

I N T E R O F F I C E M E M O R A N D U M

Date: 26-Jul-1994 06:32pm EST
From: Mike Harley TAL
HARLEY M
Dept: Air Resources Management
Tel No: 904/488-1344
SUNCOM:

TO: See Below

Subject: ORLANDO COGEN

Pursuant to your request, Mr. Kosky's latest request concerning Orlando Cogen has been reviewed. The comments are as follows:

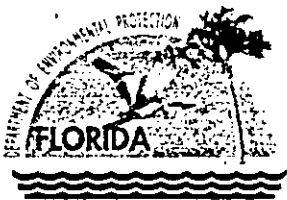
1. Pursuant to Rules 62-296.100(168), F.A.C., 62-297.100(123), F.A.C., etc., and 40 CFR 60.2, the combustion turbine and the heat recovery steam generator are separate sources and should be subject to independent emission limitations. Each source of air pollutions should be subject to an independent emission limiting standard.
2. Since the combustion turbine and the heat recovery steam generator are, by rule, two separate sources the request for a combined emission limit is actually a request for a "bubble." The State of Florida has neither adopted nor received federal approval of a generic rule for the review and approval of "bubbles." Therefore, each "bubble" must be adopted as a SIP revision and submitted to EPA for approval on a case-by-case basis regardless of whether the pollutants are regulated on the basis of NSPS, PSD, NA/NSR, or the SIP.
3. The statement that EPA Method 5 particulate testing cannot be performed at the turbine exit due to the difficulty in measuring flow rate is not consistent with information concerning particulate testing of other combustion turbines. Other combustion turbines in Florida have been successfully compliance tested using EPA Method 5--these tests have included successful EPA Method 2 flow measurements. Some of the affected sources are owned by Florida Power and the testing was conducted by Cubix.
4. The request to include PM/PM10 among the pollutants subject to a combined standard is patently unacceptable because the NSPS for Subpart Db sources include emission limiting standards for affected facilities which burn coal, oil, wood, or municipal waste. If neither of the affected sources burn coal, oil, wood, or municipal waste, it may be more appropriate to delete the particulate testing requirement altogether.

5. The application of a combined standard would impair the Department's ability to assign a violation to the specific source of excess emissions.
6. Regardless of the pollutants involved, the creation of a combined standard for a combined cycle system consisting of two NSPS sources through the permitting process would violate federal requirements and establish a precedent that would weaken our position concerning the measurement of the NSPS pollutants.
7. Mr. Kosky needs to specifically identify the specific sources that have already received combined emission limits, so that we can audit the permits to ensure that the issuance neither involved violations of state standards nor federal regulations.

This proposal appears to be based on the erroneous assumption that the Department is in the business of permitting smoke stacks. In fact, the Department is in the business of permitting -- AIR POLLUTION SOURCES. The proposal is contrary to the past practices of the Department. It has the potential to undermine the Department's position with respect to other air pollution sources such as coating lines, printing facilities, kraft pulp mills, and certain power boilers. I recommend rejection of Mr. Kosky's latest proposal.

Distribution:

TO: Syed Arif	TAL	(ARIF_S)
CC: Clair Fancy	TAL	(FANCY_C)
CC: John Brown	TAL	(BROWN_J)
CC: Bruce Mitchell	TAL	(MITCHELL_B)
CC: Martin Costello	TAL	(COSTELLO_M)
CC: Ramesh Menon	TAL	(MENON_R)



Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

July 8, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kennard F. Kosky, P.E.
KBN Engineering & Applied Sciences, Inc.
1034 N.W. 57th Street
Gainesville, Florida 32605

Re: Amendment of Construction Permit
Orlando CoGen (I), Inc.
AC48-206720; PSD-FL-184

Dear Mr. Kosky:

The Department is in receipt of your letter dated June 28, 1994, requesting reconsideration of the amendment request for the above referenced source. As stated in our letter of June 17, 1994, the Department concurs with EPA's assessment of the sources compliance with the NSPS requirements of 40 CFR 60 Subpart Db, specifically the testing requirements as outlined in 40 CFR 60.46b(f). A copy of EPA's letter is also attached for your reference.

