



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

October 11, 2000

Mr. Gregg Worley, Chief
Air, Radiation Technology Branch
Preconstruction/HAP Section
U.S. EPA – Region 4
61 Forsyth Street
Atlanta, Georgia 30303

RE: Tropicana Products, Inc.
Ft. Pierce Citrus Processing Plant
PSD-FL-303
Facility ID No. 1110004-003-AC

Dear Mr. Worley:

Enclosed for your review and comment is an application for construction of a PSD source. The applicant, Tropicana Products, Inc., proposes to add sixteen extractors to its existing Ft. Pierce Processing Plant in St. Lucie County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/922-6979. If you have any questions, please contact the project engineer, Joe Kahn at 850/921-9519.

Sincerely,

for Al Linero, P.E.
Administrator
New Source Review Section

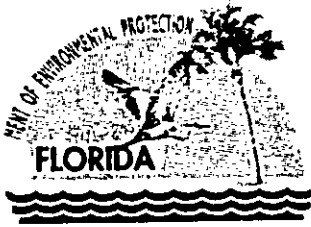
AAL/jka

Enclosures

cc: Joe Kahn

"More Protection, Less Process"

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

David B. Struhs
Secretary

October 11, 2000

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS – Air Quality Division
Post Office Box 25287
Denver, Colorado 80225

RE: Tropicana Products, Inc.
Ft. Pierce Citrus Processing Plant
PSD-FL-303
Facility ID No. 1110004-003-AC

Dear Mr. Bunyak:

Enclosed for your review and comment is an application for construction of a PSD source. The applicant, Tropicana Products, Inc., proposes to add sixteen extractors to its existing Ft. Pierce Processing Plant in St. Lucie County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/922-6979. If you have any questions, please contact the project engineer, Joe Kahn at 850/921-9519.

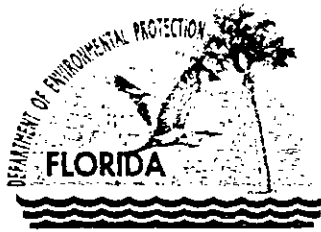
Sincerely,

AL Al Linero, P.E.
Administrator
New Source Review Section

AAL/jka

Enclosures

cc: Joe Kahn



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Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

November 8, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Richard Coyle
Director of Operations
Tropicana Products, Inc.
6500 Glades Cutoff Road
Ft. Pierce, Florida 34981

Re: Request for Additional Information
DEP File No. 1110004-003-AC, PSD-FL-303
Addition of Sixteen Juice Extractors

Dear Mr. Coyle:

On October 9, 2000 the Department received your application and complete fee for an air construction permit to add 16 juice extractors to the existing Tropicana Products, Inc., Ft. Pierce plant. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Please provide an analysis of increment consumption for SO₂, NO₂ and PM₁₀. Note that even if the facility existed prior to the baseline dates, an analysis of increment consumption is still required to account for the increases in emissions and additional emission sources since the baseline dates. In addition baseline emissions (1974/1975 for PM₁₀ and SO₂, and 1987/1988 for NO₂) need to be defined by the historic actual operation of the facility to include the actual length of the processing season for those years. Alternatively, show why such an analysis is not required by demonstrating that no emissions increases have occurred, no emission sources have been added since the baseline dates, and that the actual length of the processing season has not changed.
2. The air quality impact analysis did not include a significant impacts analysis for SO₂, PM₁₀, NO₂ or CO. A significant impact analysis is required to determine the radius of significant impact. This radius is then used to determine the extent of the modeling area for the air quality impact analysis. The significant impact analysis consists of current actual emissions versus projected allowable emissions. According to the information submitted with the application, the 1999 to 2000 season is used as the basis of the actual emissions from the facility for PSD purposes. The information provided indicates only natural gas was burned during this period. Current actual emissions for all pollutants should be based on natural gas burning and not fuel oil burning, since no fuel oil was burned during this period.
3. No summary table showing NO₂ and CO facilities considered for inclusion in the AAQS was provided. Also the modeling results submitted indicate that no sources other than Tropicana sources

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Mr. Richard Coyle	
Postage \$	Tropicana
Certified Fee	Postmark here
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Name (Please Print Clearly) (to be completed by mailer) Mr. Richard Coyle	
Street, Apt. No., or P.O. Box No. 6500 Glades Cutoff Road	
City, State, ZIP Fort Pierce, FL 34981	
PS Form 3800, July 1999 See Reverse for Instructions	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Received by (Please Print Clearly) B. Date of Delivery 11/10/00</p> <p>C. Signature X Robert Coyle <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to: Richard Coyle Director of Operations Tropicana Products, Inc. 6500 Glades Cutoff Road Fort Pierce, FL 34981</p>	<p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>
<p>2. Article Number (Copy from service label) 7099 3400 0000 1452 9849</p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>

were included in the NO₂ and CO AAQS modeling. If the significant impact analyses required in item 2 show significant impacts, then a full impact analysis is required to include other modeled sources in the vicinity of the facility.

4. No PSD Class I analysis which considers projected impacts from this project on the Everglades National Park (ENP) was included. Even though the National Park Service is not requiring any regional haze or PSD Class I increment analysis for this project, a section in the application addressing the potential air quality impacts or lack of impacts on the ENP must be included.
5. The background air quality concentrations used in the air dispersion modeling as shown in Table 4-1 should be based on highest second high and highest annual concentration for two years and not the average of the highest-second high or the annual concentration.
6. There appear to be a few typographical errors in the report. It seems that the entry in Table 2-4 for the future potential PM emissions in tons/year for oil should be 93.2, and the entry for the total should be 198.0, given the assumptions of the respective footnotes. The entry for the difference on that table would thus be 181.2, which would also replace the entry on Table 2-8 for the peel dryers, and make the total PM increase on Table 2-8 217.1 tons/year. Also, the emissions column on Table 2-9 is listed as "Natural Gas", but the entries are for fuel oil firing emissions, with the exception of the package boiler which only fires natural gas. And, the Table 3-3 entries for VOCs and sulfuric acid mist should be listed as "Yes" for PSD review. Please confirm that our understanding is correct. If so, there is no need to provide updated pages for the report.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call me at 850/921-9519. Matters regarding modeling issues should be directed to Cleve Holladay (meteorologist) at 850/921-8986.

Sincerely,



Joseph Kahn, P.E.

New Source Review Section

/jk

cc: Mr. Gregg Worley, EPA
Mr. John Bunyak, NPS
Mr. Isidore Goldman, P.E., DEP SE District
Mr. Ken Kosky, P.E., Golder Associates

Golder Associates Inc.

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



December 4, 2000

9837588

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

RECEIVED

DEC 06 2000

BUREAU OF AIR REGULATION

Attention: Mr. Joseph Kahn, P.E., New Source Review Section

RE: REQUEST FOR ADDITIONAL INFORMATION
TROPICANA PRODUCTS, INC.
DEP FILE NO. 1110004-003-AC (PSD-FL-303)

Dear Joe:

This correspondence provides information requested in your November 8, 2000 letter regarding the addition of 16 fruit extractors for the Tropicana Products, Inc. The information is being supplied in the same format requested.

1. **Analysis of PSD Increment Consumption for SO₂, NO₂, and PM₁₀:** An analysis of the PSD increment consumption has been performed based on the requirements of Rule 62-212.400(4)(b)3. for the determination of baseline emissions. In determining baseline emissions it is important to review the regulatory status of each emission unit at the facility. For the Tropicana Fort Pierce Plant, there are six emission units identified in the Title V Permit. These emission units, which were discussed in the application for the fruit extractors, are:

- Emission Unit 001 – No. 1 Peel Dryer with Waste Heat Evaporator (AO 56-1815611)
- Emission Unit 002 – No. 1 Process Steam Generator (AO 56-195346)
- Emission Unit 003 – No. 2 Process Steam Generator (AO 56-195346)
- Emission Unit 004 – No. 2 Peel Dryer with Waste Heat Evaporator (AO 56-211342)
- Emission Unit 006 – Steam Package Boiler (1110004-001-AC)
- Emission Unit 007 – Pellet Mill and Coolers

Emission Unit 001, No. 1 Peel Dryer, received a construction permit on February 8, 1973 and operated prior to both the major and minor baseline dates. Emission Units 002 and 003 received a construction permits on March 30, 1973. The facility also constructed the pellet mill and cooler (Emission Unit 007) associated with the dryer but was not specifically permitted by the Department until the Title V Permit. Until the Title V permitting process, it was the policy of the Department not to permit citrus coolers. Therefore, Emission Units 001, 002, 003 and 007 were in operation prior to the major baseline date of January 6, 1975 for PM₁₀ and SO₂ and February 8, 1988 for NO₂.

Therefore, these units are included in the baseline for SO₂, NO₂ and PM₁₀, and a determination of baseline emissions follows Rules 62-212.400(4)(b)3. a. (i) and (ii).

Emission Unit 004, No. 2 Peel Dryer, received a construction permit on October 1, 1976. This unit operated prior to the minor source baseline date of February 8, 1978 for PM and SO₂, but after the major baseline date for these pollutants. The potential emissions for this unit would have triggered PSD review as a modification to a major facility. Therefore, pursuant to Rule 62-212.400(4)(b)3. c. (ii), this unit would not be included in the baseline for PM and SO₂. However, this emission unit would be included in the determination of baseline for NO₂.

Emission Unit 006, the natural gas-fired package boiler, received a construction permit as a minor source in December 12, 1995. Therefore, this emission unit is not included in the baseline.

It should be noted that during the baseline period for PM and SO₂, the only fuel used at the Fort Pierce Plant was residual oil. Natural gas was not available at the plant until late 1980's. Currently, natural gas is the primary fuel with residual oil used as backup.

The PSD analysis of increment consumption for the additional fruit extractors was based on the requirements of Rules 62-212.400(4)(b)3. a. (i) and (ii), and c. (ii). Pursuant to Rule 62-212.400(4)(b)3.a. (i), the annual emissions for those emission units included in the baseline were the sum of annual emissions of each emission unit that were representative of the facilities in existence prior to the minor source baseline date. Since the addition of extractors primarily increases the annual capacity of the plant, the actual emissions for PM and SO₂ were based on the average amount of fruit processed during 1974-75, 1975-76 and 1976-77 seasons and the annual emissions for NO_x were based on the 1987-88 fruit season.

For the short-term averaging times, the actual emissions in the baseline were the normal maximum emissions for each emission unit [Rule 62-212.400(4)(b)3.a. (ii)]. Emission Units 001, 002, 003 and 007 do not consume short-term PSD increment. The normal maximum emissions for these units have not changed and there have been no limitations on the operation of these units (i.e., either hours per year or hours per day). Therefore, these units are not considered in evaluation. However, Emission Unit 004 (Dryer No.2) would have triggered a major modification at a major facility and is not included in the short-term PM and SO₂ baseline [Rule 62-212.400(4)(b)3.c. (ii)]. Emission Unit 006 is also not included in the short-term PSD baseline. Both Emission Unit 004 and 006 consume short-term PSD increment.

Following is a discussion of each emission unit.

- Emission Unit 001 – No. 1 Peel Dryer with Waste Heat Evaporator: This emission unit consumes annual PSD Increment due to the increased utilization from the baseline periods to that proposed in the application as the potential operation. The baseline emissions for PM and SO₂ are based on fruit processed during 1974-75, 1975-76 and 1976-77 fruit seasons. The baseline emissions for NO₂ were based on

the 1987-88 fruit season. The short-term emissions for this emission unit have not changed from the baseline period. Moreover, the use of natural gas as the primary fuel greatly reduces the amount of time that residual oil would be used and would likely reduce impacts.

- Emission Units 002 and 003 – No. 1 and No. 2 Process Steam Generators: These emission units consume annual PSD Increment due to the increased utilization from the baseline periods to that proposed as potential emissions in the application as the potential operation. The baseline emissions for PM and SO₂ are based on fruit processed during 1974-75, 1975-76 and 1976-77 fruit seasons. The baseline emissions for NO₂ were based on the 1987-88 fruit season. The short-term emissions for these emission units have not changed from the baseline period. The primary fuel is natural gas, which would greatly reduce the amount of time that residual oil would be used and would likely reduce short-term impacts.
- Emission Unit 004 – No. 2 Peel Dryer with Waste Heat Evaporator: This emission unit consumes both annual and short-term PSD Increment for PM and SO₂. For NO₂, annual PSD increment is consumed as a result of increased utilization from the baseline period to that proposed in the application as the potential operation.
- Emission Unit 006 – Steam Package Boiler: This minor source consumes PSD Increment for all pollutants.
- Emission Unit 007 – Pellet Mill and Coolers: This emission unit consumes annual PSD Increment due to the increased utilization from the baseline periods to that proposed in the application as the potential operation. The baseline emissions for PM are based on fruit processed during 1974-75, 1975-76 and 1976-77 fruit seasons. This emission unit does not emit SO₂ or NO_x. It should be noted that the PM emission rate was reduced with the installation of a baghouse in the mid-1990s that would reduce the emissions of PM. The Department acknowledged the installation of the baghouse, but did not require permitting. This emission unit has never been tested. Test data from another citrus facility with cyclones indicate an emission factor of 0.22 lb PM/ton of dried peel. Using this emission factor, the emission rate prior to the installation of the baghouse would likely be about 8.7 lb/hr. The calculated emissions with a baghouse and based on the information supplied with the Title V Application (i.e., 99.9 percent efficiency, 20,000 acfm and 1 grain-inlet/cfm) is 0.2 lb/hr. The lower emissions with the baghouse would expand the short-term and annual PSD Increment for PM. In the application, an emission rate of 10 lb/hr was assumed to provide conservative results.

