Orlando Cogen Limited, L.P. operated by Air Products and Chemicals, Inc. 8275 Exchange Drive Orlando, FL 32809

(407) 851-1350

(407) 851-1686

PRODUCTS 2

RECEIVED

MAY 0 / 1998

BUREAU OF AIR REGULATION

May 4, 1998

Telephone

Facsimile

Mr. C. H. Fancy Chief Bureau of Air Regulations Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Re:

Public Notice of Intent to Issue Title V Permit

Title V Permit No: 0950202-001-AV

Orlando CoGen Limited, L.P.

Dear Mr. Fancy:

Orlando CoGen Limited had the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" published in The Orlando Sentinel on Tuesday, April 21, 1998. Attached is the original copy of the proof of publication affidavit from The Orlando Sentinel. You should have received the faxed copy on April 28th.

Sincerely,

Larry Adkins
Plant Manager

Orlando CoGen Limited, L.P.

5/7/98 a: Lennon anderson

The Orlando Sentinel **Published Daily** State of Florida COUNTY OF ORANGE Before the undersigned authority personally appeared. that he/she is the Legal Advertising Representative of The Orlando Sentinel, a daily

newspaper published at ______ RLANDO County, Florida; that the attached copy of advertisement, being a PUBLIC NOTICE OF in the matter of ORLANDO COGEN Limited, Court. in the npance was published in said newspaper in the issue; of 04/21/98 Affiant further says that the said Orlando Sentinel is a newspaper published at **ORLANDO** County, Florida, DRANGE County, Florida, and that the said newspaper has heretofore been continuously published in County, Florida, said_na ange_____County, Florida, each Week Day and has been entered as second-class mail matter at the post in said office in ORLANDO County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper The foregoing instrument was acknowledged before me this 23rd ____, 1998 , by Donna Shaver who is personally known to me and who did take an oath. JULIA NICHOLS (SEAL) \ Mv C mm Exp. 9/23/5001 No. 1stáblic

DEPARTMENT OF ENVIRONMENTAL

PROTECTION

DESCRIPTION

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Donna Shaver

, who on oath says



RECEIVED

MAY 0.7 1998

BUREAU OF AIR REGULATION Orlando Cogen Limited, L.P. operated by Air Products and Chemicals, Inc. 8275 Exchange Drive Orlando, FL 32809

PRODUCTS 1

Telephone Facsimile (407) 851-1350 (407) 851-1686

RECEIVED

APR 28 1998

BUREAU OF AIR REGULATION

April 27, 1998

Mr. C. H. Fancy Chief Bureau of Air Regulations Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Re:

Public Notice of Intent to Issue Title V Permit

Title V Permit No: 0950202-001-AV

Orlando CoGen Limited, L.P.

Dear Mr. Fancy:

Orlando CoGen Limited had the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" published in The Orlando Sentinel on Tuesday, April 21, 1998. Attached is a faxed copy of the proof of publication affidavit from The Orlando Sentinel. I will forward an original to you as soon as I receive it.

Sincerely,

L'arry Adkins
Plant Manager

Orlando CoGen Limited, L.P.

4/28/98 oc : Lennon anderson

The Orlando Sentinel

Published Daily

State of Florida COUNTY OF ORANGE

Before the undersigned authority personally app	earedJulia_Nichols
	, who on oath says
that he/she is the Legal Advertising Representative	of The Orlando Sentinel, a daily
newspaper published at <u>Orlando</u> Orange	in
that the attached copy of advertisement, being a	County, Florida;
That the attached copy of advertisement, being a	Public Notice
in the matter ofpermit #0950203-00	1-AV
in the Orange	Cour
in the Orange was published in said newspaper in the issue, of _	4/21/98
Affiant further says that the said Orlando Senti	iel is a newspaper published at
Orange and that the said newspaper has heretofore b	, in said
Drange	County, Florida,
and that the said newspaper has heretofore b	ien continuously published in
said Orange each Week Day and has been entered as secon	County, Florida,
each Week Day and has been entered as secon	d-class mail matter at the post
office in Orlando Orange for a period of one year next preceding the fir	in said
Orange	County, Florida,
tor a period of one year next preceding the fir	st publication of the attached
copy of advertisement; and affiant further say:	that he/she has neither paid
nor promised any person, firm or corpor.	ition any discount, rebate,
commission or refund for the purpose of se	uring this advertisement for
publication in the said newspaper	
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(SEAL)	
COLLIA DONNA A. SHAVER	!
My Comm Exp. 3/15/200	
(PUBCIC) No. CC 724250	. [

[| Personally Known [) Other | D

RECEIVED

APR 28 1998

BUREAU OF AIR REGULATION OPERATION PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Title V ORAFT Permit No.: 0950203-001-AV Orlando CoClen Limited, U.P. Orange County

Orlando Cocien Limited, L.P.
Orange County
The Department of Environmenait Protection (permitting
suitority) gives notice of its Intent to Issue a Title V air operation permit to Orlando Cocien
Limited, L.P. for the Orlando CoGen Limited, L.P. Facility localed at 8275 Exchange Driva, Orlando, Orange County, The
applicant's name and address
are: Orlando Cocien Limited,
L.P. 8275 Exchange Driva, Orlando, FL 32809.