40 CFR 60.8(a) not only requires the owner or operator to perform an initial compliance test; but, it also requires the owner to perform testing at such other times as directed by the Administrator. The state requirement to conduct annual testing can be found in 17-297.340(1)(d), F.A.C. Also, specific condition 7 of the above referenced permit requires that an initial and subsequent annual compliance tests shall be conducted to demonstrate compliance.

If the source wishes to deviate from the testing requirements of 40 CFR 60 Subpart Db, then it must request approval of alternate standards and procedures as outlined in 17-297.620 F.A.C. from the Department.

The Department will issue an Intent to Deny if it does not receive a request from the source to withdraw the amendment request. However, by copy of this letter we are extending the date until July 22, 1994.

Mr. Kennard F. Kosky, P.E.
July 8, 1994
Page Two

If there are any questions on the above, please call Syed Arif at (904) 488-1344, or write to me at the above address.

Sincerely,



C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/SA/bjb

Attachment

cc: T. Hess, Orlando Cogen (I), Inc.
J. Harper, EPA
C. Collins, CFD
D. Nester, Orange County
M. Harley, BAR
S. Arif, BAR

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3. Article Addressed to: Mr. Kennard F. Kosdy, P.E. KBN Engineering & Applied Sciences 1034 NW 57th Street Gainesville, FL 32605	4a. Article Number P 872 563 641	4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature (Addressee) <i>M. Kosdy</i> 6. Signature (Agent)	7. Date of Delivery 774	
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PS Form 3800, JUNE 1991

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

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4APT-AEB

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

JUN 06 1994

Bureau of
Air Regulation

SUBJECT: Construction Permit Amendment for Orlando CoGen
Limited, L.P.

Dear Mr. Fancy:

This letter is in response to your March 1, 1994, request for clarification regarding the U.S. Environmental Protection Agency (EPA) position on a permit amendment and alternative NO_x compliance demonstration procedure proposed for a gas turbine and a duct burner in a combined cycle system operated by the referenced company. After reviewing the proposed permit amendment and alternative testing procedure, we have determined that we would be opposed to approval of either proposal.

Because of concerns about the difficulty associated with testing the duct burners in the combined cycle system at Orlando CoGen, KBN Engineering and Applied Sciences, Inc. (KBN) proposed revisions to NO_x emission limits and compliance testing procedures for the combined cycle system. The emission standard revision involved establishing two emission limits--a gas turbine emission limit and a combined limit for the gas turbine and duct burner operating together. Under this proposal, there would not be a separate limit for the duct burners, and the basis for this proposal was that the duct burners will never be operated alone.

After considering the KBN proposal for emission standard revisions, we have determined that it is not acceptable because one of the applicable regulations for the duct burners, 40 C.F.R. Part 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units), contains a separate NO_x emission standard for duct burners in combined cycle systems. Since Subpart Db contains a NO_x emission limit specifically for duct burners, establishing a combined NO_x emission limit for the gas turbine and duct burner would not relieve Orlando CoGen of the obligation to demonstrate compliance with the applicable duct burner NO_x emission limit in Subpart Db.

The second proposal in the request from KBN involves compliance demonstration procedures for the duct burner. According to Subpart Db, the NO_x emission rate for duct burners is determined by measuring the emission rate at both the inlet

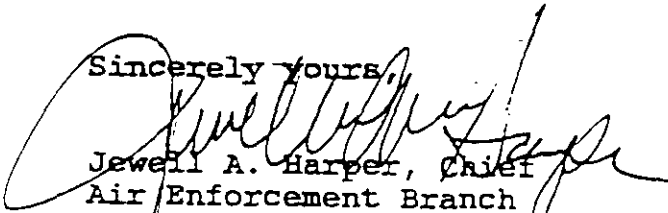
and outlet of the duct burner. As an alternative to performing the test in accordance with Subpart Db, KBN proposed to determine the duct burner emission rate by performing all testing downstream of the duct burner and operating the combined cycle systems in two modes--one with only the turbine running and one with both the turbine and the duct burner operating. Under this scenario, the duct burner emission rate would be calculated by subtracting the turbine emission rate from the emission rate with both facilities operating. In support of this proposed alternative, KBN referenced a previous approval of similar procedures for combined cycle testing that was conducted at the Florida Power and Light (FP&L) Putnam Plant.