In determining baseline emissions the same methodology used in the application to determine the actual and potential emissions increase from the project. The annual baseline emissions for PM and SO₂ were based on 4,881,816 boxes of fruit processed (average of 1974-75, 1975-76 and 1976-77 season). The annual baseline for NO₂ was based on 7,633,389 boxes of fruit processed (1987-88 season). Potential emissions are based on 38,250,000 boxes of fruit processed. As noted in the application, the potential emissions are based on the maximum throughput from the dryers over a season with the boilers operating at 8,760 hours per year (including 120 days of backup fuel oil). This methodology is considered conservative since the emissions rate for the baseline years were assumed to be the same as the 1999-2000 with the exception of the fuel used. As

discussed previously, only residual oil was available during the baseline period for PM and SO₂. Natural gas was not available at the plant until late 1980's. Currently, natural gas is the primary fuel with residual oil used as backup. The potential emissions for the plant were based on 120 days of residual oil usage.

Tables B-1 through B-8 present the calculations for the annual baseline emissions. For the short-term PSD Increment analysis for PM and SO₂, Emission Unit 004 and 007 were modeled as increment consuming. Their maximum potential emissions were used in the evaluation.

Short-term increment consumption was based on the maximum potential emissions for Emission Units 004 and 006. For Emission Unit 004, residual fuel oil was used in the evaluation.

The following air modeling results are provided:

Significant impact analysis for Significant Impact Analysis for SO₂, PM₁₀, NO₂ and CO:
Significant impact distances were determined for both annual (i.e., TPY) increases and for short-term (i.e., changes in actual to future potential emissions). The modeling results of the screening analysis are summarized in Table 1. The modeling results for the refined analysis, compared to the applicable Significant Impact Levels (SIL), are presented in Table 2. Predicted concentrations of emissions increases of SO₂, PM₁₀, and NO_x exceed the SIL to distances of 80, 9, and 3 km, respectively. Predicted concentrations of emission increases of CO do not exceed the SIL. Based on the significant impact analysis results, AAQS and PSD Class II incremental analyses were performed for SO₂, PM₁₀, and NO₂ with the consideration of other sources using the distances to the SILs and appropriate guidelines.

AAQS and PSD Class II incremental competing source information:

A summary of other SO₂ emitting facilities considered in the modeling analysis is presented in Table 3. The North Carolina (NC) screening technique was used to determine which facilities would impact the modeling area of the proposed project for both the AAQS and PSD Class II analyses. Based on the screening technique, Table 4 presents the emission and source parameter data for the other SO₂ emission sources considered in the evaluation.

Table 5 presents a summary of other PM₁₀ emitting facilities considered in the modeling analysis. Based on the screening technique, the emission and source parameter data for other PM₁₀ emission sources are presented in Table 6.

A summary of other NO_x emitting facilities considered in the air modeling analysis is presented in Table 7. Table 8 presents the emission and source parameter data for other NO_x emission sources.

AAQS Analysis

A summary of the results of the AAQS screening modeling analysis for SO₂, PM₁₀, and NO₂ are presented in Table 9. The refined modeling analysis results, compared to the AAQS, are presented in Table 10.

PSD Class II Incremental Analysis

A summary of the results of the PSD Class II increment screening modeling analysis for SO₂, PM₁₀, and NO₂ are presented in Table 11. The refined modeling analysis results, compared to the allowable PSD Class II increments, are presented in Table 12.

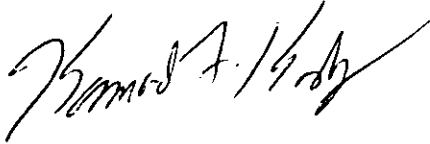
The results presented in Tables 10 and 12 indicate that the proposed potential increase in emissions of SO₂, PM₁₀, and NO_x will not be exceeded the allowable AAQS or PSD Increments.

2. **Significant Impact Analysis:** Please refer to the response to Comment 1 which addresses the results of the significant impact analysis.
3. **NO₂ and CO Impacts with Competing Sources:** A summary table showing the NO₂ facilities and emission source data used in the impact analysis is presented in Tables 7 and 8, respectively. The project's CO impacts did not exceed the SILs. Therefore, additional modeling analysis including other facilities was not required for CO.
4. **PSD Class I Analysis:** As noted in the application the Everglades National Park (ENP) is 180 kilometers to the north of the Tropicana Products, Inc. Fort Pierce Plant. This location has a low frequency of potential impacts given predominate east to west wind directions for the southeast Florida region. Also, as noted in the response to Item 1. above, the majority of emission units are included in the short-term baseline. One dryer and both boilers also were exclusively fired with residual oil and converted to gas firing in the late 1980s. Indeed, in the 1999-2000 fruit season, only natural gas was used. Fuel oil firing is only being included as a backup fuel for the purpose of calculating potential emissions. In addition, a baghouse was added to the Pellet Mills and emission of PM was likely reduced from previous levels with cyclones. Given the large distance to the ENP, low frequency of potential impacts and the sources that would potentially increase baseline emissions, the proposed project would not significantly affect the air quality in the ENP.
5. **Background Air Quality:** The Department's comments are noted and the revised non-modeled background concentrations have been incorporated into the AAQS modeling analysis results, summarized in Table 10.
6. **Typographical Errors in Tables 2-4, 2-8, 2-9 and 3-3:** The comment is correct. These tables have been corrected and are attached. Please note that there are slight differences in the numbers in the corrected Table 2-4 than in the comment due to small round-off differences using a spreadsheet.

The opportunity to provide this information is appreciated. Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.



Kennard F. Kosky, P.E.
Principal
Professional Engineer No. 14996



KFK/jkw

cc: Richard Coyle, Tropicana Products, Inc.
Douglas Foster, Tropicana Products, Inc.
Scott Davis, Tropicana Products, Inc.
Greg Worley, EPA Region IV
John Bunyak, National Park Service
Isadore Goldman, FDEP SE District

TABLES B-1 THROUGH B-8
CALCULATIONS OF PSD BASELINE EMISSIONS

Table B-1. Baseline and Potential Production for Tropicana Products, Inc. Fort Pierce Plant

	Units	Actual (Baseline)	Future Potential	Difference
Peel Dryer Information				
Heat Input	mmBtu/hr/dryer	84	84	
Capacity (wet peel)	tons/hour/dryer	50	50	
Capacity (dried peel)	tons/hour/dryer	20	20	
BDP	tons/hour/dryer	18	18	
BDP	tons/hour	36	36	
Moisture in dried peel		10.0%	10%	
Capacity (fruit)	boxes/day/dryer	75,000	75,000	
Capacity (fruit)	tons/hour/dryer	141	141	
Capacity (fruit)	tons/hour	281	281	
Percent of BDP in fruit		12.80%	12.80%	
Extractor Information				
	number	50	66	
	boxes/hour	125	125	
	hours/year	5,880	6,120	
Fruit Production	boxes/year	4,881,816	38,250,000	33,368,184
	lb/box	90	90	
	lb/hr	74,722	562,500	
	tons/hour	37.36	281.25	
BDP Information				
	% of Fruit	12.8%	12.8%	
	tons/hour	4.8	36.0	31.2
	tons/year	28,119.3	220,320.0	192,200.7
Dryer Hours	per dryer	781.1	6,120.0	5,338.9

Table B-2. Baseline and Potential Citrus Oil

	Units	Data
Type of Fruit		
Grapefruit	lb/box	85
Early/Mids	lb/box	90
Valencia's	lb/box	90
Oil Available in Fruit^a		
Grapefruit	lb/ton	6.1
Early/Mids	lb/ton	9.5
Valencia's	lb/ton	13.5
Fruit Types^b		
Grapefruit	Percent	15%
Early/Mids	Percent	35%
Valencia's	Percent	50%
Oil Available		
Grapefruit	lb/box	0.25925
Early/Mids	lb/box	0.4275
Valencia's	lb/box	0.6075
Baseline Oil (4,881,816 boxes)		
	lb/box	0.49
	tons/year	1,201.6
Potential Oil (38,250,000 boxes)		
	lb/box	0.49
	tons/year	9,414.5
Difference		
	tons/year	8,213.0

^a FCPA fruit oil content

^b Based on 1999 data

Table B-3. Baseline and Potential Emissions (PM, CO, NO_x and SO₂) from Peel Dryers at Tropicana Products, Inc. Fort Pierce Plant

Pollutant	Units	Actual Baseline Oil ^a (One Dryer)	Future Potential Gas ^b	Future Potential Oil ^c	Future Potential Total ^d	Difference
Particulate Matter	lb/hr/dryer	5.3	32.4	32.4		
	lb/hr/plant	5.3	64.7	64.7		
	tons/year	4.1	198.1	93.2	198.10	193.98
Carbon Monoxide	lb/hr/dryer	270.0	270.0	270.0		
	lb/hr/plant	270.0	540.0	540.0		
	tons/year	210.9	1,652.4	777.6	1652.40	1441.51
Nitrogen Oxides	NO _x (lb/mmBtu)	0.4	0.1	0.367		
	lb/hr/dryer	30.8	8.2	30.8		
	lb/hr/plant	30.8	16.5	61.6		
	tons/year	24.0	50.4	88.7	115.35	91.30
Sulfur Dioxide	SO ₂ (lb/mmBtu)	1.499	0.0	1.5		
	lb/hr/dryer	125.9	0.2	125.9		
	lb/hr/plant	125.9	0.5	251.9		
	tons/year	98.4	1.4	362.7	363.50	265.12

^a 781.1 full-load hours based on 1974-77 fruit seasons; PM based on last two years stack tests; CO based on previous stack tests; NO_x based on gas-firing based on AP-42 Emission Factors (Tables 1.4-1); SO₂ based on using 1 grain/100 scf

^b 6,120 full-load hours based on 255 days and 24-hours/day; PM based on process weight table; CO based on previous stack tests; NO_x based on gas-firing based on AP-42 Emission Factors (Tables 1.4-1); SO₂ based on using 1 grain/100 scf

^c 2,880 full-load hours based on 120 days and 24-hours/day; PM based on process weight table; CO based on previous stack tests; NO_x based on oil-firing using AP-42 Emission Factors (Tables 1.3-1); SO₂ based on using 1.5% sulfur No. 5 fuel oil and AP-42 Emission Factors

^d 2,880 hours oil-firing and 3,240 hours gas-firing

Table B-4. Heat Input and Fuel Usage for Steam Boilers at Tropicana Products, Inc. Fort Myers Plant

	Units	Boilers 1&2 ^a Natural Gas	Boilers 1&2 ^a Oil	Package Boiler ^b Natural Gas
Heat Input per Boiler	mmBtu/hr/boiler	63.4	63.4	17.0
	Btu/scf or Btu/gal	1,020.0	150,060.0	1,020.0
Fuel Usage per Boiler	scf/hr or gal/hr	62,156.9	422.5	16,666.7
	mmscf/yr or 10 ³ gal/yr	544.5	3,701.1	146.0
Fuel Usage (both Boilers 1 & 2)	mmscf or /yr	1,089.0	7,402.2	NA
Actual Heat Input for 1999 (based on 1999 AOR)	mmscf/yr	150.2	0.0	100.7
	mmBtu/yr	153,204	0.0	102,714.0
Production for 1999	mmBtu/yr/plant	255,918.0		
	Boxes fo Fruit ^c	14,744,536		
	mmBtu/box of fruit ^d	0.0174		
Production for 1974-77 Seasons	Boxes fo Fruit	4,881,816		
Baseline (1974-77)	mmBtu/yr ^e	84,733	0.0	NA
	mmscf/year	83.1	NA	NA
	10 ³ gal/year	NA	0.0	NA
Potential	hours/yr/boiler	8,760	2,880.0	8,760.0
	mmBtu/yr	1,110,768	365,184.0	148,920.0
	mmscf/year	1,089.0		146.0
	10 ³ gal/year		2,433.6	

^a Emission Units Nos. 002 and 003

^b Emission Unit No. 006

^c Based on 1999 calender year

^d Calculated fuel usage rate based on mmBtu per box of fruit

Table B-5. Baseline and Potential Emissions from Steam Boilers at Tropicana Products, Inc. Fort Pierce Plant

Pollutant	Units	Actual Baseline Oil ^a	Future Potential Gas ^b	Future Potential Oil ^c	Future Potential Total ^d	Difference
Particulate Matter:	lb/mmscf or 10 ³ gal	17.01	1.90	17.01		
	lb/mmBtu	0.113	0.002	0.113		
	tons/year	0.71	1.17	20.69	21.48	20.77
Carbon Monoxide	lb/mmscf or 10 ³ gal	5.00	84.00	5.00		
	lb/mmBtu	0.033	0.082	0.033		
	tons/year	0.21	51.87	6.08	40.90	40.69
Nitrogen Oxides (note: these emissions are for 1974-77 seasons; data adjusted to 1986-87 season in Table B-?)	lb/mmscf or 10 ³ gal	55.00	100.00	55.00		
	lb/mmBtu	0.367	0.098	0.367		
	tons/year	2.28	61.75	66.92	108.37	106.09
Sulfur Dioxide	lb/mmscf or 10 ³ gal	225.00	2.86	225.00		
	lb/mmBtu	1.499	0.003	1.499		
	tons/year	9.35	1.77	273.78	274.96	265.62
Volatile Organic Compounds	lb/mmscf or 10 ³ gal	0.28	5.50	0.28		
	lb/mmBtu	0.002	0.005	0.002		
	tons/year	0.01	3.40	0.34	2.62	2.61

