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Mr. RIchard Coyle, Director of Operations Tropicana Products, Inc. 6500 Glades Cutoff Road	
Ft. Pierce, Florida 34981	3. Service Type DYCArtified Mail
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

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FEB 04 2002

4 APT-APB

BUREAU OF AIR REGULATION

Mr. C.H. Fancy, P.E. Florida Department of Environmental Protection 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Thank you for sending the Technical Evaluation and Determination and draft Air Construction Permit (PSD-FL-303A) for addition of a boiler at the Tropicana Products citrus juice processing facility in Ft. Pierce, Florida. We have no comments on the evaluation or on the permit.

If you have any questions regarding this letter, please call Jim Little at 404-562-9102.

Sincerely,

Chief

Air Permits Section

Florida Department of Environmental Protection

TO:

Howard Rhodes

FROM:

Clair Fancy & 18

DATE:

January 23, 2002

SUBJECT:

Tropicana Products, Inc.

1110004-004-AC, PSD-FL-303A

Dual Fuel Boiler

Attached for approval and signature is a final air construction permit for the installation of a dual fuel boiler at Tropicana's existing Ft. Pierce facility. BACT is applicable to this project because the nitrogen oxides emissions exceed the significant emissions increase of 40 tons per year. Case-by-case MACT was not applicable to this project.

The applicant did not seek any relaxation in currently enforceable conditions in its other existing emissions units.

No comments were received during the public comment period.

I recommend your approval and signature.

March 11, 2002 is day 90 day.

Attachments

/es

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICE OF FINAL PERMIT

In the Matter of an Application for Permit by:

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

DEP File No. 1110004-004-AC, PSD-FL-303A Additional Process Steam Boiler St. Lucie County

Enclosed is Final Permit Number 1110004-004-AC, PSD-FL-303A. This permit authorizes Tropicana Products, Inc. to install an additional process steam boiler at its existing facility located at 6500 Glades Cutoff Road, Ft. Pierce, St. Lucie County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Fihal permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of to the person(s) listed:

Mr. Richard Coyle, Tropicana Products, Inc.*

Mr. Ken Kosky, P.E., Golder

Mr. Tom Tittle, DEP Southeast District

Mr. Gregg Worley, EPA Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

1 APPLICANT NAME AND ADDRESS

Tropicana Products, Inc. 6500 Glades Cutoff Road Ft. Pierce, Florida 34981

Authorized Representative: Richard Coyle, Director of Operations, Ft. Pierce Facility

2 PROJECT

The project is the installation of a process steam boiler to Tropicana's existing citrus processing facility in Ft. Pierce, St. Lucie County. The project description, emissions, and rule applicability are described in detail in Section I of the permit.

3 SOURCE IMPACT ANALYSIS

As discussed in more detail in Section I of the permit, the annual potential emissions associated with this project are: PM/PM₁₀, 6.15; SO₂, 21.75, NOx, 41.91; CO, 80.41; VOC, 2.36; and sulfuric acid mist, 1.08 tons per year. An impact analysis was required for this project because it is subject to the requirements of PSD for these pollutants based on the NOx emissions increase.

3.1 AIR QUALITY ANALYSIS INTRODUCTION

The proposed project will increase emissions of one regulated pollutant at a level in excess of PSD significant amounts, NOx. PM₁₀, SO₂ and NO₂ are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, and significant impact levels defined for them. CO is a criteria pollutant and has only AAQS and significant impact levels defined for it. Sulfuric acid mist is a non-criteria pollutant and has no AAQS or PSD increments defined for it; therefore, only a qualitative analysis of the impacts of this pollutant was done.

This project was determined to be contemporaneous with the addition of 16 juice extractors at the facility (Permit No. 1110004-003-AC, PSD-FL-303). Therefore, the modeled impacts for the steam boiler were added to the impacts determined in the aforementioned permit for comparison to AAQS and applicable PSD increments. The applicant's initial Class II PM₁₀, SO₂ and NO₂ analyses of the project revealed no significant impacts in the area surrounding the proposed facility; therefore, full impact Class II AAQS and PSD Class II increment were not required. The applicant was asked to demonstrate compliance with the 24-hour SO₂ AAQS and when reviewed by the Department, was determined to be in compliance.

No impacts on the Everglades National Park were calculated since the project is located 180 km north of this Class I area.

Based on these required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A more detailed discussion of the required analyses follows.

3.2 ANALYSIS OF EXISTING AIR QUALITY

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimis ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimis ambient concentration. If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling. No de minimis ambient concentration is provided for ozone. Instead the net emissions increase of VOC is compared to a de minimis monitoring emission rate of 100 tons per year. The table below shows maximum project air quality impacts for comparison to these de minimis levels.

MAX	MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE DE MINIMIS LEVELS					
Pollutant	Averaging Time	Maximum Predicted Impact (µg/m³)	Impact Greater than De Minimis (Yes/No)	De Minimis Level (μg/m³)		
PM10	24-hr	1.4	NO	10		
CO	8-hr	30	NO	575		
NO ₂	Annual	0.8	NO	14		
$\overline{SO_2}$	24-hour	4.8	NO	13		
VOC	Annual Emission Rate	2 TPY	NO	100 TPY		

As shown in the table, all regulated pollutants are predicted to be less than the de minimis levels; therefore, preconstruction monitoring is not required for these pollutants.

3.3 MODELS AND METEOROLOGICAL DATA USED IN THE AIR QUALITY ANALYSIS

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project will not exceed the good engineering practice (GEP) stack height criteria.