The permitting suthority will lesue the Title V PROPOSED Parmit, and subsequent Title V FtNAL Permit, in accordance with
the conditions of the Title V
DRAFT, Permit unless a respontee received in accordance
with the following procedures
results in a different decision or
regnificant change of terms or
conditions.

The permitting authority will
accept written comments con-

The permitting authority will accept written comments concerning the proposed Title v DRAFT Parmit issuance action for a perio of 30 (thirty) days from the date of publication of this Notice. Written comments should be provided to the Department's Burseu of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahaseos, Florida 32399-2400. Any written comments 1818 Stone Road, Mail Station #5505, Tallahaseos, Florida 32399-2400. Any written comments 1819 Station #5505, Tallahaseos, Florida 32399-2400. Any written comments of the proposed result in a significant change in this DRAFT Permit he permitting suthority shall issue a Ravised DRAFT Permit he permitting suthority will issue a Ravised DRAFT Permit and require. If applicable, another Public Notice.

The permitting authority will issue the permit with the attached conditions unless a timely petition for an administrative hearing is a fleed pursuant to Section 20, 575 S. Mediation under Section 120, 573, S.s. will not be available for this proposed action.

A person whose substantial information act forth bellow and must be filed fractived in the Information act forth bellow and must be filed fractived, his filed partition for an administrative hearing in accordance with sections 120, 589 and 120, 57 F.9. The petition must contain the Information act forth bellow and must be filed fractived, his filed partition for an administrative hearing in a solid contains the Information act forth bellow and must be filed fractived, his filed within fourtien days of publication of the public notice of within fourtien days of publication of the public notice of within fourtien days of publication of the public notice of within fourtien days of publication of the public notice of within fourtien days of publication of the public notice of within fourtien days of publication of the public notice of his population of the public of the perition (in a molin in compliance with his proposed action:

(a) A statement of how each petitioner's autotion of how and when each

tion:
(d) A statement of the material facts disputed by the petitioner.

is any:

(e) A statement of the facts the petitioner contends warrant re-vered or modification of the De-partment's action or proposed

action;
(f) A statement identifying the rules or statutes that the pell-tioner contends require reversal or modification of the Department's action or proposed

Golder Associates Inc.

6241 NW 23rd Street, Suite 500 Gainesville, FL 32653-1500 Telephone (352) 336-5600 Fax (352) 336-6603



April 9, 1997

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



Re:

Request for Additional Information Regarding Initial Title V Application

File No. 0950203-001-AV

Orlando CoGen Limited, Orange County

ATTN: Title V Section- Scott M. Sheplak, P.E. Administrator

Dear Mr. Sheplak:

On behalf of Orlando CoGen Limited, L.P., this correspondence and attachments provides the information requested in your January 14, 1997 letter regarding the initial Title V permit application for the above-referenced facility. The information provided below is presented in the same order as requested in your letter.

Facility Information

- 1. Standard Industrial Classification (SIC) code -- The appropriate four-digit SIC code for the facility is 4931 as listed in the construction permit (AC48-206720). The facility operates as a cogeneration plant and provides less than 95 percent of energy output as electricity. This has been confirmed for 1996, where 94.6 percent of the energy output was supplied as electricity. Thus, the appropriate four-digit code is 4931. This correction has been made to the Title V application form and is attached.
- 2. Synthetic Minor Source of Pollutants Other than HAPs The facility that includes the combustion turbine and duct burner system is not synthetically limited in the amount of NO_x or CO emissions that would otherwise classify the facility as a "minor" source. However, the duct burner has a federally enforceable limitation on the total fuel usage (i.e., Specific Condition 3 of the construction permit) that limits the potential to emit for NO_x and CO. The maximum fuel usage of 450,000 million (MM)Btu/year [low heating value (LHV)] represents 3,688.525 hours of operation per year at the maximum heat input of 122 MMBtu/hr; however, the hours per year are not limited. As a result, Field 5 under Facility Regulatory Classification was checked as "No," while Fields 4 under Section H was checked "Yes."

Combustion Turbine (Emission Unit #1)

3. Turbine Wash — The intake compressor is cleaned while the turbine is operated (i.e., on-line) at a dilution ratio of 9 gallons of cleaner to 35 gallons of demineralized water (i.e., about 20.5 percent cleaner). The cleaner currently used is Turbotech 927, which is a solvent and surfactant based

Mr. Clair H. Fancy, P.E. Page 2 April 9, 1997

mixture that contains no hazardous air pollutants as defined in Rule 62-210.200(145)(a), Florida Administrative Code (F.A.C.). An MSDS sheet is attached. The on-line compressor cleaning results in the decomposition of the solvents and surfactants to carbon dioxide and water due to the high temperatures in the combustion zone of the turbine. The on-line compressor cleaning is performed approximately once every 4 days. This frequency results in the use of about 821 gallons of cleaner per year.