^a Based on calculated 1974-77 fuel usage; oil-firing based on AP-42 Emission Factors (Tables 1.3-1 and 1.3-3); SO₂ based on using 1.5 % sulfur

^b 8,760 hours; gas-firing based on AP-42 Emission Factors (Tables 1.4-1 and 1.4-2); SO₂ based on using 1 grain/100 scf

^c 2,880 hours (120 days); oil-firing based on AP-42 Emission Factors (Tables 1.3-1 and 1.3-3) using 1.5% sulfur No. 5 fuel oil

^d 2,880 hours oil-firing and 5,880 hours gas-firing

Table B-6. Baseline and Potential Emissions from Peel Coolers/Pellet Mills at Tropicana Products, Inc.
Fort Pierce Plant

Pollutant	Units	Actual Baseline	Future	Incremental Increase
Particulate Matter:				
	lb/hr	10	10	
	hours/year	781.1	6,120.0	
	lb/year	7,810.9	61,200.0	53,389.1
	tons/year	3.9	30.6	26.7

Table B-7. Annual Emissions Increases from 1974-77 Fruit Seasons to Proposed at Tropicana Products, Inc.
Fort Pierce Plant

	Peel Dryers	Pellet Mill	Boilers	Total
Particulate Matter	194.0	26.7	20.77	241.4
Nitrogen Oxides	91.3		106.09	197.4
Sulfur Dioxide	265.1		265.62	530.7

Table B-8. Increases in Annual Emissions Over Baseline Periods
 and Emissions Used in Modeling Analysis
 Tropicana Products, Inc. Fort Pierce Plant

Emission Unit	Emissions-Units	PM	SO ₂	NO _x ^a
Peel Dryers No. 1 & 2	Increase -Tpy	193.98	265.12	77.75
	lb/hr/dryer	22.14	30.26	8.88
	grams/sec/dryer	2.79	3.81	1.12
Steam Boilers No. 1 & 2	Increase -Tpy	20.77	265.62	106.09
	lb/hr/boiler	2.37	30.32	12.11
	grams/sec/boiler	0.30	3.82	1.53
Pellet Mills	Increase -Tpy	26.69	NA	NA
	lb/hr	3.05	NA	NA
	grams/sec	0.38	NA	NA

Annual Emissions Increase Basis:

Potential Boxes	38,250,000	Future Potential
Baseline Boxes	7,633,389	1987-88
	4,881,816	1974-77

^a annual emissions for NO_x were determined based on a ratio of 1974-77 boxes and 1987-88 boxes using the data in Table B-7.

TABLES 1 THROUGH 12
RESULTS OF UPDATED MODELING EVALUATIONS

Table 1. Maximum Pollutant Impacts Predicted for the Proposed Project Only,
Significant Impact Analysis, Screening Receptor Grid

Pollutant/ Averaging Time	Concentration ^a ($\mu\text{g}/\text{m}^3$)	Receptor Location ^b		Time Period (YYMMDDHH) ^c
		Direction (degrees)	Distance (m)	
<u>SO₂</u>				
Highest Annual	7.1	300	661	87123124
	6.2	300	661	88123124
	7.4	305	577	89123124
	8.3	300	661	90123124
	7.9	300	661	91123124
Highest 24-Hour	259	305	577	87051824
	239	340	600	88012024
	228	237	750	89111224
	257	241	836	90042024
	242	293	840	91052124
Highest 3-Hour	647	220	527	87032215
	659	20	400	88060815
	576	44	468	89070312
	570	44	468	90091612
	651	100	400	91071215
<u>PM₁₀</u>				
Highest Annual	4.3	305	577	87123124
	4.4	144	314	88123124
	5.0	312	499	89123124
	5.2	305	577	90123124
	4.9	305	577	91123124
Highest 24-Hour	42.0	305	577	87051824
	37.0	320	600	88030324
	36.5	237	750	89111224
	40.3	241	836	90042024
	37.6	300	800	91050624
<u>NO_x</u>				
Highest Annual	2.6	300	661	87123124
	2.3	305	577	88123124
	2.7	305	577	89123124
	3.1	305	577	90123124
	2.9	300	661	91123124
<u>CO</u>				
Highest 8-Hour	315	220	527	87032216
	280	330	400	88071016
	289	320	800	89091424
	286	44	468	90091616
	364	100	400	91071216
Highest 1-Hour	695	85	459	87072810
	955	60	1000	88081408
	710	166	347	89080612
	748	144	314	90081212
	706	67	465	91080510

^a Based on the highest concentration predicted using surface and upper air meteorological data from the National Weather Service (NWS) station in West Palm Beach from 1987 to 1991.

^b Relative to northwest corner of Feed Mill Building

^c YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

Table 2. Maximum Pollutant Impacts Predicted for the Proposed Project Only,
Significant Impact Analysis, Refined Receptor Grid

Pollutant/ Averaging Time	Concentration ^a ($\mu\text{g}/\text{m}^3$)	Receptor Location ^b		Time Period (YYMMDDHH) ^c	EPA Significant Impact Levels ($\mu\text{g}/\text{m}^3$)
		Direction (degrees)	Distance (m)		
<u>SO₂</u>					
Highest Annual	7.9	300	661	90123124	1
Highest 24-Hour	259	305	577	87051824	5
Highest 3-Hour	659	20	400	88060815	25
<u>PM₁₀</u>					
Highest Annual	5.2	305	577	90123124	1
Highest 24-Hour	42.0	305	577	87051824	5
<u>NO₂</u>					
Highest Annual	3.1	305	577	90123124	1
<u>CO</u>					
Highest 8-Hour	364	100	400	90123124	500
Highest 1-Hour	955	60	1000	90081408	2,000

^a The project's SO₂, PM₁₀, and NO₂ impacts are predicted to be significant out to 80, 9, and 3 km, respectively

^b Relative to northwest corner of Feed Mill Building

^c YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

Table 3. Summary of SO₂ Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses
(Replaces Table 6-4 from Air Permit Application)

Plant ID	Facility Name	UTM Coordinates		Relative Location ^a				Maximum SO ₂ Emissions ^b (TPY)	Emissions Threshold ^c [(Dist. - SIA) X 20]	Included in AAQS?	Included in PSD Class II?
		North (km)	East (km)	X (km)	Y (km)	Distance (km)	Direction (deg.)				
7775058	TRS CONCRETE RECYCLING	3,028.3	557.6	-2.06	-0.01	2.1	270	1	SIA	No	No
1110040	RANGER/FT PIERCE/PLNT#129	3,030.2	561.7	2.06	1.85	2.8	48	222	SIA	Yes	No
1110060	FLORIDA GAS TRANSMISSION/ST LUCIE/STA 20	3,035.8	557.2	-2.37	7.46	7.8	342	11	SIA	Yes	No
1110046	ATLANTIC COAST RECYCLING	3,036.5	562.7	3.11	8.2	8.8	21	8	SIA	Yes	No
1110003	FT PIERCE UTIL/H D KING PWR PLNT ^d	3,036.4	566.1	6.51	8.03	10.3	39	1,651	SIA	Yes	No
1110071	FPL ST LUCIE NUCLEAR PLANT	3,025.0	573.9	14.25	-3.31	14.6	103	3	SIA	Yes	No
0610015	COUNTY LANDFILL	3,050.6	550.5	-9.11	22.28	24.1	338	2	SIA	No	No
0850015	AYCOCK FUNERAL HOME	3,008.4	573.5	13.89	-19.92	24.3	145	2	SIA	Yes	No
0610080	AMERICAN POWER TECH	3,051.1	550.7	-8.9	22.79	24.5	339	9	SIA	Yes	No
0850006	MARTIN MEMORIAL HEALTH SYSTEMS	3,008.7	574.2	14.62	-19.65	24.5	143	57	SIA	Yes	No
0610021	OCEAN SPRAY CRANBERRIES/VERO BEACH	3,051.3	550.6	-8.99	22.97	24.7	339	198	SIA	Yes	No
0610016	VERO BEACH CITRUS PACKERS	3,054.2	560.6	0.99	25.88	25.9	2	3	SIA	Yes	No
0610029	CITY OF VERO BEACH MUNICIPAL UTILITIES ^d	3,056.5	561.4	1.79	28.18	28.2	4	11,832	SIA	Yes	Yes
0850129	AMERICAN POWER TECH/INDIANTOWN	2,990.8	549.1	-10.55	-37.51	39.0	196	6	SIA	No	No
0850102	INDIANTOWN COGENERATION PLANT ^d	2,990.7	547.7	-11.96	-37.62	39.5	198	2,558	SIA	Yes	Yes
0850001	FPL MARTIN POWER PLANT ^c	2,992.7	542.7	-16.93	-35.67	39.5	205	68,468	SIA	Yes	Yes
0930001	OKEECHOBEE ASPHALT/ASPHALT PLANT	3,014.2	516.1	-43.52	-14.11	45.8	252	105	SIA	Yes	No
0990213	JUPITER MULCH, INC.	2,980.1	573.1	13.48	-48.21	50.1	164	3	SIA	No	No
0990021	PRATT & WHITNEY AIRCRAFT ^d	2,975.0	567.5	7.89	-53.32	53.9	172	571	SIA	Yes	Yes
0990019	OSCEOLA FARMS ^c	2,968.0	544.2	-15.41	-60.32	62.3	194	640	SIA	Yes	Yes
0990061	U.S. SUGAR CORP. BRYANT MILL ^d	2,969.1	537.8	-21.78	-59.2	63.1	200	2,007	SIA	Yes	Yes
0990304	VETERANS AFFAIRS MEDICAL CENTER	2,963.0	588.0	28.39	-65.32	71.2	157	1	SIA	No	No
0990234	SOLID WASTE AUTH OF PBC/NO CO RRF ^d	2,961.3	584.5	24.88	-67.06	71.5	160	307	SIA	Yes	Yes
0990344	PARKWAY ASPHALT (RIVIERA)	2,962.1	588.5	28.89	-66.22	72.2	156	43	SIA	Yes	No
0990566	INDIAN TRAIL IMPROVEMENT DISTRICT - ACI	2,956.2	564.7	5.08	-72.16	72.3	176	1	SIA	No	No
0990530	EAST COAST PAVING - LOXAHATCHEE PLANT	2,955.6	562.1	2.53	-72.76	72.8	178	48	SIA	Yes	No
0990123	PHYSICAL DISTRIBUTION CENTER & OSF	2,961.2	589.7	30.09	-67.12	73.6	156	90	SIA	Yes	No
0990333	FGT STATION NO. 21 (WPB)	2,957.1	584.4	24.75	-71.25	75.4	161	17	SIA	Yes	No
0990042	RIVIERA POWER PLANT ^d	2,960.6	594.3	34.64	-67.69	76.0	153	73,475	SIA	Yes	No
0990325	ROYAL PALM MEMORIAL GARDENS, INC.	2,960.2	593.4	33.79	-68.12	76.0	154	2	SIA	Yes	No
0990305	NORTHWOOD FUNERAL HOME	2,960.1	593.8	34.19	-68.22	76.3	153	3	SIA	Yes	No
0990529	PALM BEACH WOOD PRODUCTS INC.	2,952.1	563.5	3.92	-76.23	76.3	177	10	SIA	No	No
0990349	SFWM PUMP STATION #S-5A	2,951.3	562.6	2.94	-77	77.1	178	17	SIA	Yes	No
0990026	SUGAR CANE GROWERS CO-Op ^d	2,953.3	534.9	-24.71	-75.02	79.0	198	5,024	SIA	Yes	Yes
0990583	MAGNUM ENV. SERVICES, INC. - WPB	2,952.0	580.2	20.59	-76.32	79.0	165	90	SIA	Yes	No
0990087	WEST PALM PLANT	2,951.7	579.9	20.29	-76.62	79.3	165	94	SIA	Yes	No
0990233	MARKS LANDSCAPING & PAVING	2,952.3	582.1	22.49	-76.02	79.3	164	5	SIA	No	No
0990522	PALM BEACH TRANSFER & RECYCLING, INC.	2,951.5	583.7	24.12	-76.85	80.5	163	9	11	No	No
0990310	COMMUNITY ASPHALT (WPB)	2,950.8	582.3	22.69	-77.52	80.8	164	137	15	Yes	No
0990086	GLADES CORRECTIONAL INSTITUTION ^d	2,955.3	523.4	-36.21	-73.02	81.5	206	98	30	Yes	No
0990016	ATLANTIC SUGAR MILL ^d	2,945.2	552.4	-7.24	-83.11	83.4	185	626	68	Yes	Yes
0990549	SFWM STATION NO. G-310	2,940.5	554.2	-5.41	-87.87	88.0	184	3	161	No	No

Table 3. Summary of SO₂ Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses
(Replaces Table 6-4 from Air Permit Application)