Meteorological data used in the ISCST3 model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) station at West Palm Beach, Florida. The 5-year period of meteorological data was from 1987 through 1991. This NWS station was selected for use in the study because it is the closest primary weather station

to the study area and is most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Because five years of data are used in ISCST3, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments as requested by the Department. For the annual averages, the highest predicted annual average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

3.4 SIGNIFICANT IMPACT ANALYSIS

Preliminary modeling is performed using only the proposed project's worst-case emission scenario for each pollutant and applicable averaging time. Over 700 receptors were placed along the facility's restricted property line and out to 80 km from the facility, which is located in a PSD Class II area. Modeling refinements were done, as needed, by using a polar receptor grid with a maximum spacing of 100 m along each radial and an angular spacing between radials of one or two degrees. For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts due to the project were predicted in the vicinity of the facility. In the event that the maximum predicted impact of a proposed project is less than the appropriate significant impact level, a full impact analysis for that pollutant is not required. Full impact modeling is modeling that considers not only the impact of the project but also other major sources, including background concentrations, located within the vicinity of the project to determine whether all applicable AAQS or PSD increments are predicted to be met for that pollutant. Consequently, a preliminary modeling analysis, which shows an insignificant impact, is accepted as the required air quality analysis (AAQS and PSD increments) for that pollutant and no further modeling for comparison to the AAQS and PSD increments is required for that pollutant. The table below shows the results of this modeling. The radius of significant impact, if any, for each pollutant and applicable pollutant averaging time is also shown in the tables below.

MAXI		CT AIR QUALITY IN ANT IMPACT LEV			
Pollutant	Averaging Time	Maximum Predicted Impact (μg/m³)	Significant Impact Level (μg/m³)	Significant Impact? (Yes/No)	Radius of Significant Impact (km)
PM ₁₀	Annual	0.1	1	NO	
	24-hr	1.4	5	NO	
SO ₂	Annual	0.4	1	NO	
	24-hour	4.8	5	NO	
	3-hour	10.0	25	NO	
СО	8-hr	30	500	NO	
	l-hr	65	2,000	NO	
NO ₂	Annual	0.8	1	NO	

As shown in the tables the maximum predicted air quality impacts due to all regulated pollutant emissions from the proposed project are less than the PSD significant impact levels in the vicinity of the facility. Therefore, the applicant was not required to do full impact modeling in the vicinity of the facility. However, since maximum predicted 24-hour SO₂ impacts due to the aforementioned 16 juice extractor project (PSD-FL-303) were very close to the AAQS, the Department requested that the applicant demonstrate compliance with the 24-hour SO₂ AAQS by modeling all Tropicana sources as well as

surrounding SO₂ emitting sources in a request for additional information. The applicant demonstrated compliance with AAQS to the Department.

4 BACT DETERMINATIONS

4.1 Available Information

The applicant reviewed recent BACT determinations posted in EPA's RACT/BACT/LAER Clearinghouse for use in the BACT analysis. A list of recent determinations regarding similar projects in the United States is provided in the following table.

TABLE 3A: RECENT NO $_{\rm X}$ EMISSION LIMIT PROPOSALS AND DETERMINATIONS FOR NATURAL GAS-FIRED INDUSTRIAL BOILERS, LESS THAN 100 MMBTU/HR

Project Location	Permit Date	Capacity (MMBtu/Hr)	Emission Limits		Control Equipment/Description
Shell Offshore, Inc., AL	10/25/89	48.2	4.8	lb/hr	Low NOx Burners
Huls America, AL	8/31/90	38.9	0.075	lb/MMBtu	Low NOx Burners
Champion International Corporation, AL	5/8/91	5.83	0.05	lb/MMBtu	Flue Gas Recirculation
Anniston Army Depot. AL	6/19/97	13.4	0.03	lb/MMBtu	Low NOx Burners, Clean Fuel
Anniston Army Depot, AL	6/19/97	11.7	0.03	lb/MMBtu	Low NOx Burners, Clean Fuel
Intel Corporation, AZ	4/10/94	50			Low NOx Burners
Toma-Tek Inc., CA	3/1/89	90	3.05	lb/hr	Low NOx Burners, Good Combustion Practices
Sunland Refinery, CA	9/24/92	12.6	0.036	lb/MMBtu	Low NOx Burner and FGR
American Soda, LLP, Parachute Facility,	5/6/99	80.8	0.05	lb/MMBtu	Low NOx Combustion System
CO Orange Cogeneration, L.P., FL	12/30/93	100	0.13	lb/MMBtu	Low NOx Burners
Mid-Georgia Cogeneration, GA	4/3/96	60	0.1	lb/MMBtu	Dry Low NOx Burner with FGR
Naturalgas Pipeline Company, IL	3/1/89	8.4	0.1	lb/MMBtu	
Waupaca Foundry - Plant 5, IN	1/19/96	93.9	6.94	lb/hr	Low NOx Burners
I/N Kote, IN	11/20/89	70.8	0.05	lb/MMBtu	Flue Gas Recirculation and Fuel Selection
General Electric Company, IN	9/17/89	93	0.133	lb/MMBtu	Staged Combustion Air & Low Excess Air
Toyota Motor Corporation Services of	8/9/96	58	0.1	lb/MMBtu	Low NOx Burners and Fuel Selection
N.A., IN Transamerican Refining Corporation	1/15/93	1.2	0.14	lb/hr	Good Combustion Practices
	2/13/98	95	0.05	lb/MMBtu	Low NOx Burners
Indelk Energy Services of Otsego, MI	3/16/93	99	0.06	lb/MMBtu	Flue Gas Recirculation
Fulton Cogeneration Associates, NY	1/29/90	90	0.14	lb/MMBtu	Combustion Control
Kamine/Besicorp Corning L.P., NY	11/5/92	33.5	0.32	lb/MMBtu	Low NOx Burner and FGR
Kamine/Besicorp Syracuse L.P., NY	12/10/94	33	0.035	lb/MMBtu	Induced Flue Gas Recirculation
Kamine/Besicorp Syracuse L.P., NY	12/10/94	2.5	0.12	lb/MMBtu	No Controls
Indek - Yerkes Energy Services, NY	6/24/92	99	0.2	lb/MMBtu	No Controls
CNG Transmission Corporation, WV	5/3/93	10	140	lb/MMcf	
N.A., IN Transamerican Refining Corporation (TARC), LA Air Liquide America Corporation, LA Indelk Energy Services of Otsego. MI Fulton Cogeneration Associates, NY Kamine/Besicorp Coming L.P., NY Kamine/Besicorp Syracuse L.P., NY Indek - Yerkes Energy Services, NY	1/15/93 2/13/98 3/16/93 1/29/90 11/5/92 12/10/94 12/10/94 6/24/92	1.2 95 99 90 33.5 33 2.5	0.14 0.05 0.06 0.14 0.32 0.035 0.12	Ib/hr Ib/MMBtu Ib/MMBtu Ib/MMBtu Ib/MMBtu Ib/MMBtu Ib/MMBtu Ib/MMBtu	Good Combustion Practices Low NOx Burners Flue Gas Recirculation Combustion Control Low NOx Burner and FGR Induced Flue Gas Recirculation No Controls No Controls

