



RECEIVED

JUL 26 1991

July 24, 1991

Division of Air
Resources Management

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Manatee County A.P. - Tropicana Products Inc.
AC 41-157745; Gas Turbine & HRSG and
AC 41-159485; Auxiliary Boiler

Dear Clair:

This correspondence provides clarifications requested in your letter dated June 12, 1991, regarding the subject sources. I met with Mr. Harley on July 15, 1991, to discuss the points he raised. The clarifications are provided in the order of Mr. Harley's memorandum of June 4, 1991.

1. *Heat input in gas turbine (GT) during compliance testing* - My letter dated March 13, 1991, requested an addition to the permit to allow a comparison of the heat input rate during testing with the rated capacity of the GT based on ambient temperature. While appropriate for most sources, the Department's policy to test between 90 and 100 percent of permitted capacity is not appropriate for GTs, due to the constraints placed by ambient temperature on maximum heat input that can be achieved. It should be noted that the construction permit did not specifically address the need to test between 90 and 100 percent of maximum heat input, nor do the Department's regulations address this requirement.

For the testing performed last September, the GT was 99.9 and 95.5 percent of the rated summer heat input with and without duct firing, respectively.

For GTs, there is a practical reason for allowing the comparison of heat rate during testing with ambient conditions. In order to obtain maximum heat input, GTs would have to be tested during the coldest time of the year which usually occur for short durations, i.e., about one week's time. If all GTs in the state were required to test during this period, there would be insufficient stack test teams to provide this service. Coupled with the uncertainty of when cold periods may occur in Florida, the requirement to test at 90 to 100 percent of rated capacity is impractical.

For these reasons, it is requested that the wording on page 2 of my March 13th letter be added to Specific Condition 2.

2. *Requested emission changes* - The requested emission changes in my letter of March 13, 1991 were specific to PM/PM10 for emissions from the GT and sulfur dioxide emissions from the GT and auxiliary boiler; both requested changes were applicable to firing natural gas firing only. This request would not



affect the NSPS requirements of the duct burner and auxiliary boiler which are specified in 40 CFR Part 60, Subpart Db. These NSPS, as applicable for natural gas firing, only require specific limitations for NOx emissions. No change in the NOx emission requirements is requested.

The emission changes requested for PM/PM10 and SO₂ would not affect the PSD applicability for these pollutants as discussed in my March 13th letter. Table 1 summarizes the emissions authorized in the construction permit and those requested. As can be noted, emissions of PM/PM10 or SO₂ will not significantly increase. The proposed changes would be incorporated into the construction permit which is federally enforceable.

3. *Particulate matter retest* - Tropicana Products Inc. will perform another "initial" PM compliance test for the GT when firing natural gas. As indicated in my letter of March 13th, a change in Specific Condition 5a to allow either EPA Method 5 or 17 was requested.

4. *Heat input for the auxiliary boiler* - As discussed in my March 13th letter, there was only a slight difference between the heat input using higher heating value of natural gas and the permitted heat input (i.e., 0.8 percent). Because calculated heat input can vary, a maximum heat input of 160 million Btu/hr was requested. It should be noted that the emissions, in either lb/hr or tons/yr, would remain as permitted except as provided in Table 1.

5. *PM/PM10 testing methods* - This comment confirms the request for using either EPA Method 5 or 17 for PM. For determining compliance with PM10, the results from the PM tests would conservatively be assumed to be PM10.

I hope this information clarifies the requested changes. Please call if there are any questions concerning this response.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Kennard F. Kosky'.