Plant ID	Facility Name	UTM Coordinates		Relative Location ^a				Maximum SO ₂ Emissions ^b (TPY)	Emissions Threshold ^c {(Dist. - SIA) X 20}	Included in AAQS?	Included in PSD Class II?
		North (km)	East (km)	X (km)	Y (km)	Distance (km)	Direction (deg.)				
0510003	U.S. SUGAR CLEWISTON MILL AND REFINERY ^d	2,956.9	506.1	-53.51	-71.44	89.3	217	7,806	185	Yes	Yes
0510001	EVERGLADES SUGAR REFINERY ^d	2,954.0	509.5	-50.12	-74.35	89.7	214	1,252	193	Yes	No
0990045	T G SMITH PLANT ^d	2,943.7	592.8	33.19	-84.62	90.9	159	10,568	218	Yes	Yes
7770060	AJAX PAVING IND., INC.	2,967.9	488.9	-70.71	-60.42	93.0	229	35	260	No	No
0430008	SOUTH FLORIDA THERMAL SERVICES, INC.	2,966.6	489.2	-70.41	-61.72	93.6	229	47	273	No	No
0990322	TREASURE COAST CREMATORY	2,941.0	594.0	34.39	-87.32	93.8	159	5	277	No	No
0550005	GEORGIA PACIFIC CORP	3,009.2	467.0	-92.63	-19.09	94.6	258	59	292	No	No
0990005	OKEELANTA CORP ^d	2,940.1	524.9	-34.71	-88.22	94.8	201	6,798	296	Yes	Yes
0990332	OKEELANTA COGENERATION PLANT	2,940.0	524.1	-35.52	-88.31	95.2	202	3,203	304	Yes	Yes
0550018	PHILLIPS STATION	3,035.4	464.3	-95.31	7.08	95.6	274	4,046	311	Yes	No
0550014	BETTER ROADS OF LAKE PLACID	3,008.7	465.6	-94.01	-19.62	96.0	258	54	321	No	No
0990561	NR ASSOCIATES, INC.	2,933.3	582.5	22.87	-95.01	97.7	166	3	354	No	No
0990324	ANNCO SERVICES, INC.	2,930.4	579.2	19.59	-97.92	99.9	169	5	397	No	No

^a The Tropicana Ft. Pierce facility is located at UTM Coordinates:

North 3,028.3 km
East 559.6 km

^b The significant impact area (SIA) for the project is predicted to be

80 km.

^c Sources with emission rates of 1 TPY or less within 5 km, 2 TPY or less within 25 km, and less than 10 TPY generally were not included in modeling analysis.

^d Emission values and parameters were taken from US Sugar-Clewiston PSD Application #2000.

Table 4. Summary of SO₂ Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-5 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^c
				Height (m)	Temp. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
1110040	RANGER/FT PIERCE/PLNT#129 250T/HR [RECYCLE(50%)]DRUM MIX(S/N666-88A)		FPP2	7.01	435.9	51.5	0.76	6.40	Yes	NA	NA
1110060	FLORIDA GAS TRANSMISSION/ST LUCIE/STA 20										
	1500 BHP NAT GAS FIRED RECIP IC ENGINE #2001		FG201	8.53	588.7	21.94	0.49	0.03	Yes	NA	NA
	1500 BHP NAT GAS FIRED RECIP IC ENGINE #2002		FG202	8.53	588.7	21.94	0.49	0.03	Yes	NA	NA
	2000 BHP NAT GAS FIRED RECIP IC ENGINE #2003		FG203	8.53	588.7	29.26	0.49	0.04	Yes	NA	NA
	2400 BHP NAT GAS FIRED RECIP IC ENGINE #2004		FG204	19.81	641.5	76.50	0.34	0.05	Yes	NA	NA
	4000 BHP I.C.Reciprocating Engine & Assoc.Equip. #2005		FG205	6.71	873.2	78.63	0.15	0.08	Yes	NA	NA
1110046	ATLANTIC COAST RECYCLING SECONDARY ALUMINUM SWEAT FURNACE #1		ACR1	9.75	1005.4	8.84	0.46	0.17	Yes	NA	NA
1110003	FT PIERCE UTIL/H D KING PWR PLNT										
	2.75 MW West Diesel #1		FPU1	7.01	783.2	11.9	0.91	0.88	Yes	NA	NA
	2.75 MW East Diesel #2		FPU2	7.01	783.2	11.9	0.91	0.88	Yes	NA	NA
	23.4 MW Combined Cycle Gas Turbine with 8.2 MW HRSG-Unit # 9		FPU3	20.73	492.0	18.2	3.41	2.61	Yes	NA	NA
	16.5 MW Boiler Unit #6		FPU4	45.11	435.9	11.0	1.52	5.68	Yes	NA	NA
	33.0 MW Boiler Unit #7 (Phase II Acid Rain Unit)		FPU7	44.81	426.5	18.6	2.16	5.65	Yes	NA	NA
	56.1 MW Boiler Unit #8 (Phase II Acid Rain Unit)		FPU8	45.72	440.9	25.5	2.44	5.76	Yes	NA	NA
1110071	FLORIDA POWER & LIGHT(PSL) 4 MAIN PLANT EMERGENCY DIESEL GENERATORS		FPLSL1	3.66	694.3	36.6	0.51	0.769	Yes	NA	NA
0850015	AYCOCK FUNERAL HOME IND. EQUIP. & ENGR. MODEL IE43-PP11 CREMATOR		AYCK1	7.32	865.9	5.5	0.52	0.04	Yes	NA	NA
0610080	AMERICAN POWER TECH INCINERATOR/BOILER #1		AMPT1	17.37	394.3	16.2	0.91	0.098	Yes	NA	NA
	INCINERATOR/BOILER #2		AMPT2	17.37	394.3	16.2	0.91	0.098	Yes	NA	NA
0850006	MARTIN MEMORIAL HEALTH SYSTEMS CLEAVER BROOKS MODEL CB 150 HP BOILER - UNIT #1		MMHS1	5.79	499.8	8.2	0.40	0.645	Yes	NA	NA
	CLEAVER BROOKS MODEL CB-150 HP STEAM BOILER #2		MMHS2	5.79	499.8	8.2	0.40	0.645	Yes	NA	NA
0610021	OCEAN SPRAY CRANBERRIES/VERO BEACH 500 HP PROCESS STEAM BOILER #3		SPRAY3	9.14	491.5	7.6	0.64	0.390	Yes	NA	NA
	OIL-FIRED PROCESS STEAM BOILER #1		SPRAY1	9.14	491.5	4.0	0.76	1.678	Yes	NA	NA
	OIL-FIRED PROCESS STEAM BOILER#2		SPRAY2	9.14	491.5	17.1	0.46	0.390	Yes	NA	NA
	CITRUS PEEL DRYER #1		SPRAYC1	18.29	341.5	16.9	0.85	2.544	Yes	NA	NA
0610016	VERO BEACH CITRUS PACKERS SUPERIOR BOILER-300 HP-BURNING FUEL OIL		VBCP1	5.79	472.0	1.5	0.61	0.399	Yes	NA	NA
0610029	CITY OF VERO BEACH MUNICIPAL UTILITIES Fossil Fuel Steam Generator Unit No.1		VERO1	61.0	437.0	32.4	1.1	28.77	Yes	NA	NA
	Fossil Fuel Steam Generator Unit No.2		VERO2	61.0	434.3	37.6	1.1	84.21	Yes	NA	NA
	Fossil Fuel Steam Generator Unit 3 (Phase II Acid Rain Unit)		VERO3	61.0	440.4	19.9	1.8	142.07	Yes	NA	NA
	Fossil Fuel Steam Generator Unit 4 (Phase II Acid Rain Unit)		VERO4	61.0	425.4	24.4	2.1	69.05	Yes	NA	NA
	Combined Cycle Gas Turbine Unit 5 (Phase II Acid Rain Unit)		VERO5	38.1	416.5	19.6	3.4	15.50	Yes	Yes	CON

Table 4. Summary of SO2 Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-5 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) *
				Height (m)	Temper. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
0850102	INDIANTOWN COGENERATION PLANT	Pulverized Coal Main Boiler (2) Auxiliary Boilers	IND1	150.88	333.2	28.4	4.88	73.33	Yes	Yes	CON
			IND3	64.01	449.8	26.7	1.52	2.27	Yes	NA	NA
0850001	FLORIDA POWER & LIGHT MARTIN PLANT	UNIT #1 STEAM GENERATOR-FRONT-FIRED - 863 MW MAX. CAPACITY UNIT #2 STEAM GENERATOR-FRONT-FIRED- 863 MW CAPACITY COMBINED CYCLE UNIT 3A, 1 CT WITH 1 HT RCYV STEAM GENERATOR COMBINED CYCLE UNIT 3B, 1 CT & 1 HRSG COMBINED CYCLE UNIT 4A-1CT WITH 1 HT RCYV STEAM GENERATOR COMBINED CYCLE UNIT 4B-1 CT WITH 1 HT RCYV STEAM GENERATOR Aux Blr PSD Diesl Gens PSD 2 Simple Cycle CT	FPLM1	152.10	420.9	21.0	7.99	871.92	Yes	NA	NA
			FPLM2	152.10	420.9	21.3	7.92	871.92	Yes	NA	NA
			FPLM3	64.92	410.9	18.6	6.10	115.92	Yes	Yes	CON
			FPLM4	64.92	410.9	18.6	6.10	115.92	Yes	Yes	CON
			FPLM5	64.92	410.9	18.6	6.10	115.92	Yes	Yes	CON
			FPLM6	64.92	410.9	18.6	6.10	115.92	Yes	Yes	CON
			MARTAUX	18.3	535.4	15.2	1.10	12.90	Yes	Yes	CON
			MARTGEN	7.6	785.9	39.6	0.30	0.51	Yes	Yes	CON
0930001	OKEECHOBEE ASPHALT/ASPHALT PLANT	100 TPH ASPHALT DRUM MIXER WITH VENTURI SCRUBBER	MARTCTs	18.3	853.2	37.6	6.17	25.98	Yes	Yes	CON
			OAAP1	4.57	327.6	24.1	0.52	2.39	Yes	NA	NA
0990021	PRATT & WHITNEY AIRCRAFT	Air compressor/heater (ACHR-2-B2); slave jet engine Boiler (BO-12-E6) w/heat input of 42 mmBTUH in Test Area E	PRATARCH	15.24	810.9	143.6	0.91	11.08	Yes	Yes	CON
			PRATBO12	4.57	533.2	6.7	0.76	0.21	Yes	Yes	CON
0990019	OSCEOLA FARMS	Unit 2 Unit 3 Unit 4 Unit 5 Unit 6 Unit 1 PSD Baseline Unit 2 PSD Baseline Unit 3 PSD Baseline Unit 4 PSD Baseline	OSBLR2	27.4	339	18.63	1.52	17.12	Yes	Yes	CON
			OSBLR3	27.4	344	14.34	1.92	30.74	Yes	Yes	CON
			OSBLR4	27.4	344	16.53	1.83	17.12	Yes	Yes	CON
			OSBLR5	27.4	344	17.85	1.52	18	Yes	Yes	CON
			OSBLR6	27.4	339	18.25	1.92	33.39	Yes	Yes	CON
			OSBLR1B	22.0	342	8.18	1.52	-5.07	No	Yes	EXP
			OSBLR2B	22.0	341	18.1	1.52	-16.32	No	Yes	EXP
			OSBLR3B	22.0	341	14.5	1.93	-7.26	No	Yes	EXP
0990061	U.S.SUGAR CORP. BRYANT MILL *	BOILER #1 WITH SCRUBBER BOILER #2 WITH SCRUBBERS BOILER #3 WITH SCRUBBER BOILER #5 WITH TWO SCRUBBERS. DIESEL ELECTRIC GENERATOR UNITS 1 + 2 Unit 1 PSD Baseline Unit 2&3 PSD Baseline	OSBLR4B	22.0	341	18.8	1.83	-13.61	No	Yes	EXP
			USSB1	19.81	338.7	37.6	1.65	13.47	Yes	Yes	CON
			USSB2	19.81	338.7	36.9	1.65	13.47	Yes	Yes	CON
			USSB3	19.81	338.7	36.4	1.65	13.47	Yes	Yes	CON
			USSB5	45.72	338.7	18.0	2.90	5.24	Yes	Yes	CON
			USSB7	8.53	519.3	13.0	0.37	0.11	Yes	NA	NA
			USSBRY1B	19.8	494.0	44.3	1.68	-36.50	No	Yes	EXP
			USBRY23B	19.8	344.0	37.9	1.68	-73.00	No	Yes	EXP
0990234	SOLID WASTE AUTH OF PBC/NO CO RRF	412.5MMBTU/HR RDF BOILER NO.1 (324,000 lb/hr STEAM) 412.5MMBTU/HR RDF BOILER NO.2 (324,000 lb/hr. steam)	SWPBC1	76.20	505.4	24.7	2.04	3.05	Yes	Yes	CON
			SWPBC2	76.20	505.4	24.7	2.04	3.05	Yes	Yes	CON
0990344	PARKWAY ASPHALT (RIVIERA)	Asphalt rotary drum dryer (400 TPH); counterflow	PKA1	12.80	422.0	18.5	1.42	0.97	Yes	NA	NA
0990530	EAST COAST PAVING - LOXAHATCHEE PLANT	Hot mix asphalt plant (175 TPH)	HUBB1	7.62	402.6	34.3	0.94	3.81	Yes	NA	NA