3.2 Nitrogen Oxides (NOx)

Discussion of NOx Emissions

Emissions of NOx are a result of the thermal fixation nitrogen in the combustion air (thermal NOx) and the oxidation of nitrogen in the fuel (fuel NOx). Thermal NOx is primarily a function of peak flame temperature and available oxygen, which are factors that depend on boiler size, firing configuration, and operating practices. Fuel NOx is a function of nitrogen in the fuel and the available oxygen. About 50% of the fuel nitrogen is converted to NOx, which means that fuel NOx emissions from firing natural gas or distillate oil is almost negligible because these fuels contain only trace amounts of fuel-bound nitrogen.

Description of Available NOx Controls

The following technologies were identified as potentially applicable for the control of NOx from boilers firing natural gas and distillate oil.

Low NOx burners with Flue Gas Recirculation (LNB w/FGR): The following description is an excerpt from the July 1998 edition of Section 1.4.4 in AP-42.

"The two most prevalent combustion control techniques used to reduce NOx emissions from natural gas-fired boilers are flue gas recirculation (FGR) and low NOx burners. In an FGR system, a portion of the flue gas is recycled from the stack to the burner windbox. Upon entering the windbox, the recirculated gas is mixed with combustion air prior to being fed to the burner. The recycled flue gas consists of combustion products which act as inerts during combustion of the fuel/air mixture. The FGR system reduces NOx emissions by two mechanisms. Primarily, the recirculated gas acts as a dilutent to reduce combustion temperatures, thus suppressing the thermal NOx mechanism. To a lesser extent, FGR also reduces NOx formation by lowering the oxygen concentration in the primary flame zone. The amount of recirculated flue gas is a key operating parameter influencing NOx emission rates for these systems. An FGR system is normally used in combination with specially designed low NOx burners capable of sustaining a stable flame with the increased inert gas flow resulting from the use of FGR. When low NOx burners and FGR are used in combination, these techniques are capable of reducing NOx emissions by 60 to 90 percent.

Low NOx burners reduce NOx by accomplishing the combustion process in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses thermal NOx formation. The two most common types of low NOx burners being applied to natural gas-fired boilers are staged air burners and staged fuel burners. NOx emission reductions of 40 to 85 percent (relative to uncontrolled emission levels) have been observed with low NOx burners."

Selective Catalytic Reduction (SCR): This is an add-on control technology in which ammonia is injected into the exhaust gas stream in the presence of a catalyst bed to combine with NOx in a reduction reaction forming nitrogen and water. For this reaction to proceed satisfactorily, the exhaust gas temperature must be maintained between approximately 450° F and 850° F. SCR is a commercially available and demonstrated control technology with numerous applications nationwide. Conventional SCR is technically feasible for this project with a control efficiency of approximately 75% to 85%.

Selective Non-Catalytic Reduction (SNCR): In the SNCR process, ammonia or urea is injected at high temperatures without a catalyst to reduce NOx emissions to nitrogen and water vapor. The exhaust temperature must typically be maintained above 1600°F to allow the reaction to occur; otherwise uncontrolled NOx will be emitted as well as unreacted ammonia. Also, the exhaust temperature must not exceed 2000°F or ammonia will actually be oxidized creating additional NOx

emissions. New catalysts are available that can extend this temperature range to approximately 1000° F to 1950° F. For boilers, SNCR has achieved control efficiencies in the 25% to 75% range and is technically feasible for this project.

SCONOxTM: This technology is a NOx and CO control system developed by Goal Line Environmental Technologies and distributed by ABB for large gas turbine projects. Specialized potassium carbonate catalyst beds reduce CO and NOx emissions using an oxidation-absorption-regeneration cycle. The required operating temperature range is between 300°F and 700°F, which requires a heat recovery steam generator for use with a combined cycle gas turbine. SCONOxTM can achieve a control efficiency greater than 90% and is technically feasible for this project.

Cannon Technology's Low Temperature Oxidation (LTO): This technology involves injecting ozone into a gas stream (approximately 300° F) to oxidize CO, NOx, and SO2 to carbonates, nitrates, and sulfates, which are then absorbed by a dilute nitric acid solution in a scrubber. The system was developed for steam boilers and test results show NOx emissions below 4 ppmvd at 3% oxygen for gas firing. However, only very small units (< 20 MMBtu per hour) have been tested. Because the exhaust gas will be approximately 400° F and the modified boiler is nearly ten times that of the largest tested unit with LTO, this technology was not evaluated further.

Applicant's Proposed NOx Controls

The applicant ranked the control technologies in the following order:

Rank	Technology	Control Efficiency (%)	Emissions Rate (lb/MMBtu) ^c	Annual Emissions TPY
1	LNB w/SCR a	92%	0.030	8.7
2	LNB w/SNCR b	72%	0.105	30.6
3	LNB w/FGR	60%	0.10 °	43.7 ^d

⁻ SCR alone can achieve approximately 80% reduction.

The applicant states that SCR and SNCR would result in the following adverse impacts.