Kennard F. Kosky, P.E.
President and Principal Engineer

cc: Jeff Johns, Tropicana
Gordan Hartman, Tropicana
J. Harry Kerns, P.E. FDER Southwest District Office

Table 1. Tropicana Products Inc.: Comparison of Permitted and Requested Changes

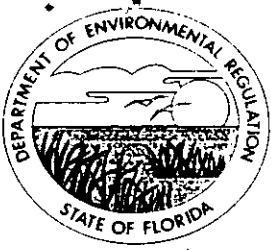
Pollutant and Source	Permitted Emissions (tons/yr)	Requested Emissions (tons/yr)
Particulate Matter (PM):		
Gas Turbine	6.6	8.76 ^a
HRSG	0.95	0.95
Auxiliary Boiler	7.03	7.03
Total:	14.58	16.74
Emissions Offsets	-1.2	-1.2
Net Emissions Increase	13.38	15.54
Significant Emission Rate	25	25
PM10		
Gas Turbine	6.6	8.76 ^a
HRSG	0.95	0.95
Auxiliary Boiler	4.2	4.2
Total:	11.75	13.91
Emissions Offsets	-1.2	-1.2
Net Emissions Increase	10.55	12.71
Significant Emission Rate	15	15
SO₂		
Gas Turbine	1.07	2.63 ^b
HRSG	0.23	0.66 ^c
Auxiliary Boiler	34.33	34.81 ^d
Total:	35.63	38.1
Emissions Offsets	-0.1	-0.1
Net Emissions Increase	35.53	38
Significant Emission Rate	40	40

^a See page 2 of March 13, 1991, letter, i.e., 2 lb/hr and 8.76 tons/yr maximum.

^b See page 3 of March 13, 1991, letter, i.e., 1.2 lb/hr maximum and 0.6 lb/yr average (2.63 tons/yr).

^c See page 3 of March 13, 1991, letter, i.e., 0.29 lb/hr maximum and 0.15 lb/yr average (0.66 tons/yr).

^d No change in oil firing (47.2 lb/hr and 34 tons/yr); See page 3 of March 13, 1991, letter, i.e., 0.44 lb/hr maximum and 0.22 lb/yr average (0.97 tons/yr at 8,760 hours per year or 0.81 tons/yr for 7,320 hours/yr).



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

June 12, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: Manatee County - A.P.
Tropicana Products, Inc.
AC 41-157745 - Gas Turbine & HRSG
AC 41-159485 - Auxiliary Boiler

Dear Mr. Kosky:

The Department is in receipt of your letter dated March 13 requesting modification to the specific conditions of the above referenced projects to allow an increase in the PM/PM₁₀ and SO₂ emissions, along with a request to allow both EPA Method 5 and 17 for determining compliance with PM/PM₁₀ emissions and to modify the heat input testing requirements.

Before the Department can make a final decision on your requests, please clarify/satisfy some of the concerns raised by our Compliance Section staff (a copy of the memo is attached).

This letter must be attached to each permit and shall become a part of the permits.

Sincerely,

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

CHF/MB/plm

Attachment

c: Gordan Hartman, TPI
J. Harry Kerns, P.E., SWD

SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3 and 4a & b. • Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece next to the article number.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Mr. Kennard F. Kosky, P.E. KBN Engineering & Applied Sciences 1034 N.W. 57th Street Gainesville, Florida 32605		4a. Article Number P 832 539 846	
		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	
		7. Date of Delivery 6-17-91	
5. Signature (Addressee) 		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent) <i>Mary L. Burke</i>			
PS Form 3841, October 1990 U.S. GPO: 1990-273-861 DOMESTIC RETURN RECEIPT			

P 832 539 846

Certified Mail Receipt
 No Insurance Coverage Provided
 Do not use for International Mail
 (See Reverse)

UNITED STATES POSTAL SERVICE

Sent to	
Mr. Kennard F. Kosky, KBN	
Street & No.	
1034 N.W. 57th Street	
P.O., State & ZIP Code	
Gainesville, FL 32605	
Postage	
Certified Fee	\$
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	
Mailed: 6-14-91	
Permit: AC 41-157745	
AC 41-159485	

PS Form 3800, June 1990

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Griscom Bethe, III
Impicamas Products, Inc
P.O. Box 338
Bradenton, FL 33506

4. Article Number:
P 938 762 869

Type of Service:
☒ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED

5. Signature of Addressee:
X *[Signature]*

6. Signature of Agent:
X *[Signature]*

7. Date of Delivery:
3/12/90

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 • U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 938 762 869