Table 4. Summary of SO2 Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-5 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) *
				Height (m)	Temper. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
0990123	PHYSICAL DISTRIBUTION CENTER & OSF	12.5 mmBTU/hr boiler #1 (Unit A) burning No.6 fuel oil	FPLPO1	9.14	491.5	10.1	0.52	1.03	Yes	NA	NA
		12.5 mmBTU/hr boiler #2 (Unit B) burning No 6 fuel oil	FPLPO2	9.14	491.5	10.1	0.52	1.03	Yes	NA	NA
0990333	FGT STATION NO. 21 (WPB)	COMPRESSOR #2101, 6500 BHP NATURAL GAS FIRED TURBINE	FGTX1	15.24	763.7	56.4	1.01	0.20	Yes	NA	NA
		COMPRESSOR #2102, 6500 BHP NATURAL GAS FIRED TURBINE	FGTX2	15.24	763.7	56.4	1.01	0.20	Yes	NA	NA
0990042	FLORIDA POWER & LIGHT (PRV) RIVIERA	Fossil Fuel Steam Generator, Unit 3 -Phase II Acid Rain Unit	FPLR3	90.83	401.5	26.9	4.88	1056.9	Yes	NA	NA
		Fossil Fuel Steam Generator, Unit 4 -Phase II Acid Rain Unit	FPLR4	90.83	401.5	26.6	4.88	1056.9	Yes	NA	NA
0990325	ROYAL PALM MEMORIAL GARDENS, INC.	HUMAN CREMATION INCINERATOR, IEE CO. #1E 43-PPII (100 LB/HR)	RPMG1	6.10	865.9	4.9	0.55	0.04	Yes	NA	NA
0990305	NORTHWOOD FUNERAL HOME	HUMAN CREMATION INCINERATOR, IEE CO. #1E43-PPII (150 LB/HR)	NRTH1	4.88	699.8	3.4	0.52	0.06	Yes	NA	NA
0990349	SFWMD PUMP STATION #S-5A	Six 1600 hp diesel engines powering flood control pumps	SFWMD1	4.88	685.9	5.3	0.99	0.40	Yes	NA	NA
0990026	SUGAR CANE GROWERS CO-OP *	BOILER #1 WITH A 2 SCRUBBERS AND 1 STACK	SCGC1	45.72	337.6	21.6	1.31	24.97	Yes	NA	NA
		BOILER #2 WITH 2 SCRUBBERS AND 1 STACK	SCGC2	45.72	336.5	23.2	1.31	24.97	Yes	NA	NA
		BOILER #3 WITH SCRUBBER	SCGC3	27.43	341.5	15.8	1.62	17.09	Yes	NA	NA
		BOILER #4 WITH CYCLONES AND 3 SCRUBBERS WITH ONE STACK	SCGC4	33.53	337.6	8.2	2.90	42.73	Yes	NA	NA
		BOILER #5 WITH CYCLONES, TWO SCRUBBERS, AND ONE STACK	SCGC5	45.72	341.5	12.3	2.13	32.82	Yes	NA	NA
		504 MMBTU/HR BOILER # 8 RESIDUE/BAGASSE/OIL	SCGC8	47.24	344.8	9.1	2.90	37.67	Yes	Yes	CON
0990583	MAGNUM ENV. SERVICES, INC. - WPB	Soil thermal treatment facility	MGNM1	9.75	1144.3	31.6	0.98	2.30	Yes	NA	NA
0990087	WEST PALM PLANT	Double drum dryer (250 TPH) burning low sulfur residual oil	RANGR4	10.97	394.3	41.1	1.01	7.23	Yes	NA	NA
0990310	COMMUNITY ASPHALT (WPB)	Rotary drum mixer (300 TPH) fired by fuel oil	COMM1	12.80	413.7	16.2	1.40	8.75	Yes	NA	NA
0990086	GLADES CORRECTIONAL INSTITUTION	Boiler No. 1 w/heat input of 4.2 mmBTUH; No. 5 fuel oil	FDOC1	9.14	477.6	1.2	1.04	1.12	Yes	NA	NA
		Boiler No. 2 w/heat input of 4.2 mmBTUH; No. 5 fuel oil	FDOC2	9.14	477.6	1.2	1.04	1.12	Yes	NA	NA
0990016	ATLANTIC SUGAR MILL	BOILER #1 WITH SCRUBBER	ATLSUG1	27.43	344.3	16.8	1.89	8.60	Yes	NA	NA
		BOILER #2 WITH 1 JOY TURBULAIRE TYPE D-40 IMPINGEMNT SCRUBBER	ATLSUG2	27.43	344.3	12.5	1.89	8.60	Yes	NA	NA
		BOILER #3 WITH 2 JOY TURBULAIRE IMPINGEMENT SCRUBBERS	ATLSUG3	18.29	338.7	16.2	1.83	6.47	Yes	NA	NA
		253 MM BTU/HR BAGASSE BOILER #5 W/SUPP FUEL OIL #6	ATLSUG5	27.43	338.7	18.0	1.68	9.39	Yes	Yes	CON
0510003	U.S. SUGAR CLEWISTON MILL AND REFINERY										

Table 4. Summary of SO₂ Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-5 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^c
				Height (m)	Temper. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
		Boiler #1 Crop Season	USSC1	64.92	347.0	15.4	2.44	78.79	Yes	NA	NA
		Boiler #2 Crop Season	USSC2	64.92	338.7	13.9	2.44	78.49	Yes	NA	NA
		Boiler #3Crop Season	USSC3	64.92	333.2	6.8	2.44	47.08	Yes	NA	NA
		Boiler #4 Crop Season	USSC4	45.72	344.3	20.3	2.51	21.53	Yes	NA	NA
		Boiler #7 Crop Season	USSC7	68.58	405.4	20.8	2.59	13.91	Yes	NA	NA
		Boiler #1 Off Crop Season	USSCO1	64.92	347.0	14.1	2.44	51.64	Yes	NA	NA
		Boiler #2 Off Crop Season	USSCO2	64.92	338.7	12.7	2.44	51.27	Yes	NA	NA
		Boiler #3 Off Crop Season	USSCO3	64.92	333.2	6.2	2.44	30.74	Yes	NA	NA
		Boiler #7 Off Crop Season	USSCO7	68.58	405.4	23.6	2.59	17.39	Yes	NA	NA
		Unit 1 PSD Baseline	BLR1B	23.10	344.0	30.2	1.86	-79.86	No	Yes	EXP
		Unit 2 PSD Baseline	BLR2B	23.10	343.0	35.7	1.86	-79.86	No	Yes	EXP
		Unit 3 PSD Baseline	BLR3B	27.40	342.0	14.7	2.29	-48.30	No	Yes	EXP
		East Pellet Plant PSD Baseline	EPELLET	12.20	347.0	8.5	1.52	-10.30	No	Yes	EXP
		West Pellet Plant PSD Baseline	WPELLET	15.70	347.0	8.5	1.52	-10.30	No	Yes	EXP
0510001	EVERGLADES SUGAR REFINERY										
		CHAR KILN, FIRED WITH #2 FUEL OIL	ESUGR1	19.51	308.2	3.4	1.22	0.36	Yes	NA	NA
		MAIN BOILER, 1100 HP, #6 FUEL OIL	ESUGR2	21.95	477.6	10.1	1.07	27.84	Yes	NA	NA
		PACKAGE BOILER, 125 HP, #2 FUEL OIL	ESUGR3	5.18	560.9	7.6	0.40	0.35	Yes	NA	NA
0990045	LAKE WORTH UTILITIES AUTHORITY: TG SMITH PLANT										
		2000 KW DIESEL GENERATOR # 1 PEAKING UNIT	LWU1	5.18	625.9	37.1	0.56	0.96	Yes	NA	NA
		2000 KW DIESEL GENERATOR # 2 PEAKING UNIT	LWU2	5.18	625.9	37.1	0.56	0.96	Yes	NA	NA
		2000 KW DIESEL GENERATOR # 3 PEAKING UNIT	LWU3	5.18	625.9	37.1	0.56	0.96	Yes	NA	NA
		2000 KW DIESEL GENERATOR # 4 PEAKING UNIT	LWU4	5.18	625.9	37.1	0.56	0.96	Yes	NA	NA
		2000 KW DIESEL GENERATOR # 5 PEAKING UNIT	LWU5	5.18	625.9	37.1	0.56	0.96	Yes	NA	NA
		GAS TURBINE # 1	LWU6	14.02	720.4	24.8	4.88	19.78	Yes	NA	NA
		7.5 MW FOSSIL FUEL STEAM GENERATING UNIT 1	LWU7	18.29	422.0	10.5	1.52	34.52	Yes	NA	NA
		FOSSIL FUEL STEAM GENERATOR #3 (Phase II, Acid Rain Unit)	LWU9	34.44	418.2	15.7	2.13	101.05	Yes	NA	NA
		FOSSIL FUEL STEAM GENERATOR #4 (Phase II, Acid Rain Unit)	LWU10	35.05	418.2	17.0	2.29	130.28	Yes	NA	NA
		COMBINED CYCLE UNIT (GT-2S-5)	LWU11	22.86	479.8	26.7	3.05	13.73	Yes	NA	NA
		HRSG	LWUHRSG	45.70	377.6	13.7	5.49	12.79	Yes	Yes	CON
0990005	OKEELANTA CORP										
		BAGASSE BOILER #4 WITH DUCON MULTIVANE SCRUBBER	OKEE1	22.86	347.0	11.9	2.29	12.50	Yes	NA	NA
		BOILER #5 WITH SCRUBBERS	OKEE2	22.86	344.3	13.2	2.29	49.98	Yes	NA	NA
		BOILER # 6 FIRED BY BAGASSE AND NO. 6 FUEL OIL	OKEE3	22.86	355.4	11.7	2.29	30.23	Yes	NA	NA
		BOILER # 10, RATED @ 125000 #/HR STEAM WITH DUCON M/VANE SCR	OKEE4	22.86	338.7	16.8	2.29	43.05	Yes	NA	NA
		BOILER # 11 FIRED WITH BAGASSE AND NO. 6 FUEL OIL	OKEE5	22.86	335.9	19.2	2.29	29.18	Yes	NA	NA
		BOILER #12 WITH MECH COLLECTOR AND SCRUBBER	OKEE6	22.86	341.5	13.9	2.29	52.76	Yes	NA	NA
		BOILER #14 RATED AT 150000 LBS/HR STEAM WITH SCRUBBER & DUST	OKEE7	22.86	341.5	14.4	2.29	52.76	Yes	NA	NA
		BOILER #15 125000 LBS/HR STEAM WITH SCRUBBER & DUST COLLECTO	OKEE8	22.86	333.2	19.5	2.29	30.23	Yes	NA	NA
		BOILER #16 150000 LBS/HR STEAM, 205 MMBTU/HR	OKEE9	22.86	483.2	22.8	1.52	13.29	Yes	NA	NA
		Boiler #4 PSD Baseline	OKEEB4	22.90	333.0	7.4	2.29	-10.95	No	Yes	EXP
		Boiler #5 PSD Baseline	OKEEB5	22.90	333.0	12.1	2.29	-15.64	No	Yes	EXP
		Boiler #6 PSD Baseline	OKEEB6	22.90	334.0	8.7	2.29	-15.64	No	Yes	EXP
		Boiler #10 PSD Baseline	OKEEB10	22.90	334.0	10.4	2.29	-17.15	No	Yes	EXP
		Boiler #11 PSD Baseline	OKEEB11	22.90	342.0	9.9	2.29	-16.79	No	Yes	EXP
0990332	OKEELANTA COGENERATION PLANT ^b										
		715 MMBTU/HR COGENERATION BOILER NO. 1	OKEC1	60.66	419.3	15.9	3.05	9.01	Yes	Yes	CON

Table 4. Summary of SO₂ Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-5 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^c
				Height (m)	Temper. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
		715 MMBTU/HR COGENERATION BOILER NO. 2	OKEC2	60.66	419.3	15.9	3.05	9.01	Yes	Yes	CON
		715 MMBTU/HR COGENERATION BOILER NO. 3	OKEC3	60.66	419.3	15.9	3.05	9.01	Yes	Yes	CON
0550018	TAMPA ELECTRIC CO.:PHILLIPS STATION										
		SLOW SPEED DIESEL ELECTRIC GENERATOR UNIT 1 P	TECO1	45.72	441.5	24.1	1.83	57.87	Yes	NA	NA
		SLOW SPEED DIESEL ELECTRIC GENERATOR UNIT 2 P	TECO2	45.72	449.8	24.1	1.83	57.87	Yes	NA	NA

^a Facilities that operate only during the November 1 through May 31 crop season

^b Sugar mill sources that operate all year

^c NA= not applicable; CON= PSD increment consuming source; EXP= PSD increment expanding source

Table 5. Summary of PM10 Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses
(Replaces Table 6-6 from Air Permit Application)