Energy Impacts: The applicant states that installation of SCR would result in energy penalties due to the pressure drop across the catalyst, energy required to operate the ammonia injection system, and possibly energy to reheat the exhaust gas. Similarly, SNCR would result in energy penalties to operate the system.

Environmental Impacts: The applicant indicates that installation of SCR would result in unreacted ammonia "slipping" past the catalyst, potential ammonia emissions from an accidental release, and solid waste disposal of the spent catalyst. Similarly, SNCR could result in urea emissions from an accidental release.

Economic Impacts: The applicant estimates that the installation of SCR would result in a capital cost of \$1.7 million, and annualized cost of \$377,460, and a cost effectiveness of \$10,794 per ton of NOx removed. The applicant estimates that the installation of SNCR would result in a lower capital cost but a much higher annualized cost, and a higher cost effectiveness based on experience.

b - SNCR alone can achieve approximately 30% reduction.

Proposed steam boiler emission rate for gas and oil firing.

^d - Based on an emission rate of 0.10 lb/MMBtu for natural gas at 99.8 MMBtu/hr for 8,760 hours.

Applicant's Proposal: Based on the estimated high capital and operating costs associated with the add on control systems, the applicant rejected both SCR and SNCR and proposes the following NOx standards based on LNB with FGR:

Oil: NOx emissions shall not exceed 0.10 lb/MMBtu of heat input

Gas: NOx emissions shall not exceed 0.055 lb/MMBtu of heat input

Department's Draft NOx BACT Determination

The Department does not necessarily endorse the applicant's cost evaluations, but generally agrees that neither SCR nor SNCR are cost effective for this project, which consists of a burner system modification to fire natural gas. It is noted that the costs of a SCONOxTM system were not estimated since it is not applied to boilers. However, costs for a comparable SCONOxTM system are typically higher than SCR and it is not expected that this technology would be cost effective or feasible for the project.

Draft NOx BACT Determination: The Department determines NOx BACT to be low-NOx burners with flue gas recirculation. The following limits represent BACT for NOx emissions.

Oil: NOx emissions shall not exceed 0.10 lb/MMBtu of heat input

Gas: NOx emissions shall not exceed 0.055 lb/MMBtu of heat input

As shown in Table 3A, this determination is consistent with recent BACT determinations for similarly sized boilers. The NOx limit for firing distillate oil was based on the proposed boiler manufacturer's guarantee, assuming that the fuel nitrogen content will be less than 0.02% by weight. Recent data on very low sulfur No. 2 distillate oil indicates a maximum nitrogen content of 0.015% by weight. Compliance with the emissions standards shall be demonstrated by conducting initial and annual performance tests in accordance with EPA Method 7e at permitted capacity.

3.3 Carbon Monoxide CO

Discussion of CO Emissions

Emissions of carbon monoxide (CO) will result from incomplete fuel combustion. In general, CO emissions are inversely proportional to NOx emissions. However, new advanced burner designs have also been able to lower CO emissions concurrently with reduced NOx emissions.

Applicant's Initial Proposed CO Controls

The applicant reviewed recent CO BACT determinations and noted that no add-on controls were required for similarly sized boilers. In addition, the applicant believes that the proposed emission standards are within the general range of these recent BACT determinations.

Applicant's Initial Proposal: The applicant proposed the following CO standards.

Gas/Oil: CO emissions shall not exceed 200 ppm at 3% O₂

Department's CO Determination

The Department discussed the feasibility of lower CO emissions rates for the boiler with the applicant. After additional discussions with the burner manufacturer, the applicant agreed to the following CO emissions standards that would avoid a BACT determination.

Gas/Oil: CO emissions shall not exceed 200 ppm at 3% O2

The Department believes that a new boiler would be able to achieve a CO standard 200 ppm at 3% O_2 . The requested emissions standard appears reasonable. Compliance with the emissions standards

shall be demonstrated by conducting initial and annual performance tests in accordance with EPA Method 10 at permitted capacity.

3.4 Particulate Matter (PM/PM10) and Sulfur Dioxide (SO2)

Discussion of PM/PM10 and SO2

Emissions of particulate matter (PM/PM10) and sulfur dioxide (SO2) will result from the combustion of natural gas and distillate oil. Particulate matter emissions increase with incomplete fuel combustion as well as with higher concentrations of ash, sulfur, and trace elements in the fuel. Sulfur dioxide emissions will increase with higher fuel sulfur contents. However, natural gas and very low sulfur distillate oil contain little ash, sulfur, or other contaminants.

Applicant's Proposed PM/PM10 and SO2 Controls

The applicant indicates that post-control devices are not typically applied to package boilers and would be cost prohibitive.

Applicant's Proposal: For both PM/PM10 and SO2, the applicant proposes the following fuel specifications and opacity standard.

Gas: Pipeline-quality natural gas with a maximum of 1 gr/100 cf, opacity shall not exceed 10%

Oil: No. 2 distillate oil with a maximum of 0.05% sulfur by weight, opacity shall not exceed 20%

Department's Draft PM/PM10 and SO2 BACT Determinations

The Department identifies several available control technologies for particulate matter removal including centrifugal collectors, electrostatic precipitators, fabric filters, and wet scrubbers. However, particulate emissions are estimated to be much less than 0.01 grains per dscf of exhaust gas, which is approximately the level of controlled emissions from a baghouse. Similarly, there is acid gas scrubbing equipment available to further reduce SO2 emissions. The applicant proposes to fire pipeline-quality natural gas and very low sulfur distillate oil as the primary fuels with as a backup fuel. The Department agrees with the applicant that further control of particulate matter and sulfur dioxide emissions with any of these add-on control technologies would be cost prohibitive due to the very low uncontrolled emissions. The fuel sulfur contents proposed are clearly more stringent than the NSPS Subpart Db standard of 0.5% sulfur by weight. The specification of clean fuels constitutes a pollution prevention technique and is given favorable consideration in this case.