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

PS Form 3800, June 1985

Sent to Griscom Bethe, III	
Street and No Impicamas Prod. Inc - P.O. Box 338	
P.O., State and ZIP Code Bradenton, FL 33506	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date 2-7-90	
Pmt #s AC 41-157745 159485	

Attachment 10



January 23, 1990
90009

RECEIVED

Mr. Clair H. Fancy, P.E.
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

JAN 24 1990

DER=BAQM

Subject: Tropicana Products, Inc. Cogeneration Facility
Construction Permits AC 41-157745, AC 41-159485, and
PSD-FL-136

Dear Clair:

This correspondence is submitted on behalf of Tropicana Products, Inc. to request a change in the compliance test method for Volatile Organic Compounds (VOCs) required by the above referenced construction permits. The designated test method for VOCs in these permits is Method 25. This method is referenced in Specific Condition number 5 in permit AC 41-157745 for the gas turbine/heat recovery steam generator (GT/HRSG) and number 6 in permit AC 41-159485 for the auxiliary boiler.

As codified in 40 Code of Federal Regulations (CFR) Part 60 Appendix A, the minimum detectable limit for Method 25 is 50 ppm (see attached reference). The permitted VOC emission rates for the GT/HRSG and auxiliary boiler are based on 7 ppm and 25 ppm, respectively. Table 2-4 on page 2-8 and Appendix C of air permit application indicating basis of emissions calculations are attached. Because Method 25 is not appropriate at concentrations below 50 ppm, it is requested that Method 25A be approved by the FDER for the compliance testing of these sources. This method can measure VOC concentrations below 1 ppm and is appropriate for combustion sources which would contain lighter molecular weight VOCs.

The compliance testing for the GT/HRSG and auxiliary boiler is scheduled to be performed in March, 1990. As a result an expeditious response would be greatly appreciated. Please call me if you have any questions.

Sincerely,

Kennard F. Kosky, P.E.
Principal Engineer

cc: John Webb, Tropicana Products, Inc.

enclosures

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189



RECEIVED

November 29, 1988

NOV 30 1988

Mr. Clair H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DER-BAQM

Subject: Tropicana Products, Inc. Cogeneration Project

Dear Clair:

Please find attached 5 original permit applications and support information for the Tropicana Cogeneration Project. The project consists of two sources for which permit applications have been completed: gas turbine/heat recovery steam generator, and auxiliary boiler.

Attached to this letter is the \$5,000.00 permit application fee as required by 17-4.050(4). This fee was considered appropriate since the GT/HRSRG and auxiliary boiler together form the project and thus one PSD source. In addition, they will not be operated together under normal operating conditions. I discussed this with Bill Thomas and he considered this a reasonable interpretation of the rule.

Please contact me if you or your staff have any questions or additional information is required.

Sincerely,

Kennard F. Kosky, P.E.
Principal Engineer

KFK:dk

enclosures

cc: Gordon D. Hartman, Tropicana Products, Inc.
Scobee Woolwine, Tropicana Products, Inc.
William E. Sedlock, Monsanto Enviro-Chem Systems, Inc.
Griscom Bettel, III, Tropicana Products, Inc.
Ross McVoy, Esq., Parker, Skelding, McVoy & Labasky

Copied: Barry Andrews
Don Rogers
Bill Thomas, SW Dist.
Jayne Aronson, EPA

KBN ENGINEERING AND APPLIED SCIENCES, INC.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

4APT/APB-aes

JUN 29 1989

Mr. C. H. Fancy, P.E.,
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
JUL 5 1989
DER-BAQM

Re: Tropicana Products, Inc. (PSD-FL-136)

Dear Mr. Fancy:

This is to acknowledge receipt of your final permit for the above referenced facility's proposed cogeneration project, dated May 31, 1989. As discussed between Mr. Barry Andrews of your staff and Gregg Worley of my staff on June 23, 1989, we have the following comments to offer.