Plant ID	Facility Name	UTM		Relative Location ^a				Maximum	Emissions	Included in AAQS?	Included in PSD Class II?
		Coordinates		X	Y	Distance	Direction	PM10	Threshold ^c		
		North	East					Emissions ^b	[(Dist. - SIA) X 20]		
		(km)	(km)	(km)	(km)	(km)	(deg.)	(TPY)			
1110051	RINKER/FT PIERCE/MIDWAY RD	3,028.0	559.8	0.17	-0.34	0.4	153	6	SIA	Yes	No
1110001	CONTINENTAL/FT PIERCE/CONCR BATCH PLNT	3,030.0	561.4	1.82	1.64	2.4	48	2	SIA	Yes	No
1110040	RANGER/FT PIERCE/PLNT#129	3,030.2	561.7	2.06	1.85	2.8	48	52	SIA	Yes	No
1110010	DICKERSON/ASPHALT PLNT#14	3,030.4	562.2	2.63	2.04	3.3	52	21	SIA	Yes	No
1110018	INDIAN RIVER FOODS	3,030.5	562.4	2.82	2.16	3.6	53	104	SIA	Yes	No
1110060	FLORIDA GAS TRANSMISSION/ST LUCIE/STA 20	3,035.8	557.2	-2.37	7.46	7.8	342	3	SIA	Yes	No
1110003	FT PIERCE UTIL/H D KING PWR PLNT	3,036.4	566.1	6.51	8.03	10.3	39	215	27	Yes	No
1110029	MARCONA OCEAN INDUSTRIES	3,037.7	566.1	6.53	9.38	11.4	35	44	49	No	No
1110071	FPL ST LUCIE NUCLEAR PLANT	3,025.0	573.9	14.25	-3.31	14.6	103	9	113	No	No
0610015	COUNTY LANDFILL	3,050.6	550.5	-9.11	22.28	24.1	338	42	301	No	No
0850015	AYCOCK FUNERAL HOME	3,008.4	573.5	13.89	-19.92	24.3	145	2	306	No	No
0610080	AMERICAN POWER TECH	3,051.1	550.7	-8.9	22.79	24.5	339	7	309	No	No
0610021	OCEAN SPRAY CRANBERRIES/VERO BEACH	3,051.3	550.6	-8.99	22.97	24.7	339	112	313	No	No
0850003	RINKER/STUART	3,007.3	574.1	14.51	-21.03	25.5	145	34	331	No	No
0850004	TARMAC/STUART	3,006.0	575.3	15.64	-22.35	27.3	145	17	366	No	No
0610003	RINKER MATERIALS	3,055.7	559.9	0.29	27.38	27.4	1	6	368	No	No
0610029	CITY OF VERO BEACH MUNICIPAL UTILITIES	3,056.5	561.4	1.79	28.18	28.2	4	758	385	Yes	Yes
0850012	BAY STATE MILLING	2,991.7	547.4	-12.21	-36.64	38.6	198	962	592	Yes	No
0850002	CAULKINS INDIANTOWN CITRUS	2,991.5	548.0	-11.63	-36.85	38.6	198	206	593	No	No
0850102	INDIANTOWN COGENERATION PLANT	2,990.7	547.7	-11.96	-37.62	39.5	198	291	610	No	No
0850001	FPL MARTIN POWER PLANT ^e	2,992.7	542.7	-16.93	-35.67	39.5	205	7,977	610	Yes	Yes
0850009	RINKER MATERIALS/INDIANTOWN	2,989.9	550.3	-9.31	-38.41	39.5	194	3	610	No	No
0850019	PIONEER CONCRETE TILE	2,991.7	583.7	24.07	-36.63	43.8	147	8	697	No	No
0990213	JUPITER MULCH, INC.	2,980.1	573.1	13.48	-48.21	50.1	164	10	821	No	No
0990226	TARMAC FLORIDA (WEST JUPITER PLANT)	2,976.3	571.7	12.09	-52.02	53.4	167	18	888	No	No
0990021	PRATT & WHITNEY AIRCRAFT	2,975.0	567.5	7.89	-53.32	53.9	172	120	898	No	No
0990185	SIKORSKY AIRCRAFT CORP. - JUPITER	2,975.0	567.5	7.89	-53.32	53.9	172	2	898	No	No
0990019	OSCEOLA FARMS	2,968.0	544.2	-15.41	-60.32	62.3	194	617	1065	No	No
0990331	OSCEOLA COGENERATION PLANT	2,968.0	544.0	-15.59	-60.32	62.3	194	123	1066	No	No
0990061	U.S. SUGAR CORP. BRYANT MILL	2,969.1	537.8	-21.78	-59.2	63.1	200	852	1082	No	No
0990025	RINKER MATERIALS (LAKE PARK)	2,964.5	591.9	32.29	-63.82	71.5	153	11	1250	No	No
0990234	SOLID WASTE AUTH OF PBC/NO CO RRF	2,961.3	584.5	24.88	-67.06	71.5	160	115	1251	No	No
0990344	PARKWAY ASPHALT (RIVIERA)	2,962.1	588.5	28.89	-66.22	72.2	156	7	1265	No	No
0990566	INDIAN TRAIL IMPROVEMENT DISTRICT - ACI	2,956.2	564.7	5.08	-72.16	72.3	176	22	1267	No	No
0990530	EAST COAST PAVING - LOXAHATCHEE PLANT	2,955.6	562.1	2.53	-72.76	72.8	178	12	1276	No	No
0990123	PHYSICAL DISTRIBUTION CENTER & OSF	2,961.2	589.7	30.09	-67.12	73.6	156	6	1291	No	No
0990120	RINKER MATERIALS (RIVIERA BEACH)	2,960.2	591.2	31.59	-68.12	75.1	155	1	1322	No	No
0990127	TARMAC AMERICA (MANGONIA PARK)	2,960.3	591.6	31.99	-68.02	75.2	155	13	1323	No	No
0990333	FGT STATION NO. 21 (WPB)	2,957.1	584.4	24.75	-71.25	75.4	161	3	1329	No	No

Table 5. Summary of PM10 Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses
(Replaces Table 6-6 from Air Permit Application)

Plant ID	Facility Name	UTM Coordinates		Relative Location ^a				Maximum PM10 Emissions ^b	Emissions Threshold ^c	Included in AAQS?	Included in PSD Class II?
		North (km)	East (km)	X (km)	Y (km)	Distance (km)	Direction (deg.)	[(Dist. - SIA) X 20]			
0990046	SUNBELT CEMENT (DBA)	2,960.7	594.0	34.39	-67.62	75.9	153	90	1337	No	No
0990084	SOUTHDOWN, INC. - RIVIERA BEACH	2,960.8	594.3	34.69	-67.52	75.9	153	9	1338	No	No
0990042	FPL RIVIERA POWER PLANT	2,960.6	594.3	34.64	-67.69	76.0	153	3,340	1341	Yes ^f	No
0990325	ROYAL PALM MEMORIAL GARDENS, INC.	2,960.2	593.4	33.79	-68.12	76.0	154	2	1341	No	No
0990305	NORTHWOOD FUNERAL HOME	2,960.1	593.8	34.19	-68.22	76.3	153	2	1346	No	No
0990056	ST. MARY'S HOSPITAL, INC.	2,959.7	593.0	33.39	-68.62	76.3	154	2	1346	No	No
0990529	PALM BEACH WOOD PRODUCTS INC.	2,952.1	563.5	3.92	-76.23	76.3	177	100	1347	No	No
0990348	PALM BEACH AGGREGATES, INC.	2,952.0	563.0	3.39	-76.32	76.4	177	83	1348	No	No
0990349	SFWM D PUMP STATION #S-5A	2,951.3	562.6	2.94	-77	77.1	178	35	1361	No	No
0990146	TRI-COUNTY CONCRETE (WPB)	2,953.9	583.9	24.29	-74.42	78.3	162	1	1386	No	No
0990026	SUGAR CANE GROWERS CO-OP ^u	2,953.3	534.9	-24.71	-75.02	79.0	198	1,829	1400	Yes ^f	No
0990583	MAGNUM ENV. SERVICES, INC. - WPB	2,952.0	580.2	20.59	-76.32	79.0	165	12	1401	No	No
0990087	WEST PALM PLANT	2,951.7	579.9	20.29	-76.62	79.3	165	14	1405	No	No
0990233	MARKS LANDSCAPING & PAVING	2,952.3	582.1	22.49	-76.02	79.3	164	38	1406	No	No
0990122	MASCHMEYER CONCRETE (WEST PALM BEACH)	2,952.4	583.0	23.39	-75.92	79.4	163	24	1409	No	No
0990082	S.E. PRESTRESSED CONCRETE	2,951.9	582.3	22.69	-76.42	79.7	163	37	1414	No	No
0990091	RINKER MATERIALS (CEN-CON, WPB)	2,951.2	580.3	20.73	-77.15	79.9	165	5	1418	No	No

^a The Tropicana Ft. Pierce facility is located at UTM Coordinates:
North 3028.3 km
East 559.6 km

^b The significant impact area (SIA) for the project is predicted to be 9 km

^c Sources with emission rates of <1 TPY were not included in modeling analysis.

^d Emission values taken from Title V Permit Application 6/15/1996

^e Emission values taken from Title V Air Operation Permit 5/18/1998

^f Large emission source beyond screening distance included in AAQS air modeling analysis

Table 6. Summary of PM₁₀ Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-7 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^b			
				Height (m)	Temp. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II				
1110051	RINKER/FT PIERCE/MIDWAY RD	31,100 BLK/DA CONC.BLOCK PLANT W/WT.HOPPER&CEM.STO.TO ENCLB 85TPH (210TPH DESIGN) BATCH PLANT W/CENTRAL BAGHOUSE	RINK1	13.72	298.7	8.8	0.24	0.003	Yes	No	NA			
			RINK2	3.66	298.2	3.7	1.07	0.026	Yes	No	NA			
1110001	CONTINENTAL/FT PIERCE/CONCR BATCH PLNT	READY MIX CONCRETE BATCH PLANT	CONT1	17.70	298.2	7.6	0.15	0.16	Yes	No	NA			
1110040	RANGER/FT PIERCE/PLNT#129	250T/HR [RECYCLE(50%)] DRUM MIX(S/N666-88A)	RANG1	7.00	435.9	51.5	0.76	6.3	Yes	No	NA			
1110010	DICKERSON/ASPHALT PLNT#14	275 TPH CONTIN. MIX ASPH.PLANT	DAP1	7.90	400.9	24.9	1.25	1.58	Yes	No	NA			
1110018	INDIAN RIVER FOODS	60,000 LB/HR PEEL DRYER W/ TWO (2) WASTE HEAT EVAPORATORS PELLET MILL COOLER	IRR07	28.96	333.2	10.1	1.46	3.85	Yes	NA	NA			
			IRF11	6.10	310.9	31.3	0.52	2.71	Yes	NA	NA			
1110060	FLORIDA GAS TRANSMISSION/ST LUCIE/STA 20	1500 BHP NAT GAS FIRED RECIP IC ENGINE #2001 1500 BHP NAT GAS FIRED RECIP IC ENGINE #2002 2000 BHP NAT GAS FIRED RECIP IC ENGINE #2003 2400 BHP NAT GAS FIRED RECIP IC ENGINE #2004 4000 BHP I.C.Reciprocating Engine & Assoc.Equip. #2005	FGT1	8.50	588.7	21.9	0.49	0.014	Yes	No	NA			
			FGT2	8.50	588.7	21.9	0.49	0.014	Yes	No	NA			
			FGT3	8.50	588.7	29.3	0.49	0.019	Yes	No	NA			
			FGT4	19.80	641.5	76.5	0.34	0.011	Yes	No	NA			
			FGT5	6.70	873.2	78.6	0.15	0.020	Yes	No	NA			
1110003	FT PIERCE UTIL/H D KING PWR PLNT	2.75 MW West Diesel #1 2.75 MW East Diesel #2 23.4 MW Combined Cycle Gas Turbine with 8.2 MW HRSG-Unit # 9 16.5 MW Boiler Unit #6 33.0 MW Boiler Unit #7 (Phase II Acid Rain Unit) 56.1 MW Boiler Unit #8 (Phase II Acid Rain Unit)	FTPU1	7.01	783.2	11.9	0.91	1.21	Yes	NA	NA			
			FTPU2	7.01	783.2	11.9	0.91	1.21	Yes	NA	NA			
			FTPU3	20.73	492.0	18.2	3.41	3.19	Yes	NA	NA			
			FTPU4	45.11	435.9	11.0	1.52	0.05	Yes	NA	NA			
			FTPU7	44.81	426.5	18.6	2.16	0.07	Yes	NA	NA			
			FTPU8	45.72	440.9	25.5	2.44	0.12	Yes	NA	NA			
			0610029	CITY OF VERO BEACH MUNICIPAL UTILITIES	Fossil Fuel Steam Generator Unit No.1 Fossil Fuel Steam Generator Unit No.2 Fossil Fuel Steam Generator Unit 3 (Phase II Acid Rain Unit) Fossil Fuel Steam Generator Unit 4 (Phase II Acid Rain Unit) Combined Cycle Gas Turbine Unit 5 (Phase II Acid Rain Unit)	VERO1	60.96	415.9	32.2	1.07	1.76	Yes	NA	NA
						VERO2	60.96	448.2	41.8	1.07	9.19	Yes	NA	NA
VERO3	60.96	445.4				20.9	1.83	5.17	Yes	NA	NA			
VERO4	60.96	412.6				23.7	2.13	8.63	Yes	NA	NA			
VERO5	38.10	416.5				19.4	3.35	1.44	Yes	Yes	CON			
0850012	BAY STATE MILLING	16.5 TPH WHEAT CLEANING PLANT PRECLEANING/HANDLING: PNEUMATIC CONVEYANCE SYSTEM	BAY02	6.40	298.2	22.6	0.70	10.40	Yes	NA	NA			
			BAY03	7.92	298.2	8.2	1.10	10.40	Yes	NA	NA			