Draft PM/PM10 and SO2 BACT Determinations: The Department establishes the following fuel specifications as BACT for PM/PM10 and SO2.

Gas: Pipeline-quality natural gas

Oil: No. 2 distillate oil with a maximum of 0.05% sulfur by weight

The Department notes that pipeline-quality natural gas typically contains much less than 1 grain per 100 SCF of natural gas. Compliance with the fuel sulfur limit for distillate oil shall be demonstrated by an initial test and maintaining the fuel quality records provided by the vendor for each shipment. Limiting the fuel sulfur content also effectively limits the potential emissions of SAM and SO2, so that additional emissions standards are unnecessary. In conjunction with the above fuel specifications, the Department also establishes the following standards as BACT for PM/PM10.

Gas: Opacity shall not exceed 10%

Oil: Opacity shall not exceed 20%

TECHNICAL EVALUATION AND DETERMINATION

The proposed fuels are natural gas and distillate oil containing no more than 0.05% by weight. It is expected that there will be no visible emissions plume from the stack because these fuels contain very little sulfur, ash, or other contaminants. After the initial performance test, the opacity standard will also serve as an indicator of efficient combustion and compliance with the particulate matter standards.

4 EXCESS EMISSIONS

Excess emissions for this emissions unit are specified in Section II of the permit. This permitting action does not change any authorization for excess emissions provided by other Department permits for other emissions units

5 LIMITS AND COMPLIANCE REQUIREMENTS

The permit limits the sulfur content of the distillate fuel oil and limits the heat input to the emissions units from all permitted fuels. Specific emission limits were not imposed because the potential emissions are below the PSD significance criteria. The fuel consumption limits and the compliance requirements are detailed in Section III of the permit.

6 PRELIMINARY DETERMINATION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. The Department's preliminary determination is to issue the draft permit to allow the rebuild of the process steam boiler, subject to the terms and conditions of the draft permit.

7 FINAL DETERMINATION

An "INTENT TO ISSUE AIR CONSTRUCTION PERMIT" to Tropicana Products, Inc. for their existing citrus juice processing plant located at 6500 Glades Cutoff Road, Ft. Pierce, St. Lucie County was clerked on December 24, 2001. The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" was published in The Tribune, St. Lucie County on December 26, 2001. The Draft Air Construction Permit was available for public inspection at the Southeast District office in West Palm Beach and the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was received on January 10, 2002.

No comments were received during the thirty (30) day public comment period. As a result, the Final Air Construction permit will be issued, as noticed.

DETAILS OF THIS ANALYSIS MAY BE OBTAINED BY CONTACTING:

Edward J. Svec, Engineer IV Department of Environmental Protection Bureau of Air Regulation Mail Station #5505 2600 Blair Stone Road Tallahassee, Florida 32399-2400 Telephone: 850/488-0114

Recommended by:

Bureau of Air Regulation

Approved by: \mathcal{Q}

Howard L. Rhodes, Director Division of Air Resources

Management

OI 28/02 Date



Department of Environmental Protection

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

David B. Struhs Secretary

PERMITTEE

Tropicana Products, Inc. 6500 Glades Cutoff Road Ft, Pierce, Florida 34981

Permit No. 1110004-004-AC, PSD-FL-303A
Project Addition of Process Steam Boiler
SIC No. 2037
Expires: December 31, 2002

Authorized Representative:

Richard Coyle, Director of Operations

PROJECT AND LOCATION

This permit authorizes Tropicana Products Inc., Ft. Pierce Plant, to install a process steam boiler equipped with low-NOx burners and utilizing flue gas recirculation. The boiler has a physical capacity of 99.8 MMBtu per hour heat input firing natural gas and 95.7 MMBtu per hour heat input firing very low sulfur distillate fuel oil (0.05% sulfur by weight).

This facility is located at 6500 Glades Cutoff Road, Ft. Pierce, St. Lucie County. The UTM coordinates are: Zone 17; 561.0 km E and 3028.1 km N.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The attached appendix is a part of this permit:

Appendix GC General Permit Conditions

Howard L. Rhodes, Director Division of Air Resources

Management

SECTION I. FACILITY INFORMATION

FACILITY AND PROJECT DESCRIPTION

This facility consists of an existing citrus processing facility that extracts juice from whole citrus fruit to produce single-strength and frozen concentrated juices and byproducts of juice production such as citrus oils, citrus molasses and animal feed.

The applicant proposed in this project to allow the addition of a process steam boiler, a D-Type Abco Industries Inc. boiler, with a design rating of 85,000 pounds per hour steam and a design heat input rate of 99.8 MMBtu per hour when firing natural gas and 95.7 MMBtu/hr when firing #2 distillate fuel oil at the Ft. Pierce facility. The applicant has requested continuous, dual-fuel operation (8,760 hours per year) for the steam boiler. PSD review is required due to the increase in nitrogen oxides (NO_x), above PSD thresholds. The applicant did not seek any relaxation in currently enforceable conditions in its other existing emissions units.

The emissions increases associated with this project were estimated by the applicant as follows in tons per year:

Pollutant	Net Increase ¹	PSD Significance	Subject to PSD?
PM/PM ₁₀	6.15	25/15	No
SO ₂	21.75	40	No
NOx	41.91	40	Yes
CO	80.41	100	No
VOC	2.36	40	No
SAM	1.08	7	No

Potential emissions (shown as net increase) were estimated by the Department from allowable natural gas and distillate fuel oil usage and AP-42 emission factors (tables 1.3-1 and 1.3-3 for fuel oil, tables 1.4-1 and 1.4-2 for natural gas), with a heat content of 1,020 Btu/scf of natural gas and 131.1 million Btu/1,000 gallons of distillate fuel oil, given a design heat input capacity of 99.8 MMBtu/hour operating on natural gas and 95.7 MMBtu/hour operating on fuel oil, and the fuel use limits of the permit.

