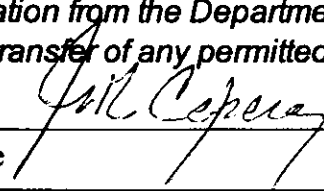
3. Owner/Authorized Representative or Responsible Official Telephone Numbers :

Telephone : (561)996-9072 Fax : (561)992-7326

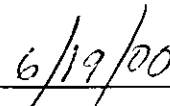
4. Owner/Authorized Representative or Responsible Official Statement :

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions units.*

Signature



Date



* Attach letter of authorization if not currently on file.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
050	Cogen Boiler No. 1	
051	Cogen Boiler No. 2	
052	Cogen Boiler No. 3	

Purpose of Application and Category

Category I : All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

-] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

-] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

-] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

-] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

-] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

- Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

- Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

I. Part 4 - 2

Current operation permit number(s), if any :

- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one :

Attached - Amount : \$250.00 Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :	
Utilize natural gas as a fuel in the cogeneration boilers.	
Projected or Actual Date of Commencement of Construction is: July 01, 2000 (field entry below could not display this information)	
2. Projected or Actual Date of Commencement of Construction :	01-Jul-2001
3. Projected Date of Completion of Construction :	01-Jul-2002

Professional Engineer Certification

1. Professional Engineer Name : David A Buff Registration Number : 19011	
2. Professional Engineer Mailing Address :	
Organization/Firm : Golder Associates, Inc.	
Street Address : 6241 NW 23rd Street, Suite 500	
City : Gainesville	State : FL Zip Code : 32653-1500
3. Professional Engineer Telephone Numbers :	
Telephone : (352)336-5600	Fax : (352)336-6603

4. Professional Engineer Statement :

I, the undersigned, hereby certify, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature
(seal)

David A. Buff

Date

6/19/00

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact :

Name : Gus Cepero
Title : Vice President

2. Application Contact Mailing Address :

Organization/Firm : Okeelanta Power L.P.
Street Address : 21250 U.S. Highway 27
City : South Bay
State : FL Zip Code : 33493

3. Application Contact Telephone Numbers :

Telephone : (561)996-9072 Fax : (561)992-7326

Application Comment

See Attachment OC-AI-AC

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Cogen Boiler No. 1

Segment Description and Rate : Segment 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Electric Utility Boiler - Natural Gas - Greater than 100 MMBtu/hr	
2. Source Classification Code (SCC) : 10100601	
3. SCC Units : Million Cubic Feet Burned (all gaseous fuels)	
4. Maximum Hourly Rate : 0.61	5. Maximum Annual Rate : 1,325.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.00	8. Maximum Percent Ash : 0.00
9. Million Btu per SCC Unit : 1,000	
10. Segment Comment : Based on maximum heating input of 605 mmBtu/hr. Annual rate based on 25% of maximum rate.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Cogen Boiler No. 2

Segment Description and Rate : Segment 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Electric Utility Boiler - Natural Gas - Greater than 100 MMBtu/hr	
2. Source Classification Code (SCC) : 10100601	
3. SCC Units : Million Cubic Feet Burned (all gaseous fuels)	
4. Maximum Hourly Rate : 0.61	5. Maximum Annual Rate : 1,325.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 1,000	
10. Segment Comment : Based on maximum heating input of 605 mmBtu/hr. Annual rate based on 25% of maximum rate.	

III. Part 8 - 10

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

Cogen Boiler No. 3

Segment Description and Rate : Segment 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Electric Utility Boiler - Natural Gas - Greater than 100 MMBtu/hr	
2. Source Classification Code (SCC) : 10100601	
3. SCC Units : Million Cubic Feet Processed	
4. Maximum Hourly Rate : 0.61	5. Maximum Annual Rate : 1,325.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 1,000	
10. Segment Comment : Based on maximum heating input of 605 mmBtu/hr. Annual rate based on 25% of maximum rate.	

III. Part 8 - 15