Table 6. Summary of PM₁₀ Sources Included in the AAQS and PSD Class II Increment Analyses
(Replaces Table 6-7 from Air Permit Application)

Facility ID	Facility	Unit Name	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^b
				Height (m)	Temp. (K)	Velocity (m/s)	Diameter (m)		AAQS	Class II	
		PRECLEANING/HANDLING: 31.25 TPH BULK FLOUR HNDLG/STORAGE FAC	BAY04	5.18	298.2	4.0	0.70	3.94	Yes	NA	NA
		PRECLEANING/HANDLING: FEED STOR.&LOADOUT- 2 BINS(130,000 # EA	BAY07	20.12	298.2	3.0	0.30	0.00	Yes	NA	NA
		MILL HOUSE: 15 TPH FLOUR MILL W/PURIFIERS,DUSTERS &GEN.EXHAU	BAY08	6.40	298.2	10.7	0.70	1.89	Yes	NA	NA
		12.5 TPH Bran Grinding Hammermill with 8 Baghouses	BAY10	13.72	298.2	15.6	0.76	1.20	Yes	NA	NA
0850001	FPL MARTIN POWER PLANT										
		UNIT #1 STEAM GENERATOR-FRONT-FIRED- 863 MW MAX. CAPACITY	FPLM1	152.10	420.9	21.0	7.99	70.30	Yes	Yes	CON
		UNIT #2 STEAM GENERATOR-FRONT-FIRED- 863 MW CAPACITY	FPLM2	152.10	420.9	21.3	7.92	70.30	Yes	Yes	CON
		COMBINED CYCLE UNIT 3A,1 CT WITH 1 HT RCVY STEAM GENERATOR	FPLM3	64.92	410.9	18.6	6.10	7.64	Yes	Yes	CON
		COMBINED CYCLE UNIT 3B, 1 CT & 1 HRSG	FPLM4	64.92	410.9	18.6	6.10	7.64	Yes	NA	NA
		COMBINED CYCLE UNIT 4A-1CT WITH 1 HT RCVY STEAM GENERATOR	FPLM5	64.92	410.9	18.6	6.10	7.64	Yes	NA	NA
		COMBINED CYCLE UNIT 4B-1 CT WITH 1 HT RCVY STEAM GENERATOR	FPLM6	64.92	410.9	18.6	6.10	7.64	Yes	NA	NA
		Aux Blr PSD	MARTAUX	18.30	535.4	15.2	1.10	0.01	Yes	Yes	CON
		Diesel Gens PSD	MARTGEN	7.60	785.9	39.6	0.30	0.22	Yes	Yes	CON
		2 Simple Cycle CT	MARTCT5	18.30	853.2	37.6	6.17	4.28	Yes	Yes	CON
0990042	FPL RIVIERA POWER PLANT										
		Fossil Fuel Steam Generator, Unit 3 -Phase II Acid Rain Unit	FPLR3	90.83	401.5	26.9	4.88	115.29	Yes	NA	NA
		Fossil Fuel Steam Generator, Unit 4 -Phase II Acid Rain Unit	FPLR4	90.83	401.5	26.6	4.88	115.29	Yes	NA	NA
0990026	SUGAR CANE GROWERS CO-OP ^a										
		BOILER #1 WITH A 2 SCRUBBERS AND 1 STACK	SCGC1	45.72	337.6	21.6	1.31	10.52	Yes	NA	NA
		BOILER #2 WITH 2 SCRUBBERS AND 1 STACK	SCGC2	45.72	336.5	23.2	1.31	10.52	Yes	NA	NA
		BOILER #3 WITH SCRUBBER	SCGC3	27.43	341.5	15.8	1.62	7.20	Yes	NA	NA
		BOILER #4 WITH CYCLONES AND 3 SCRUBBERS WITH ONE STACK	SCGC4	33.53	337.6	8.2	2.90	14.41	Yes	NA	NA
		BOILER #5 WITH CYCLONES, TWO SCRUBBERS, AND ONE STACK	SCGC5	45.72	341.5	12.3	2.13	13.83	Yes	NA	NA
		504 MMBTU/HR BOILER # 8 RESIDUE/BAGASSE/OIL P	SCGC8	47.24	344.8	9.1	2.90	9.53	Yes	NA	NA

^a Facility operates only during the November 1 through May 31 crop season^b NA= not applicable; CON= PSD increment consuming source; EXP= PSD increment expanding source

Table 7. Summary of all NO_x Emitting Facilities in the Vicinity of Tropicana Fort Pierce for Inclusion in the AAQS and PSD Class II Air Modeling Analyses

Plant ID	Facility Name	Source Location		Relative Location ^a				NO _x Emissions	Q Emissions	Included in AAQS	Included in PSD Class II?
		North	East	X	Y	Distance	Direction	Rate	Threshold ^b		
		(km)	(km)	(km)	(km)	(km)	(deg.)	(TPY)	(20 x Distance)		
1110050	HAISLEY-HOBBS FUNERAL HOME	3,034.4	563.7	4.1	6.1	7.3	34	2	146	No	No
1110060	FLORIDA GAS TRANSMISSION/ST LUCIE/STA 20	3,035.8	557.2	-2.4	7.5	7.8	342	664	157	Yes	No
1110046	ATLANTIC COAST RECYCLING	3,036.5	562.7	3.1	8.2	8.8	21	1	175	No	No
1110003	FT PIERCE UTIL/H D KING PWR PLNT	3,036.4	566.1	6.5	8.0	10.3	39	2,462	207	Yes	No
1110029	MARCONA OCEAN INDUSTRIES	3,037.7	566.1	6.5	9.4	11.4	35	11	229	No	No
1110071	FPL ST LUCIE NUCLEAR PLANT	3,025.0	573.9	14.3	-3.3	14.6	103	99	293	No	No
0610015	COUNTY LANDFILL	3,050.6	550.5	-9.1	22.3	24.1	338	83	481	No	No
0610080	AMERICAN POWER TECH	3,051.1	550.7	-8.9	22.8	24.5	339	87	489	No	No
0850006	MARTIN MEMORIAL HEALTH SYSTEMS	3,008.7	574.2	14.6	-19.7	24.5	143	8	490	No	No
0610021	OCEAN SPRAY CRANBERRIES/VERO BEACH	3,051.3	550.6	-9.0	23.0	24.7	339	30	493	No	No
0610016	VERO BEACH CITRUS PACKERS	3,054.2	560.6	1.0	25.9	25.9	2	2	518	No	No
0610029	CITY OF VERO BEACH MUNICIPAL UTILITIES	3,056.5	561.4	1.8	28.2	28.2	4	3,171	565	Yes	Yes
0850002	CAULKINS INDIANTOWN CITRUS	2,991.5	548.0	-11.6	-36.9	38.6	198	16	773	No	No
0850129	AMERICAN POWER TECH/INDIANTOWN	2,990.8	549.1	-10.6	-37.5	39.0	196	10	779	No	No
0850102	INDIANTOWN COGENERATION PLANT	2,990.7	547.7	-12.0	-37.6	39.5	198	2,583	790	Yes	Yes
0850001	FPL MARTIN POWER PLANT	2,992.7	542.7	-16.9	-35.7	39.5	205	31,110	790	Yes	Yes
0990213	JUPITER MULCH, INC.	2,980.1	573.1	13.5	-48.2	50.1	164	26	1001	No	No

^a The Tropicana Ft. Pierce facility is located at UTM Coordinates:

North	3028.3 km
East	559.6 km

^b The significant impact area (SIA) determined by modeling equals 3 km

Table 8. Summary of NO₂ Sources Included in the AAQS and PSD Class II Air Modeling Analysis

Facility ID	Facility	Units	Modeling ID Name	Stack Parameters				Emission Rate (g/s)	Modeled in		PSD Source Type (EXP/CON) ^b
				Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)		AAQS	Class II	
1110060	Florida Gas Transmission/St. Lucie/Sta. 20	1500 BHP NAT GAS FIRED RECIP IC ENGINE #2001	FGT1	8.53	0.49	588.7	21.9	4.67	Yes	NA	NA
		1500 BHP NAT GAS FIRED RECIP IC ENGINE #2002	FGT2	8.53	0.49	588.7	21.9	4.67	Yes	NA	NA
		2000 BHP NAT GAS FIRED RECIP IC ENGINE #2003	FGT3	8.53	0.49	588.7	29.3	6.24	Yes	NA	NA
		2400 BHP NAT GAS FIRED RECIP IC ENGINE #2004	FGT4	19.81	0.34	641.5	76.5	1.34	Yes	NA	NA
		4000 BHP I.C.Reciprocating Engine & Assoc.Equip. #2005	FGT5	6.71	0.15	873.2	78.6	2.19	Yes	NA	NA
1110003	Ft. Pierce Utilities/H D King Power Plant	2.75 MW West Diesel #1	FPU1	7.01	0.91	783.2	11.9	11.29	Yes	NA	NA
		2.75 MW East Diesel #2	FPU2	7.01	0.91	783.2	11.9	11.29	Yes	NA	NA
		23.4 MW Combined Cycle Gas Turbine with 8.2 MW HRSG-Unit # 9	FPU3	20.73	3.41	492.0	18.2	17.10	Yes	NA	NA
		16.5 MW Boiler Unit #6	FPU4	45.11	1.52	435.9	11.0	0.17	Yes	NA	NA
		33.0 MW Boiler Unit #7 (Phase II Acid Rain Unit)	FPU7	44.81	2.16	426.5	18.6	13.15	Yes	NA	NA
		56.1 MW Boiler Unit #8 (Phase II Acid Rain Unit)	FPU8	45.72	2.44	440.9	25.5	17.89	Yes	NA	NA
0610029	Vero Beach Power	Fossil Fuel Steam Generator Unit No.1	VERO1	60.96	1.07	415.9	32.2	13.58	Yes	No	NA
		Fossil Fuel Steam Generator Unit No.2	VERO2	60.96	1.07	448.2	41.8	16.68	Yes	No	NA
		Fossil Fuel Steam Generator Unit 3 (Phase II Acid Rain Unit)	VERO3	60.96	1.83	445.4	20.9	28.06	Yes	No	NA
		Fossil Fuel Steam Generator Unit 4 (Phase II Acid Rain Unit)	VERO4	60.96	2.13	412.6	23.7	25.89	Yes	No	NA
		Unit 5 Simple Cycle CT	VERBU5	38.10	3.35	416.5	19.6	9.95	Yes	Yes	CON
0850102	Bechtel Indiantown	Pulverized Coal Main Boiler	INDTWN1	150.88	4.88	333.2	28.4	73.33	Yes	Yes	CON
		(2) Auxiliary Boilers	INDTWN3	64.01	1.52	449.8	26.7	9.02	Yes	Yes	CON
0850001	FPL Martin	Units 3 & 4	MART34	64.92	6.10	410.9	18.6	89.21	Yes	Yes	CON
		2 Simple Cycle CTs	MARTCT5	18.30	6.71	853.2	37.6	93.39	Yes	Yes	CON
		Unit 1 & 2 PSD Baseline	MART12B	152.10	9.14	472.0	17.8	-104.8	No	Yes	EXP

^a Facility operates only during the November 1 through May 31 crop season^b NA = not applicable; CON = PSD increment consuming source; EXP = PSD increment expanding source

Table 9. Maximum Pollutant Impacts Predicted for All Future Modeled Sources
AAQS Analysis, Screening Receptor Grid (Replaces Table 7-1 from Air Permit Application)

Pollutant/ Averaging Time	Concentration ^a (ug/m ³)	Receptor Location ^b		Time Period (YYMMDDHH) ^c
		Direction (degrees)	Distance (m)	
SO₂				
Highest Annual	29.1	300	661	87123124
	26.3	300	661	88123124
	30.5	305	576.8	89123124
	34.2	300	661	90123124
	33.0	300	661	91123124
HSH 24-Hour ^d	208	227.2	597.5	87102324
	216	340	600	88112724
	186	310	600	89072124
	211	237.4	749.5	90042024
	224	232.3	678.5	91102924
HSH 3-Hour ^d	484	227.2	597.5	87110124
	580	55	472.1	88041112
	523	210.2	482.3	89013115
	538	220	600	90061318
	571	311.6	498.5	91072412
PM₁₀				
Highest Annual	13.3	144	313.6	87123124
	15.6	144	313.6	88123124
	14.0	144	313.6	89123124
	12.4	305	576.8	90123124
	14.1	144	313.6	91123124
HSH 24-Hour ^d	87	144	313.6	87112824
	97	144	313.6	88070324
	81	347.7	340.3	89123124
	95	144	313.6	90110524
	102	125.6	310.4	91122924
NO₂				
Highest Annual	4.08	305	576.8	87123124
	4.30	305	576.8	88123124
	4.31	305	576.8	89123124
	4.56	305	576.8	90123124
	4.63	305	576.8	91123124

^a Based on the highest concentration predicted using surface and upper air meteorological data from the National Weather Service (NWS) station in West Palm Beach from 1987 to 1991.