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The existing facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment or unclassifiable for the criteria pollutants ozone, PM₁₀, carbon monoxide, SO₂, nitrogen dioxide and lead. This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant exceeds 100 tons per year (TPY). At this facility potential emissions of PM/PM₁₀, SO₂, NOx, CO and VOC exceed 100 TPY.

This facility is not within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 250 TPY for at least one criteria pollutant, the facility is also an existing Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). The net increase, including emission increases from the contemporaneous juice extractor project at the facility, in emissions exceeds the PSD significance levels of Table 212.400-2, F.A.C. Therefore the project is subject to PSD requirements of Rule 62-212.400,F.A.C., for PM/PM₁₀, SO₂, NOx, CO and VOC since the boiler is contemporaneous with the juice extractors project in 2000. The project is subject to a BACT determination, as discussed in the Department's Technical Evaluation and Determination.

SECTION I. FACILITY INFORMATION

The applicant stated that this facility is a major source of hazardous air pollutants (HAPs). This project is not subject to a case-by-case MACT determination, per Rule 62-204.800(10)(d)2, F.A.C., because it does not result in the construction or reconstruction of a major source of HAP emissions.

This project does not impose any requirements under the New Source Performance Standards, 40 CFR 60, or National Emissions Standards for Hazardous Air Pollutants, 40 CFR 61 or 63. The project is subject to the NSPS Subpart Dc for recordkeeping.

REVIEWING AND PROCESS SCHEDULE

fuly 18, 2001	Received permit application and fee
August 17, 2001	Department's request for additional information
September 17, 2001	Received applicant's response to Department's request
October 19, 2001	Department's second request for additional information
November 2, 2001	Received applicant's response to Department's second request
November 2, 2001	Application complete
December 24, 2001	Distributed Notice of Intent to Issue and supporting documents
December 26, 2001	Notice of Intent published in The Tribune, St. Lucie County
September 17, 2001 October 19, 2001 November 2, 2001 November 2, 2001 December 24, 2001	Received applicant's response to Department's request Department's second request for additional information Received applicant's response to Department's second request Application complete Distributed Notice of Intent to Issue and supporting documents

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Permit application filed July 18, 2001 and applicant's additional information (October 30, 2001)
- Department's Technical Evaluation and Determination
- Department's Intent to Issue

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

The following specific conditions apply to all emissions units at this facility addressed by this permit.

ADMINISTRATIVE

- Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, phone number 850/488-0114. All documents related to reports, tests, minor modifications and notifications shall be submitted to the Department's Southeast District office at P.O. Box 15425, West Palm Beach, Florida 33416-5425, and phone number 561-681-6600.
- 2. <u>General Conditions</u>: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes(F.S.). [Rule 62-4.160, F.A.C.]
- 3. <u>Terminology</u>: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
- 4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S., and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the F.A.C. regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
- 5. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 6. Expiration: This air construction permit shall expire on ^DRAFT. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4), 62-4.080, and 62-4.210, F.A.C]
 - <u>PSD Expiration</u>: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [Rules 62-4.070(4), 62-4.210(2) & (3), and 62-210.300(1)(a), F.A.C.]
 - <u>BACT Determination Review</u>: In conjunction with extension of the 18 month periods to commence or continue construction, extension of the permit expiration date, or where construction is conducted

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

- in two or more phases, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rules 62-4.070(4), 62-4.210(2) & (3), 62-210.300(1)(a), and 62-212.400(6)(b), F.A.C.]
- 7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
- 8. <u>Title V Operation Permit Required</u>: This permit authorizes construction and/or installation of the permitted emissions unit and initial operation to determine compliance with Department rules. A revision to the Title V operation permit is required for regular operation of the permitted emissions unit. The owner or operator shall apply for a Title V operation permit at least ninety days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Southeast District office. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSION LIMITING STANDARDS

- 9. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]
- 10. Unconfined Emissions of Particulate Matter: [Rule 62-296.320(4)(c), F.A.C.]
 - (a) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
 - (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
 - (c) Reasonable precautions for this facility include the following:
 - Paving and maintenance of roads, parking areas and yards.
 - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
 - Landscaping or planting of vegetation.
 - Limiting access to plant property by unnecessary vehicles.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

- (d) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
- 11. General Pollutant Emission Limiting Standards: [Rule 62-296.320(1)(a)&(2), F.A.C.]
 - (a) No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
 - (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Note: An objectionable odor is defined in Rule 62-210.200(198), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.]

OPERATIONAL REQUIREMENTS

- 12. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's Southeast District office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
- 13. <u>Circumvention</u>: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
- 14. Excess Emissions: This permit does not change any authorization for excess emissions provided by other Department permits for other emissions units. The following excess emissions provisions of state rule apply to this emissions unit (emissions unit 008) as specified below.
 - (a) Excess emissions resulting from start-up and shutdown are permitted for the emissions unit 008 providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period.
 - (b) Excess emissions resulting from malfunction of this emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
 - (c) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

[Rules 62-210.700(1), (4) and (5), F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

- 15. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]
 - (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
- 16. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]
- 17. <u>Test Notification</u>: The owner or operator shall notify the Department's Southeast District office at least 15 days prior to the date on which each formal compliance test is to begin. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9., F.A.C.]
- 18. Compliance Test: A single compliance test shall be required annually to ensure the emission unit's compliance with permit conditions. The test shall be performed in the manner described in this permit as follows: EPA Method 7e shall be used to test NOx for the initial compliance test as well as the annual compliance test. EPA Method 10 shall be used to test CO for the initial compliance test as well as the annual compliance test.

REPORTING AND RECORD KEEPING REQUIREMENTS

19. <u>Duration of Record Keeping</u>: Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. [Rules 62-4.160(14)(a)&(b)and 62-213.440(1)(b)2.b., F.A.C.]

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

- 20. <u>Test Reports</u>: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 21. Excess Emissions Report: In case of excess emissions resulting from malfunction, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department. [Rules 62-4.130 and 62-210.700(6), F.A.C.]
- 22. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southeast District office by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

The following specific conditions apply to the following emissions units after construction.