- 4. Segment (Process/Fuel) Information -- The 0.987 MMcf/hr of gas represents the maximum heat input at 20°F inlet turbine temperature. Since a turbine's output is inversely proportional to turbine inlet temperature, the maximum heat input occurs at the lowest temperature. However, ISO conditions (59°F and 60 percent relatively humidity) is the common benchmark for turbine performance, the basis of the New Source Performance Standards (NSPS) for Stationary Gas Turbines (40 CFR Part 60, Subpart GG) and the basis of the construction permit limits. A performance summary from 20°F to 102°F was included in the construction permit application. Attachment OR-E01-L12 includes a table from the original application that lists engine performance characteristics including fuel usage (see attached). The maximum heat input of 0.987 MMcf/hr was used to calculate a maximum annual usage at 20°F, a condition unlikely in Florida. The actual permit limit is based on ISO conditions and limits the heat input to 856.9 MMBtu/hr; this is equivalent to 0.9058 MMcf/hr and 7,935 MMcf/year. It should be noted that there is no inherent fuel usage limit for the gas turbine in the construction permit.
- 5. Million Btu per SCC Unit -- The 946 MMBtu/MMcf (i.e., 946 Btu/cf) represents the lower heating value (LHV) of the natural gas. This heating value was the basis of the construction permit application as listed on Page 5 of 12 of the application form (see attached).
- 6. Emission Unit Pollutant Detail Information SO₂ -- The 2.82 lb/hr was based on a maximum sulfur content of 1 grain/100 cf of natural gas. This is based on an evaluation of sulfur contents of natural gas received in Florida over the last 6 to 7 years. The calculation was provided in Field 8 of the Title V application (see attached page). The reference to "165" may be an error in the database and the calculation may have been inadvertently changed in the database at some point.
- 7. Emission Unit Pollutant Detail Information PM The calculation presented in Field 8 using the 934 MMBtu/hr was based on the 20°F operating condition. Because 9 lb/hr and 36.4 ton/year is based on a federally enforceable construction limit (Specific Condition 4 of the construction permit) and the "0" was checked in Field 7, the calculation shown was not necessary. Moreover, using the ISO heat input of 856.9 MMBtu/hr produces the same emissions rate when rounded-off. Since there may be confusion, this page was revised to include both calculations (see attached).

Duct Burner System (Emission Unit #2)

8. Segment (Process/Fuel) Information -- The Maximum Annual Rate listed in Field 5 should be 450,000 as provided for in Specific Condition 3 of the construction permit application. This page of the application form has been corrected and is attached.

14434Y/F1/WP/07

Mr. Clair H. Fancy, P.E. Page 3 April 9, 1997

Miscellaneous

9. Trivial and Unregulated Sources -- The original EPA trivial activities list and the trivial activities list originally developed by the Department included freshwater cooling towers. Since the final EPA trivial list does not include cooling towers, the cooling towers are being requested to be classified as an exempt emission unit by Rule 62-213.430(6) F.A.C. Attachment OR-E03-B6 has been corrected. The maximum potential emission for the cooling towers are 2.741 tons/year of PM/PM10. The calculation is as follows:

2,500 milligram/liter (mg/L) maximum total dissolved solids 25,000 gallons/minute circulating water rate 0.002% of circulating water rate drift; 0.00002 of circulating water rate

 $2,500 \text{ mg/L} \times 3.785 \text{ L/gallon} \times \text{g/1,000 mg} \times \text{lb/453.6 g} \times 25,000 \text{ gal/min} \times 0.00002 \times 60 \text{ min/hr} = 0.626 \text{ lb/hr} \text{ or } 2.741 \text{ tons/year}$

10. Trivial and Unregulated Sources -- The emergency generator is a 150 kW unit fired with natural gas at a rate of 37 cf/min. Currently, the unit is tested quarterly for about 30 minutes and during planned outages for about 1 hour as a full-load test. At other times, the emergency generator is only used when electric power is lost from both the plant and the interconnection with Florida Power Corporation. This unit should be classified as an unregulated unit and would be operated under the general exemption in Rule 62-210.300(3)(a)20. F.A.C. of 4.4 MMcf/year of natural gas.

Also attached is the certification pages for the Responsible Official and Professional Engineer that was requested with this information. Please call if you have any further questions.

Sincerely,

Memal 7. Kuly Kennard F. Kosky, P.E.

Principal

KFK/lcb

cc: Larry Adkins, Orlando CoGen Limited, L.P. Tom Hess, Orlando CoGen Limited, L.P. File (2)