^b Relative to northwest corner of Feed Mill Building

^c YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

^d HSH = Highest, second-highest concentration

Table 10. Maximum Total Air Quality Impacts Predicted for All Future Modeled Sources and Background Concentrations
AAQS Analysis, Refined Receptor Grid (Replaces Table 7-2 from Air Permit Application)

Pollutant/ Averaging Time	Concentration (ug/m ³)			Receptor Location ^b		Time Period (YYMMDDHH) ^c	Florida AAQS (ug/m ³)
	Total	Contribution From		Direction (degree)	Distance (m)		
		Modeled Sources	Background ^d				
SO₂							
Highest Annual	39.3	34.3	5	302	700	90123124	60
HSH 24-Hour ^d	258.3	224.3	34	232.3	700	91102924	260
HSH 3-Hour ^d	617	580	37	55	472.1	88041112	1,300
	608	571	37	310	500	91070615	
PM₁₀							
Highest Annual	35.6	15.6	20	144.0	313.6	88123124	50
HSH 24-Hour ^d	141	102	39	125.6	310.4	91122924	150
NO₂							
Highest Annual	29.6	4.63	25	305	576.8	90123124	100

^a Background concentrations obtained from air quality monitoring data from FDEP stations in Palm Beach and St. Lucie Counties. The highest, second highest short-term and highest annual concentrations from 1998 and 1999 were assumed to represent concentrations for those sources not explicitly modeled.

^b Relative to northwest corner of Feed Mill Building

^c YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

^d HSH = Highest, second-highest concentration

Table 11. Maximum Pollutant Impacts Predicted for PSD Increment Affecting Sources
PSD Class II Increment Analysis, Screening Receptor Grid

Pollutant/ Averaging Time	Concentration ^a (ug/m ³)	Receptor Location ^b		Time Period (YYMMDDHH) ^c
		Direction (degrees)	Distance (m)	
<u>SO₂</u>				
Highest Annual	7.3	300	661	87123124
	6.4	300	661	88123124
	7.7	305	576.8	89123124
	8.6	300	661	90123124
	8.3	300	661	91123124
HSH 24-Hour ^d	69	300	661	87061924
	61	310	800	88112024
	64	310	600	89072124
	70	300	800	90012024
	65	305	576.8	91050524
HSH 3-Hour ^d	176	20.9	356.8	87091812
	188	305	576.8	88072015
	191	160.5	346.9	89102612
	185	144	313.6	90080212
	207	95.1	390.3	91071312
<u>PM₁₀</u>				
Highest Annual	4.4	305	576.8	87123124
	4.5	144	313.6	88123124
	5.0	311.6	498.5	89123124
	5.2	305	576.8	90123124
	4.9	305	576.8	91123124
HSH 24-Hour ^d	17.6	300	661	87061924
	15.6	310	800	88112024
	15.7	310	600	89072124
	18.0	300	800	90012024
	16.8	305	576.8	91050524
<u>NO₂</u>				
Highest Annual	2.66	300	661	87123124
	2.36	305	576.8	88123124
	2.83	305	576.8	89123124
	3.16	305	576.8	90123124
	3.02	300	661	91123124

^a Based on the highest concentration predicted using surface and upper air meteorological data from the National Weather Service (NWS) station in West Palm Beach from 1987 to 1991.

^b Relative to northwest corner of Feed Mill Building

^c YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

^d HSH = Highest, second-highest concentration

Table 12. Maximum Pollutant Impacts Predicted for PSD Increment Affecting Sources
PSD Class II Increment Analysis, Refined Receptor Grid

Pollutant/ Averaging Time	Concentration (ug/m ³)	Receptor Location ^a		Time Period (YYMMDDHH) ^b	PSD Class II Increment (ug/m ³)
		Direction (degree)	Distance (m)		
SO₂					
Highest Annual	8.6	300	661	90123124	20
HSH 24-Hour ^c	70.1	302	600	87061924	91
	70.1	300	800	90012024	
HSH 3-Hour ^c	207	95.1	390.3	91071312	512
PM₁₀					
Highest Annual	5.2	305	576.8	90123124	17
HSH 24-Hour ^c	17.6	302	700	87061924	30
	18.0	300	800	90012024	
NO₂					
Highest Annual	3.2	305	576.8	90123124	25

^a Relative to northwest corner of Feed Mill Building

^b YYMMDDHH = Year (YY, last two digits), Month (MM), Day (DD), Hour Ending (HH)

^c HSH = Highest, second-highest concentration

**CORRECTED TABLES WITH
TYPOGRAPHICAL ERRORS**

Table 2-4. Actual and Potential Emissions (PM, CO, NO_x and SO₂) from Peel Dryers at Tropicana Products, Inc. Fort Pierce Plant

Pollutant	Units	Actual Gas ^a	Future Potential			Difference
			Gas ^b	Oil ^c	Total ^d	
Particulate Matter	lb/hr/dryer	5.3	32.4	32.4		
	lb/hr/plant	10.6	64.7	64.7		
	tons/year	16.8	198.1	93.2	198.1	181.3
Carbon Monoxide	lb/hr/dryer	270.0	270.0	270.0		
	lb/hr/plant	540.0	540.0	540.0		
	tons/year	857.6	1,652.4	777.6	1652.40	794.82
Nitrogen Oxides	NO _x (lb/mmBtu)	0.1	0.1	0.367		
	lb/hr/dryer	8.2	8.2	30.8		
	lb/hr/plant	16.5	16.5	61.6		
	tons/year	26.2	50.4	88.7	115.35	89.19
Sulfur Dioxide	SO ₂ (lb/mmBtu)	0.003	0.0	1.5		
	lb/hr/dryer	0.2	0.2	125.9		
	lb/hr/plant	0.5	0.5	251.9		
	tons/year	0.7	1.4	362.7	363.50	362.75

^a 3,176 full-load hours based on 1999-2000 fruit season; PM based on last two years stack tests; CO based on previous stack tests; NO_x based on gas-firing based on AP-42 Emission Factors (Tables 1.4-1); SO₂ based on using 1 grain/100 scf

^b 6,120 full-load hours based on 255 days and 24-hours/day; PM based on process weight table; CO based on previous stack tests; NO_x based on gas-firing based on AP-42 Emission Factors (Tables 1.4-1); SO₂ based on using 1 grain/100 scf

^c 2,880 full-load hours based on 120 days and 24-hours/day; PM based on process weight table; CO based on previous stack tests; NO_x based on oil-firing using AP-42 Emission Factors (Tables 1.3-1); SO₂ based on using 1.5% sulfur No. 5 fuel oil and AP-42 Emission Factors

^d 2,880 hours oil-firing and 3,240 hours gas-firing

Table 2-8. Maximum Potential Emissions Increase for Extractor Addition at Tropicana Products, Inc. Fort Pierce Plant

	Peel Dryers	Pellet Mill	Boilers	Total
Particulate Matter	181.3	14.7	21.16	217.1
Carbon Monoxide	794.8		26.71	821.5
Nitrogen Oxides	89.2		91.48	180.7
Sulfur Dioxide	362.7		274.48	637.2
Volatile Organic Compounds	See Note a	See Note a	1.69	5,701.3

Note a - VOC emissions based on estimate of total oil in fruit and shown in total column.

Table 2-9. Stack Parameters and Oil-Fired Emissions for Tropicana Products, Inc. Fort Pierce Plant (English Units)

Description	Emission Units I.D. Number	Stack Parameters				Emissions (lb/hr) - Oil			
		Height (ft)	Diameter (ft)	Velocity (ft/sec)	Temperature (°F)	PM	SO ₂	NO _x	CO
Dryer No. 1	001	95	3.17	63.30	140	32.37	125.95	30.79	270.00
Dryer No. 2	004	95	3.17	63.30	140	32.37	125.95	30.79	270.00
Boiler No. 1	002	60	2	135.30	592	7.18	95.06	23.24	2.11
Boiler No. 2	003	60	2	135.30	592	7.18	95.06	23.24	2.11
Package Boiler	006	60	2	41.91	450	0.03	0.05	1.67	1.40
Pellet Coolers ^a	007	20	4	26.53	90	10.00	0.00	0.00	0.00

^a the exhaust from the pellet coolers is horizontal out the side of the citrus feed building.

Table 3-3. Maximum Emissions Due to the Proposed Addition of Extractors for Tropicana Fort Pierce Plant Compared to the PSD Significant Emission Rates

Pollutant	Pollutant Emissions (TPY)		PSD Review
	Potential Emissions from Proposed Facility ^a	Significant Emission Rate	
Sulfur Dioxide	637	40	Yes
Particulate Matter [PM (TSP)]	217	25	Yes
Particulate Matter (PM ₁₀)	217	15	Yes
Nitrogen Dioxide	181	40	Yes
Carbon Monoxide	822	100	Yes
Volatile Organic Compounds	4,530	40	Yes
Lead	NEG	0.6	No
Sulfuric Acid Mist ^a	8.5	7	Yes
Total Fluorides	NEG	3	No
Total Reduced Sulfur	NEG	10	No
Reduced Sulfur Compounds	NEG	10	No
Hydrogen Sulfide	NEG	10	No
Mercury	NEG	0.1	No
MWC Organics (as 2,3,7,8-TCDD)	NEG	0.0000035	No
MWC Metals (as Be, Cd)	NEG	15	No
MWC Acid Gasser (as HCl)	NEG	40	No

Note: NEG = Negligible.

^a Based on SO₂ emissions and AP-42 Emission factors for SO₃ (Table 1.3-1).

Kahn, Joseph

From: Kosky, Ken [KKosky@GOLDER.com]
Sent: Friday, December 08, 2000 3:05 PM
To: Holladay, Cleve
Cc: Kahn, Joseph; Linero, Alvaro; Douglas. Foster (E-mail); scott.davis@tropicana.com; Marks, Steve
Subject: Tropicana Products, Inc. - Fort Pierce

Cleve: This correspondence provides information requested by voice mail on December 8, 2000 related to the operation of the Tropicana Products, Inc Fort Pierce Plant during the baseline period. The Fort Pierce Plant was permitted and operated prior to the major baseline. Yesterday I transmitted by facsimile copies of the original construction permits for Peel Dryers Nos. 1 and 2, and Process Stem Boilers Nos. 1 and 2. The plants first full season was 1974-75. During the baseline period (prior to the minor source baseline date) the plant operated over a period of 32 weeks from the first week in December through the second week of July. The average production was about 300,000 boxes of fruit per week.

Over the last five years the season has ranged from 30 to 35 weeks with an average of 32.8 weeks. The typical season is from the second week of November through the second week of July. The production has averaged 474,000 boxes of fruit per week over the last 5 fruit seasons. The 1999-2000 season occurred over a period of 35 weeks (second week in November through second week of July) with an average production of 567,000 boxes of fruit per week.

The application was based on the capacity of the dryers and the operation at full potential would be a period of 36.4 weeks. This was an artifact of the potential production rate and not reflective of an increased season. However, it is important to note that for the sources in the baseline, the Rules in 62-212 determine the basis of emissions for both the long-term and short-term increment consumption. Specifically, Rule 62-212.400(4)(b)3.a. provides two distinct methods for consideration of increment consumption. These are listed below:

a. Except as provided under Rules 62-212.400(4)(b)3.b. through d., F.A.C., the baseline emissions shall be the actual emissions representative of all facilities in existence on the applicable minor source baseline date which are located within the baseline area or have a significant impact on the baseline area.

(i) On an annual basis, the actual emissions representative of a facility shall be the sum of the actual emissions of each emissions unit within the facility.

(ii) On a short-term basis, the actual emissions representative of a facility shall be the sum of the normal maximum emissions of each emissions unit within the facility, where normal maximum emissions are the emissions that would occur for each applicable averaging time if a emissions unit were operated at the lesser of its maximum or federally enforceable permitted capacity, using the normal types and amounts of fuels or materials processed, and operated for the lesser of the normal or federally enforceable permitted number of hours per day.

In case of the long term baseline emissions comparison, the boxes of fruit was used to estimate emissions since records for emissions as well as annual reporting requirements did not exist. Further, emission rates were used based on current emissions so that the differential from potential would be conservatively estimated. For example, the current PM emission rates for the dryers were used to estimate emissions during the baseline years. These emission rates are quite low (4 times lower) compared to the potential PM emissions based on the process weight table. In addition, the long-term emission estimates were based on the maximum throughput from the dryers which would in effect limit the potential of the facility. This also produces a conservative result.

In the case of the short-term baseline emission comparison, the Department's Rule is based on "normal maximum emissions and hours per day" for "each applicable averaging time" unless restricted by a federally enforceable capacity or hours per day limit. The emission units in the baseline (Dryer No. 1, Pellet Mill and Process Steam Boilers No. 1 and 2) did not have a federally enforceable limits on production or in hours or operation per day during the baseline period. Indeed, the capacity for these unit have not changed form the original baseline period nor has the operation changed substantially in terms of their normal operation. Operation during the baseline period was typically 24-hours per day to accommodate the incoming fruit. It should be noted that during the baseline period the maximum weekly production was over 500,000 boxes per week during some periods.

Please call if you have any questions.

Regards, Ken

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