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION	
008	Process Steam Boiler	

[Note: This emissions unit is a process steam boiler that is installed to serve as a source of steam to meet citrus processing needs. This boiler is limited to one of a physical capacity of 99.8 MMBtu/hour firing natural gas and 95.7 MMBtu/hour firing very low sulfur distillate fuel oil (0.05% sulfur by weight). This emissions unit is subject to the requirements of the state rules as indicated in this permit. This emissions unit is subject to a determination of Best Available Control Technology pursuant to Rule 62-296.406, F.A.C. The fuel authorized by this permit is consistent with that BACT determination. This emissions unit is subject to regulation under the New Source Performance Standards of 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.]

STATE RULE REQUIREMENTS

OPERATIONAL REQUIREMENTS

- 1. <u>Hours of Operation</u>: This emissions unit may operate up to 8,760 hours/year. [Rules 62-4.070(3) and 62-210.200, F.A.C., and limitation on potential to emit]
- 2. <u>Design Heat Input Capacity Limited</u>: The design heat input capacity of this emissions unit shall be limited to a maximum of 99.8 MMBtu per hour firing natural gas and 95.7 MMBtu per hour firing distillate fuel oil, based on the physical design and characteristics of the steam generation unit. [Rules 62-4.070(3) and 62-210.200, F.A.C., and limitation on potential to emit]
- 3. Fuel Consumption Limited: This emission unit shall be fired with natural gas and distillate fuel oil with a maximum sulfur content of 0.05 percent, by weight. Natural gas consumption by this emissions unit shall not exceed 857 million standard cubic feet in any consecutive 12-month period. Distillate fuel oil consumption by this emissions unit shall not exceed 6,392 thousand gallons in any consecutive 12-month period. [Rules 62-4.070(3), 62-210.200 and 62-296.406, F.A.C., BACT for small boilers, and limitation on potential to emit]
- 4. <u>Visible Emissions Limited</u>: Visible emissions from this emissions unit shall not exceed 20/10 percent opacity for oil/gas operation except for periods of startup/shutdown or malfunction. [Rule 62-296.406(1), F.A.C.]
- 5. NOx Emissions Limited: NOx emissions from this emissions unit shall not exceed 0.10 lb/MMBtu for oil operation and 0.055 lb/MMBtu for gas operation. Compliance shall be determined using EPA Method 7e, as described in 40 CFR 60 Appendix A.
- 6. CO Emissions Limited: CO emissions from this emissions unit shall not 200 ppm @ 3% O₂ for oil and/or gas firing. Compliance shall be determined using EPA Method 10, as described in 40 CFR 60 Appendix A.

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

7. Fuel Sulfur Content Tests: The owner or operator shall determine the sulfur content of each delivery of distillate fuel oil received for these emissions units using ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for

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SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

sulfur in petroleum products: ASTM D129-91, ASTM D1552-90, ASTM D2622-94, or ASTM D4294-90. A more recent version of these methods may be used. The owner or operator may comply with this requirement by receiving records from the fuel supplier that indicate the sulfur content of the distillate fuel oil delivered complies with the sulfur limit of specific condition 3 of this section. [Rules 62-4.070(3) and 62-297.440, F.A.C.]

8. <u>Visible Emission Tests Required</u>: The owner or operator shall demonstrate compliance with the visible emissions limit for this emissions unit upon initial installation and annually using EPA Method 9, as described in 40 CFR 60 Appendix A. [Rules 62-4.070(3) and 62-297.310, F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

- 9. <u>Fuel Sulfur Content Records</u>: The owner or operator shall maintain records of sulfur content of each delivery of distillate fuel oil received for these emissions units, made pursuant to the requirements of specific condition 5 of this section. [Rule 62-4.070(3), F.A.C.]
- 10. <u>Distillate Fuel Oil Consumption Records</u>: The owner or operator shall make and maintain monthly records of natural gas and distillate fuel oil consumption for this emissions unit. From the monthly records of consumption of all permitted fuels, the owner or operator shall make records of the consecutive 12-month fuel consumption to demonstrate compliance with the fuel consumption limits of specific condition 3 of this section. All of these records shall be completed within ten days of the end of each month. [Rule 62-4.070(3), F.A.C.]
- 11. Records of Design Heat Input Capacity: The owner or operator shall maintain records of the design heat input capacity provided by the boiler's manufacturer or vendor to demonstrate compliance with condition 2 of this section. Such records shall be received prior to installation of this emissions unit, and shall be retained for each such emissions unit installed at the facility for a period of five years from the date of installation. [Rule 62-4.070(3), F.A.C.]
- 10. Pursuant to 40 CFR 60.48c NSPS Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), the permittee is required to maintain daily records of the amount of natural gas combusted. Since none of the emission limits in Subpart Dc are applicable to this boiler when firing natural gas (the primary fuel for this boiler), it has been determined by the Department that keeping records for natural gas usage on a monthly rather than daily basis is adequate for the purpose of verifying the periods that only natural gas is burned in this unit. [Rule 62-296.810, F.A.C.; 40 CFR 60.48c(g) and (i)]
- 11. The permittee shall maintain a (daily) record of the quantity of fuel oil used for each day of operation. [Rule 62-204.800(7)(b)4., F.A.C.; 40 CFR 60.48c(g) and 40 CFR 60.48c(i)]
- 12. The permittee shall submit the following <u>written notifications</u> to the Air Compliance Section of the Southeast District Office of the Department:
 - a. A notification of the date construction (or reconstruction as defined under 60.15) of the boiler is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 - b. A notification of the anticipated date of initial startup of the boiler, postmarked not more than 60 days nor less than 30 days prior to such date.
 - c. A notification of the actual date of initial startup of the boiler, postmarked within 15 days after such date.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