We concur with the best available control technology (BACT) determination made by your staff. However, there is a point of contention which was made in my letter to you, dated April 20, 1989, in regards to your preliminary determination. This point is that the use of \$1,000 per ton of pollutant removed as a screening value in making control technology determinations is unacceptable. It is important in making these determinations that the reviewing agency consider costs incurred by similar sources in applying a certain control technology. For example, municipal waste combustors (MWC) have incurred costs in the range of \$4,000 per ton of NO_x removed for the application of thermal deNO_x. Florida's screening policy of a \$1,000 per ton, though, would preclude a determination that deNO_x would be BACT for a MWC in Florida.

In addition, the \$1,000 per ton is based on what is considered reasonable by the NSPS. As you know, the NSPS level is the minimum level for BACT. It seems obvious that a PSD source may pay more to control its emissions below the level of the NSPS. Also, as a matter of note, the dollar value expressed in any particular background information document (BID) for a NSPS is not necessarily equivalent to present value dollars. In any case, it is not acceptable to use this screening value as a blanket cutpoint for all industries.

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

AIR-4

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

Thank you for allowing us to review this package and for the effort put forth by your staff in resolving the issues raised during our mutual review. If you have any questions or comments, please contact Gregg Worley of my staff at (404) 347-2864.

Sincerely yours,

Bruce P. Miller

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

cc: Mr. Griscom Bettel, III
Tropicana Products, Inc.
P. O. Box 338
Bradenton, Florida 33506

*copied: P. Raval
D. Andrews
D. Rogers
B. Thomas, SW Dir.
CHF/ET*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30366

RECEIVED

JUN 9 1989

DER-BAQM

4APT/APB-aes

JUN 07 1989

Mr. C.H. Fancy, P.E., Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Tropicana Products Inc. (PSD-FL-136)

Dear Mr. Fancy:

We received the additional information from KBN Engineering dated May 17, 1989, concerning the feasibility of installing add-on NO_x controls for the above referenced facility. As discussed between Mr. X Barry Andrews of your staff and Gregg Worley of my staff on May 23, 1989, we have the following comments.

BACT Determination

The additional information submitted by the applicant gave adequate justification that a NO_x limit of 42 ppm for the gas turbine with steam injection would represent BACT for the specific case of Tropicana. The applicant demonstrated that steam injection was incorporated into the turbine design primarily for the increased power output. Consequently, the cost for the addition of SCR (over \$4,000 per ton of NO_x removed) in conjunction with the associated environmental benefit did not appear reasonable.

It must be noted that, in general, EPA considers steam and water injection to be a NO_x control technology with increased power as a positive by-product^x and an increased heat penalty as a negative by-product under normal turbine design conditions. In some instances, however, wet injection may be incorporated into the original turbine design specifically for the additional power output with reduced NO_x emissions as a by-product.

NSPS

As stated in the letter of April 20, 1989, the proposed gas turbine is subject to 40 CFR Part 60, Subpart GG. Although the turbine is exempted from the NO_x standards of Section 60.332, the turbine is subject to the performance^x and testing requirements of the Subpart.

In summary, we will concur with Tropicana's assertion and Florida DER's preliminary determination that a NO_x limit of 42 ppm represents BACT for this proposed turbine. Thank you for the effort your staff, along with

file copy

DIVISION OF AIR RESOURCE MANAGEMENT

(For Internal Use Only)

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Chair 6/13

Initial

Date

2

Bill Howard

Initial

Date

3

Patty (file)

Initial

Date

4

Initial

Date

REMARKS:

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

FROM:

DATE

6-12

PHONE

Tropicana, have put forth in resolving these issues. If you have any questions on these comments, please contact Gregg Worley of my staff at (404) 347-2864.

Sincerely yours,

Wayne J. Carlson / for

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

cc: Griscom Bettie, III, Vice President
Tropicana Products, Inc.
P.O. Box 338
Bradenton, Florida 33506

*copied: P. Raval
C. Andrews
B. Thomas, SW Dist.*