After considering the testing alternative proposed by KBN, we do not believe that it should be approved either. The basis for this position is that we are aware of other sources where similar procedures have yielded suspect results (i.e., NO_x mass emission rates with the gas turbine and duct burner operating together were lower than they were with only the turbine operating). The reason for these suspect results is uncertain, but they may have been caused by the inability to achieve and maintain identical operating conditions for the turbine during both sets of tests.

Although procedures similar to those proposed by KBN were approved for the FP&L Putnam Plant, we do not consider this prior approval relevant with respect to Orlando CoGen because of differences in the two facilities. The primary justification for approving alternative testing procedures at the Putnam Plant was that these units were existing units that became subject to Subpart Db due to reconstruction. Although 40 C.F.R. §60.8(e) requires that a source owner or operator provide adequate testing and sampling locations, we did not necessarily consider these requirements applicable to FP&L since the Putnam units were not subject to Subpart Db at the time the units were originally constructed. Since the combined cycle system at Orlando CoGen is new, testing requirements should have been considered during the design of the facility, and failure to take these testing requirements into account during design does not constitute sufficient grounds for approval of an alternative test method.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of my staff at 404/347-5014.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: Michael Harley, FL DEP



PATTY - FILE

SYED. E. HALLEY
HAWK

RECEIVED COPIES

June 28, 1994

JUL 01 1994

Bureau of
Air Regulation

Mr. Preston Lewis
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Orlando CoGeneration, Inc.
Amendment to Construction Permit AC48-206720

Dear Preston:

This letter is a following-up of our conversation last week, and provides clarification on the amendment request.

1. Orlando CoGen (I), Inc. has offered to perform initial performance testing of the duct burners (DB) using EPA Method 20 with sampling locations at the turbine exhaust and stack.
2. Such testing would be in conformance with Subpart Db and Method 20. The cost for this testing is estimated to be about \$70,000. The applicable standard is 0.2 lb NO_x per million BTU for the DB.
3. The amendment request deals with determining compliance after the initial performance tests.
4. For this purpose, separate combustion turbines (CT) and CT/DB limits are requested.
5. No change in the emissions are proposed, just adding CT/DB emissions together.
6. This request is appropriate because:
 - a. DB limit is 1/2 of NSPS limit; therefore meeting CT/DB limit provides reasonable assurance of meeting DB limits.
 - b. DB cannot be operated without CT.
 - c. Sampling errors could still be introduced by subtraction using simultaneous testing due to the large flow rates involved.
 - d. Simultaneous testing is very costly and difficult to conduct regardless of the plant configuration.
 - e. CEM data are more appropriately compared to CT and CT/DB limits and not valid for separate DB limits.

91134A1/18

KBN ENGINEERING AND APPLIED SCIENCES, INC.

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June 28, 1994

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7. We believe the Department has the authority to issue such an amendment since the BACT limits are substantially lower than NSPS limits and there is no specific NSPS requirement to perform simultaneous testing on an annual basis. Moreover, it is not consistent with the monitoring method, i.e. CEM.

I believe the amendment request is a practical solution to a complex issue and will provide both the Department and Orlando Cogen (I), Inc., a straight forward approach of demonstrating and maintaining compliance (i.e., emissions from the stack). It may be appropriate to meet on this issue the week of July 5-8. I'll call you later this week.

Sincerely,

Handwritten signature of Kennard F. Kosky

Kennard F. Kosky, P.E.
President

KFK/mlb

cc: Tom Hess, Orlando CoGen (I), Inc.