- d. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 60.14 (e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice. [Rule 62-204.800(7)(b)4., F.A.C.; 40 CFR 60.7(a) and 40 CFR 60.48c(a)]
- 13. The permittee shall submit <u>quarterly reports</u> of the fuel oil supplier sulfur content certification records required by Condition 11 for any calendar <u>quarter during which fuel oil is fired</u>. In addition to the above, the quarterly report shall include a certified statement signed by the owner or operator of the facility that the records of the fuel supplier certifications submitted represent all of the fuel combusted during the quarter. The quarterly reports shall be submitted to the Air Compliance Section of the Southeast District Office of the Department within 30 days of the end of the quarter being reported. [Rule 62-204.800(7)(b)4., F.A.C.; 40 CFR 60.48c(e)(11)]

GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does G.3not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of G.4 title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- The permittee shall properly operate and maintain the facility and systems of treatment and control (and G.6 related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, G.7 upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - Have access to and copy and records that must be kept under the conditions of the permit;
 - Inspect the facility, equipment, practices, or operations regulated or required under this permit, and, (b)
 - Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - A description of and cause of non-compliance; and
 - The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL PERMIT CONDITIONS [RULE 62-4.160, F.A.C.]

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
 - (a) Determination of Best Available Control Technology (X);
 - (b) Determination of Prevention of Significant Deterioration (X); and
 - (c) Compliance with New Source Performance Standards (X).
- G.14 The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Tropicana

RECEIVED
JAN 1 0 2002

BUREAU OF AIR REGULATION

January 7, 2002

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

Re: DEP File No. 1110004-004-AC, PSD-FL-303A

Addition of a Process Steam Boiler

Dear Sir or Madam:

Enclosed please find Affidavit of Publication as required.

Sincerely,

Scott Davis

Manager, Environmental

And Plant Services

Encl.

ce: E. Suc C. Halladay J. Dittle, SED D. Worley EPA D. Buryat, WP3



THE TRIBUNE ST. LUCIE COUNTY, FLORIDA

600 Edwards Road, Ft. Pierce, FL 34982

AFFIDAVIT OF PUBLICATION

STATE OF FLORIDA COUNTY OF ST. LUCIE

Before the undersigned authority personally appeared, Lynn Ferraro, General Manager; Kathy LeClair, Business Manager or Bob Rossi, Circulation Manager of The Tribune, a daily newspaper published at

Fort Pierce in St. Lucie County, Florida; that the attached copy of advertisement was published in The Tribune in the following issues below. Affiant further says that the said Tribune is a newspaper published at Fort Pierce in said St. Lucie County, Florida and that the said newspaper has heretofore been continuously published in said St. Lucie County, Florida daily and distributed in St. Lucie County, Florida, for a period of one year next preceding the first publication of attached copy of advertisement; and affiant further says that ne/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

The Tribune has been entered as second class matter at the Post Office in Fort Pierce, St. Lucie County, Florida and has been for a period of one year next preceding the first publication of the attached copy of advertisement.

Ad # Name Date Price Per Day PO #

2313883 TROPICANA PRODUCTS 12/26/2001

\$297.00 1110004004a

Total \$297.00

Subscribed and sworn to me before this date:

01/03/2002

Notary Public

KATHY LEE My Comm Exp. 7/30/2002 No. CC 763706

Personally Known-[] Other I.D.

The second secon	_\
PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMI	r ja
STATE OF FLORIDAL TO A STATE OF THE STATE OF	· Y
DEPARTMENT OF ENVIRONMENTAL PROTECTION	
DEP File No. 1110004-004-AC, PSD-FL-303A	• ,
Tropicana Products, Inc.	
St. Lucie County	
The Department of Environmental Protection (Department) gives notice of its intent	10 12208 CI
to allow the addition of a process steam and a design heat input rate of 9 design rating of 85,000 pounds per hour steam and a design heat input rate of 9 design rating #2 distillate for	el ail at th
design rating of 83,000 points per loss steam that steam the firing #2 distillate five per hour when firing natural gas and 95.7 MMBtu/hr when firing #2 distillate five per hour when firing #2 distillate five per hour when firing #2 distillate five per hour five per hour when firing #2 distillate five per hour five per hou	8.760 hour
Ft. Pierce facility. The applicant has requested commods, and the increase in nitriper year) for the steam boiler. PSD review is required due to the increase in nitriper year.	ogen oxide
(NOx) above PSD thresholds. This project is subject to the requirements for P	SD. An a
(NOx) above PSD inresholds. This project is sooled to	

quality Impact analysis was required.
I fotal emissions of pollulants from the changes authorized by this peimit will not exceed the following:
Pollutant
PM/PM10 (filterable plus 6.15 25/15)
condensable) 6.15 100
CO- 80.4 1.91 40
VOC 2.36 40
VOC 21,75 40
SO2 21,75 7

The Department will issue the final permit with the attached conditions unless a response; received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of this Public Notice of action for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit! Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Natire.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 Florida Statutes (F.S.), before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may person whose substantial interests are affected by the proposed permitting decision may perition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S.

The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address

indicated above at the time of filling. The failure of any person to tite a pention within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.559 and 120.557. E.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filling of a motion in compliance with Rule 28-106.205 of the Florida' Administrative Code (F.A.C.).

A petition that disputes the material facts on which the Department's action is based must contain the following information. (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner, received notice of, the agency action or proposed action; (d) A statement of his disputed issues of material facts; if there are none, the petition must so indicate, (e) A concise statement, of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of, the petitioner contends require reversal or modification of the agency's proposed action, and (g) A statement of the relief, soughly by the petitioner, stating pracisely the action petitioner wishes the agency to take with respect to the agency's proposed action, and (g) A statement of the relief, soughly by the petitioner of the agency's proposed action, and (g) A statement of the petition to be accome in the petition of as set forth above, as required by Rule 28-106.301; F.A.C. A statement of the relief soughly by the petitioner of the general state that one such as a state of the petition of the same information a